THE ROLE OF ACADEMIC LIBRARIES IN FACILITATING ACADEMIC RESEARCH - A CASE STUDY OF REGIONAL MARITIME UNIVERSITY, GHANA

BY

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THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF M.A. PORTS AND SHIPPING ADMINISTRATION DEGREE

JULY, 2015
DECLARATION

I hereby declare that this submission is by my own work towards the award of Master of Art (M.A.) In Ports and Shipping Administration Degree and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University except where due acknowledgement has been made in the text.

STUDENT

..............................................     ........................................

ERIC DUGBATEY DORNOR    Date

SUPERVISOR

I confirm that the student undertook the study himself. I further declare that I have personally supervised the student and he therefore has my permission to submit it.

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DEDICATION

This dissertation is dedicated to my dear wife, Mrs. Antoinette Frimpong Dornor, for her love, care and support throughout these years.
ACKNOWLEDGEMENTS

I would want to sincerely thank my family especially my wife and mother for their prayers, encouragements and supports for me.

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Last but not least my endless thanks go to all who in their diverse way have assisted me during the time of this study.
ABSTRACT

The new student-centred paradigm and new learning and teaching approaches have created the need for a re-conceptualisation of the roles and responsibilities of libraries in learning and teaching processes. The university is expanding in terms of admissions and academic programmes. Likewise, information needs of students and lecturers at the university are rapidly changing. In the light of these, academic library of the university is expected to change in line with the growing needs of users. However, what is worrying in current times is that, many are those who use the library for learning centres instead of research centres while others including some lecturers turn to the Internet cafés to seek information for their research works.

The study sought to examine the role of the academic library in Regional Maritime University in facilitating research. The study employed a combination of qualitative and quantitative methods by which data were collected via questionnaire and interviews. The data were collected from 73 students, 1 librarian and 10 lecturers of the Regional Maritime University, Ghana.

It was found that university libraries help in providing research materials for researchers; provide access to publishers for faculty journals publishing; increase faculty research productivity; and promote new technologies and new models for scholarly communication.

The study recommends that the academic library of the Regional Maritime University should be greatly assisted with adequate resources such funds, logistics and new technologies which would enable the academic library to contribute significantly in facilitating research activities of the lecturers and students as well. The study also recommends that the university should implement adequate electronic databases, internet facilities and other electronic facilities so as to encourage more users to patronise the services of the library.
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### LIST OF ABBREVIATIONS

<table>
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<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ARL</td>
<td>Association of Research Libraries</td>
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<tr>
<td>BEE</td>
<td>Bachelor in Electronic Engineering</td>
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<tr>
<td>BLM</td>
<td>Bachelor in Logistics Management</td>
</tr>
<tr>
<td>BME</td>
<td>Bachelor in Marine Engineering</td>
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<td>BNS</td>
<td>Bachelor in Nautical Studies</td>
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<tr>
<td>BPS</td>
<td>Ports and Shipping</td>
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<tr>
<td>CBL</td>
<td>Consortium of British Libraries</td>
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<td>CURL</td>
<td>Consortium of British Libraries in the British Isles</td>
</tr>
<tr>
<td>LOC</td>
<td>Library of Congress</td>
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<tr>
<td>MPS</td>
<td>Masters in Ports and Shipping</td>
</tr>
<tr>
<td>NDLP</td>
<td>National Digital Library Program</td>
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<tr>
<td>RAE</td>
<td>Research Assessment Exercise</td>
</tr>
<tr>
<td>RMU</td>
<td>Regional Maritime University</td>
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<tr>
<td>SCOT</td>
<td>Social Construction of Technology</td>
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<td>UIUC</td>
<td>University of Illinois at Urbana-Champaign</td>
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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The term university meant ‘universe’, a community of teachers and students. But in its modern meaning it stands for a centre of teaching and research with the emphasis on research. In some part of the word, the teaching function is considered to be almost the only responsibility of the universities which seem to forget that a university cease to be a true seat of learning unless its members are engaged in research. In the modern age, no university can afford to rest content with the mere dissemination of knowledge. It must advance knowledge through a continuous process of research and assume responsibility for initiating the coming generation in research. Some academicians claim that teaching and research are incompatible. But on a closer view they are found to be inseparable. Meaningful teaching stimulates research, and research imparts depth to teaching and in this regard, academic library is seen as a major player.

The library plays a vital role in assisting the university in fulfilling its basic function, by collecting, preserving and making available for use, books, manuscripts, journals and research related materials. A properly equipped university library is indispensable for the transmission and advancement of knowledge. There can be no teaching and no research worth the name without well-stocked libraries. Students have to use them to increase their knowledge, teachers have to use them to enrich their instruction and research workers to pursue their research. University library are expected to assist researchers into their real of knowledge.

In recent years, universities have begun paying greater attention to research. Universities do this by developing appropriate policies, making funds and facilities available for research, and encouraging their staff and students to do research. In many universities, students are required to undertake a research project and submit a report as a pre-requisite for completing their degree.
Faculty members are also required to do research themselves, take on more postgraduate students, and are assessed based on the outputs of their research. This has led to researchers making greater demands for access to information and on the quality of information provided (Singh, 2007).

Academic libraries within universities have long been known as gateways to information. In line with the changing role of universities, the vision and mission of academic libraries has to alter to meet these new requirements. As indicated by Foo (2002), academic libraries now take on the key role of providing a competitive advantage for the university and they are positioning themselves to be the learning and research centres of universities. Therefore, the traditional role of academic libraries to support teaching and learning only is being challenged. Campbell (2006) argued that academic libraries are complex institutions with multiple roles. They provide not only books and space for students to study, but also provide services for facilitating research activities, such as bibliographies, reference services and information literacy classes.

At the same time, academic libraries are experiencing another challenge as a result of changes in scholarly communication. Researchers now have ability to get more online materials at no or low cost, and are more confident in accessing online resources. The library is no longer seen as the only or even the primary provider of information to scholars (Consortium of British Libraries in the British Isles (CURL) 2006). For example, researchers are turning to Google in growing numbers, even though the libraries have provided the latest research materials to them (Law, 2009). Chiemeke (2007) conducted a research study on the perceptions of postgraduate students and results showed that universities students visit the internet more often compared with the academic library facilities to fulfil their research needs.

To better meet these challenges, academic libraries need to keep the connection with researchers and further develop the functions and remain viable and competitive in this new information
environment so that researchers could effectively learn and apply the full capabilities of resources and services offered, while at the same time recognize that academic libraries offered quality research resources for them (Moyo, 2004). Otherwise, university libraries cannot contribute to the competitiveness of its university's research (Haglund, 2008). Thus, it is appropriate for academic libraries in universities to re-examine how they can play a more relevant role in facilitating research (Singh, 2007). Postgraduate students and lecturers form a significant group of researchers in a university. Hence, a starting point would be to examine how this group of students views the role of their university library in their research.

This study seeks to examine the current role of academic libraries in facilitating research in Regional Maritime University from the perspective of students and lecturers. This study explores which library resources and services were of important to the users and to assess the satisfaction level of students and lecturers on the role of academic library in facilitating research.

1.2 Statement of the Problem

The new student-centred paradigm and new learning and teaching approaches have created the need for a re-conceptualisation of the roles and responsibilities of libraries in learning and teaching processes. In the light of these the academic library of the Regional Maritime University is to redefine its role towards the users of the library (both lecturers and students) as it ever-reducing levels of resources, staffing and services is leading to severe challenges in information literacy, patronization by users for research. The Regional Maritime University like any other university or learning institution cannot do without academic library. But, imperative to inquire whether the academic library is receiving sufficient supports in making it one-stop hub for effective and efficient centre for research endeavours.
The university is expanding in terms of admissions and academic programmes. Likewise, information needs of students and lecturers at the university are rapidly changing. In the light of these, academic library of the university is expected to change in line with the growing needs of users. However, what is worrying in current times is that, many are those who use the library for learning centres instead of research centres while others including some lecturers turn to the Internet cafés for seek for information for their research works. Also, offices of lecturers are stocked with pile of books and other research materials. There seems to be growing uncertainty regarding the role of academic library in facilitating research works. Importantly, one cares to ask whether the facilities at the university library are adequate and innovative in meeting the increasing research needs of its users. In other words, in today's contemporary and rapidly changing knowledge environment, the question is whether the academic library is creating the conducive and innovative climate for research activities. It is important therefore that in the midst of all these and other intriguing questions, this study sought to examine the role of the academic library in Regional Maritime University in facilitating research.

1.3 Aim and Objectives of the Study

The aim of this research is to examine the role of the academic library in Regional Maritime University in facilitating research. The specific objectives of this study are as follows:

i. To assess the frequency and purpose of users visiting the library

ii. To find out the sort of materials accessed at the Regional Maritime University library.

iii. To ascertain how the library meets the research needs of users.

iv. To determine whether the library promotes and exploits new technologies and new models of scholarly communications.

v. To determine users’ satisfaction levels with library resources and services

vi. To determine if the library creates a better work environment for users.
1.4 Research Questions

In pursuance to achieve its stated objectives, the study intends to address the following research questions.

i. How frequent do users visit the library and for what purpose?

ii. What are the sorts of materials accessed at the Regional Maritime University library?

iii. How does the library meet the research needs of users?

iv. How does the library promote and exploit new technologies and new models of scholarly communications?

v. Are users of the library satisfied with the library resources and services?

vi. Does the library create a better work environment for users?

1.5 Justification

Academic libraries have become one of the cardinal structures in higher institution such as the Universalities. Their role is undeniably important in the way a university is graded. This study is important to the Regional Maritime University as the findings are going to put the library in perspective. The study would primarily show the extent of library use by students which will indicate the level of patronization of the facility. It will also enlighten management on the extent to which the library assists lecturers in their research activities. The study will be a wakeup call for management to invest much into the library and will enhance any future efforts at promoting the management of the academic library.

This research seeks to raise awareness of the importance of academic libraries. These insights will be useful to library practitioners, but also the perspectives, taken as a whole, illustrate the larger context of innovation, and identify important variables to be examined in future empirical studies. That is the study will add to the available knowledge on the role libraries play in higher learning institutions.
1.6 Scope of the Study

Since the study sought to examine the role of academic libraries in facilitating research in Regional Maritime University, the study focused on the university and involved students, librarians and lecturers of the Regional Maritime University, Ghana. It will take into account the level of use and satisfaction of the library by students for their research purpose, how the library is able to aid lecturers in lesson preparation and research and the role the librarians play in facilitating library research.

1.7 Limitations of the Study

The limitations are the constraints encountered during the research process. The main difficulties encountered were time and financial constraints. Thus there was not enough time to interact with the respondents due to the fact that they were preparing to write their end of semester examination. Also, financial difficulty was a big challenge making it difficult to involved as many students and lecturers.

1.8 Organisation of the Study

This dissertation consists of five chapters. In chapter one, the background, problems, aim and objectives of the research, significance, scope and limitations are explained. Chapter two is a literature review of previous related publications on the value of academic library. This chapter reviews various concepts and studies on academic library in general. Chapter three is devoted to the research methodology employed in the collection of data for the research and how the acquired data was analyzed. The fourth chapter consists of presentation of the data collected from the field and an in-depth analysis and discussion of the findings of the research. The last chapter, chapter five, concludes the study, summarizes the findings of the previous chapters and contains recommendations.
CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews the various works or documents by authors in the very subject area of academic library. Literature here refers to secondary information (published or unpublished), thus, primary information that has been processed or documented and made accessible to other people. “Literature review discusses published information in a particular subject area, and sometimes information in a particular subject area within a certain time period. A literature review can be just a subject summary of the source” (The Writing Centre, University of North Carolina, 2012).

2.1 Innovation in Academic libraries

Writing some 45 years ago, Shera (1965) suggested that a new library institutional structure must emerge to address the needs of a modern, pluralistic society, one in which research is increasingly interdisciplinary. For many years, the academic library “… responded to the requirements of its parent institution rather than the direct pressures from the forces that shaped the supporting culture” (p. 35). Implied within Shera's comments is the impression that libraries are bound in tradition and are not responding to the forces that originate outside of the university. Buckland (1996) took a historical perspective and commented critically on the lack of innovation in U.S. libraries during the early 20th century. He pointed out that innovation was a vital force in librarianship in the late 19th and early 20th centuries, but that the period of the 1930s and 1940s did not produce any significant innovation in U.S. libraries. In contrast during this period, there appeared to be a great deal of innovation in Europe, which was ignored by U.S. libraries. For example, microforms were considered as an expansion of the paper codex, and Paul Otlet, a Belgian documentalist (1868–1944), developed hypertext theory before computers
and the Internet existed. According to Buckland, most of the electronic features in the library of the 20th century were foreseen and discussed at the International Congress of Documentation of 1935 (Buckland, 1996).

In a more recent perspective on libraries, Dalbello (2005a, 2005b) has examined technological innovation in the National Digital Library Program (NDLP) at the Library of Congress (LOC). The main thesis of her research is that understanding technological innovation in the library context depends on an insight into how innovators and the environment are shaping innovation decisions. Dalbello blends the SCOT (Social Construction of Technology) framework with theories of isomorphic change (Dimaggio & Powell, 1983) in order to explain societal pressures and self-directed change, highlighting that innovation processes are likely to encounter resistance because of the need to conform to established processes. Although Dalbello’s focus is on the NDLP and specific innovators, her findings have implications for understanding how institutions such as the academic library innovate and respond to transformational forces. For example, she found that a simple concept such as the goal of creating five million digital images in five years seemed to assimilate, incorporate, and standardize differences within the organization. In the NDLP case, the quantitative goal “provided a clear sense of what a successful outcome would be” and created a non-ideological objective which was embraced by all participants (Dalbello, 2005a, p. 413). Librarianship as a profession and a normative force had relatively less impact in contrast to this overarching digitization goal.

As one of the few researchers who have studied innovation in libraries, Musman (1982) pointed to some important areas to examine. He stated that the serious researcher must pay careful attention to the libraries’ organizational structure and the technological environment, noting that the most important structural predictor of innovation over a period of time is the number of occupational specialties found in an organization. A process that he dubbed “machine
“bureaucracy” is evident in libraries and is characterized by obsession with controls and rigid structures what Hage and Aiken (1970) termed “formalization.” Musman (1993) concluded his article by stating that the most important innovation within the library profession would be a change in attitude. In assessing 100 years of innovation in libraries, Musman (1993) chronicled some of the attitudes of librarians toward technological change and the role innovations have played in shaping the development of library processes and services. In the early 20th century, a strong cultural influence developed among librarians, in part as a reaction to technological advancements in the larger industrial environment. Librarians suspected that automobiles, movies, and television were having a negative impact on reading. Hours traditionally spent with a book were now being diverted to other types of entertainment. To librarians, the book represented the embodiment of knowledge and thought, and technological diversions did not bode well for the health of the society. More recent research findings on innovation do not always support Musman's anecdotal analysis. Although he cited professionalism and lack of rigid structures as positively affecting innovation in early libraries, he also noted that small size (Musman, 1993, p. 8) can contribute to innovation, an observation that is not generally supported by the size-innovation studies, as noted.

A few in-depth studies of innovation in academic libraries have contributed significantly to the accumulated knowledge on this topic. Clayton (1997) used a case study approach in his published dissertation, along with Rogers' five attributes as a framework to study innovation in Australian academic libraries. His findings contributed significantly to Rogers' model and he also introduced novel innovation strategies (Clayton, 1997) including the disguising and concealing of potentially innovative projects (pp. 47–48). Beyond these proposed additions, Clayton (1997) observed that a major problem in libraries is the rigidly defined job classifications which, according to many researchers, encourage ritualistic and unimaginative behaviour (p. 86). In a mixed-mode analysis of 140 academic libraries within institutions that
grant master's and bachelor's degrees, White (2001) found that the size of the organization is positively related to innovation in the area of digital reference services. She also found that early adopters differed significantly from non-adopters in all variables that were examined, including size of the institution (measured in terms of per student operating budget, and expenditures for computer search services), number of staff, gate counts, and reference questions. Based on Hage and Aiken's theory (1970, 1967) of organizational complexity, Howard (2007) presents an analysis of how the impact of organizational structure can affect the rate of innovation in academic libraries. In reviewing the research of Hage and Aiken, Howard reported that a key variable that stimulates creativity is organizational complexity, and the critical component of organizational complexity is diversification of knowledge. Diversification of knowledge can be characterized by the number of occupational job titles. For the sample of institutions, Howard selected four members of the Association of Research Libraries (ARL), grouped by demographic similarities into two pairs. For these two pairs, Howard reported mixed results in the complexity–innovation relationship. The study suffered from a very small sample, and insufficient attention to other variables such as those related to the environment and size of the organization (Howard, 2007).

2.2 The role of academic libraries in facilitating postgraduate research

Previous literature on the role of academic libraries in facilitating research has acknowledged that academic libraries play a pivotal role in ensuring the success of research. With greater attention on research given by universities, the considerable amount of literatures have showed that libraries have put more emphasis on their services as compare to research facilities. Kaufman (2008) highlighted that what academic libraries are doing today is not like those of the past, even the future. Ka (2005) suggested that university libraries play a significant role in supporting research. University libraries do not just store books and journals and offer space for
student learning, but they also provide systematically digitized information. University libraries, as they become more and more digitized, will play an important role in offering a greater support service for young professors and PhD students which will help in the development of their academic careers. Singh (2007) showed that research is taking on increasing importance in universities and colleges. Universities are making larger allocations for research and the rank of university is based on their research outputs.

The academic library has traditionally been seen as the ‘heart of the university’ serving the academic community of its parent institution. However, Grimes notes (cited in Brophy, 2001: 21) that the metaphor has been used loosely and with little evidence that it reflects institutional realities. He refers to a number of areas: “Students and faculty alike fail to involve library resources and services in regular learning and instruction, turning to the library primarily as an undergraduate study hall or reserve book room. National initiatives fail to mention, much less to plan, improvement of library resources. There is a disheartening decrease in academic library share of institutional funding, they remain, for the most part, on the periphery of decision-making and innovative processes librarians are often not involved in information policy development. In all, the ‘library is the heart of the university’ metaphor leads librarians and academics to erroneous conclusions about the real relationships between the library and the university. Brophy (2001: 21) notes that many other commentaries on the academic library as the centre of scholarly activity neglect the fact that for most university researchers such notions simply do not reflect reality, if they ever did.

In this context, there has been a continuous concern about the role and status of the academic library. Many authors have pointed out that academic libraries will have to change and the roles and responsibilities of librarians need re-conceptualisation. For example, in 1979 Osburn highlights the need for change in research libraries because of the changing patterns of
scholarship in America, the emerging dominance of the sciences in the university’s hierarchy of disciplines and the demands of government funding agencies for relevant research. He emphasized that research libraries needed to be more responsive to the new academic agenda and more service-oriented model of collection development was needed (Osburn, 1979). In 1999, at the LIBER Annual General Conference in Prague, Wätjen (1999: 439) notes: “All of us know that we have to redefine the traditional role of the library: what and how to select, to acquire, to classify, to catalogue, to provide, to archive or to give access to and how to assist people in the use of information and more important: how to provide free and equal access to information according to the mission of libraries”. Brophy notes: “Libraries, among the most-intensive organizations in existence, will have to change (Brophy, 2006:11) … to enter any academic or public library in almost any part of the world is to be greeted by a scene not that different from that which would have met a visitor half a century ago” (Brophy, 2006: 5).

During the last decade the discussion about change in academic libraries focuses most frequently on the ICT developments, the implications of information in digital format, new learning and teaching concepts, new economic models and legal frameworks. Many authors discuss expectations for the academic library in today’s information age, an array of new functions and partnerships for library staff that flow from changes in society and higher education, the implications that these changes within the library will have for all parts of the academy and what will the changes mean for students, faculty, academic administrators, technical staff, and library staff themselves. Several authors believe that these “changes could catapult the library into a central role within the teaching/learning enterprise if appropriate adaptations are made; if not, they could further remove the library from the institutional centre” (CETUS, 1997). At the start of the 21st century, academic libraries explore service developments to support a series of new scenarios (Brophy, 2005: 25):
• new publication and scholarly communication scenarios; more intensive use and delivering of digital resources;
• serving increasingly heterogeneous student population;
• continuing high demand from students for traditional resources;
• new modes of study, including ICT-based and distance learning, with which libraries have had little involvement in the past;

In doing so, academic libraries could provide more effective services and supports to their users. Webb (2007) highlighted that the effective academic libraries are gateways to academic knowledge through their own collection and by facilitating access to material. In line with its core purpose, providing effective library services could support the research activities of researchers. Haglund (2008) indicated that university libraries are dedicated to what they perceive as the needs of students and researchers at the university. Otherwise, they could not effectively assist the research activities, nor could they contribute to the university’s research. Even though the literature has indicated that academic libraries play a significant role on facilitating research, the overall support of academic libraries for research was not strategic. Instead of developing an extensive research collection, the libraries relied heavily on inter-library loans to support research (Patterson 2009).

Simmonds (2001) found that the use of academic libraries is influenced most by users’ perceived familiarity with the library and its resources. Those who are more familiar with the libraries are more likely to use academic libraries. To motivate the greater usage of libraries, librarians need to educate users on how to use library resources not only in the confines of the library building, but even when they access the resources remotely.

Rowley (2004) pointed out that librarians can promote the research culture among researchers. Currently, libraries are undergoing continual changes and development as library managers,
information professionals, and knowledge workers need to manage and understand these changes to respond to the dynamic environments. Researchers could benefit from these changes as the academic environment is constantly changing, and with universities increasing their emphasis on research, academic libraries need to re-examine their role in assisting the users in their research. While there is much literature on the importance of academic libraries in assisting university research in general, there is little on the needs of specific groups of researchers, including the postgraduate students. Apart from Ka (2005) and Singh (2007) mentioned above, little was found on the needs of postgraduate students, their perceptions, usage and assessment of academic libraries.

2.3 Impacts of Academic Library

Academic libraries do not only impact students, but they also provide value for faculty teachers in a university. According to Bundy (2004), instructional content, methods, and assessments “can no longer be the sole province of individual academic teachers”; instead, librarians can become instructional partners and help faculty “improve the quality of their courses…develop innovative curricula, and save time on teaching-related activities” (Simmel, 2007, 91). While some in higher education may argue that librarians are not teachers, others would counter that “librarians have always been educators because the most enduring and flexible agency for learning is the library—organized for well over two millennia predating the first universities by well over one millennium” (Bundy, 2004, 2).

Many Faculty teachers welcome library instructional support. One study describes the results of course-integrated library instruction from a Faculty’s perspective (Simmel 2007). The study involved interviews of faculty who spent time with librarians to determine how to integrate information literacy instruction in their classes; “while estimates ranged from 15 minutes to two hours, depending on project and course, every faculty member interviewed considered the time...
spent on this activity a negligible price to pay in light of the benefits they realized.” In this study, librarians helped improve the quality of courses by providing “a higher calibre of discipline-based research instruction” that allowed faculty to “1) develop and implement new curricula by targeting and customizing access to relevant information resources, 2) improve their own research productivity since they learn new techniques and become familiar with new resources, and 3) save time in preparing research classes, interacting with students about information resources, and grading both individual assignments and group projects” (Simmel, 2007, 90). Librarians can also add value to faculty teaching by participating in institutional efforts to increase faculty instructional skills (e.g., grants for faculty projects or teaching workshops and seminars) (Levinson-Rose and Menges, 1981).

Assessments of co-created instruction effectiveness should be designed and scored collaboratively (Nimon, 2001; Warner, 2008), but students are not the only ones who can be assessed when librarians and faculty work together. Faculties can also be queried about the impact of academic library support for faculty teaching. In one study of this kind, three out of five faculties felt that librarians had assisted their students in finding appropriate information for course assignments, and nearly half said that librarians had “supported their teaching objectives” (Dickenson, 2006). Similar numbers reported the positive impact of library resources on their instructional goals, including preparation of lectures, student reading assignments, and conceptual frameworks for courses (Dickenson, 2006).

Academic libraries contribute to faculty research productivity in both straightforward and subtle ways (Case, 2008). In the past, library contributions to faculty research were primarily collections-based. However, as online collections grow and discovery tools evolve, that role has become less critical (Schonfeld and Housewright 2010; Housewright and Schonfeld, *Ithaka’s 2006 Studies of Key Stakeholders* 2008). Now, libraries serve as research consultants, project
managers, technical support professionals, purchasers, and archivists (Housewright, Themes of Change 2009, 256; Case, 2008). Although librarian roles are changing, research collaborations between faculty and librarians continue to benefit both partners. Faculty benefit from library resources and librarian expertise and that the importance of these benefits is underscored by faculty who have been impacted by library resource cuts; this faculty believe that the cuts have negatively impacted their ability to conduct research (Dickenson 2006; Pittas 2001). On the other side of the partnership, librarians benefit from the opportunity to “secure the library’s future as a significant partner in research and scholarship” (Case, 2008).

When academic libraries impact faculty research productivity, they also impact institutional quality. Traditional library measures can be linked to faculty research productivity; for instance, Wolff (1995) linked research activity to reference inquires, and other authors suggested grants and publications as indicators of faculty productivity that could be connected to library factors (Pritchard, Determining Quality in Academic Libraries 1996; Gratch-Lindauer, Defining and Measuring 1998). Another author suggests that number of library books and journal may be correlated to faculty research productivity (Dundar and Lewis 1998, 614). In contrast, Rosenblatt suggested traditional library inputs/outputs were ill suited for documenting library contribution to faculty research (Rosenblatt, 1998).

Some traditional input/output measures may indeed be useful for correlating library value to the outcome of faculty research productivity. Much of this data can be obtained from individual institutional research offices or by using software packages such as Academic Analytics (Academic Analytics, 2010). Of course, there are many other predictors of faculty productivity not included on this list (Kaufman, 2001; Dundar and Lewis, 1998); many faculty productivity predictors are personal characteristics or related to institutional, not library, characteristics.
Other traditional approaches to the assessment of library impact on faculty research productivity are also viable. Librarians can count citations of faculty publications (Dominguez 2005). Budd used a citation database to discover connections between the number of publications faculty produce and library volume counts, total expenditures, materials expenditures, and professional staffing (Budd, Faculty Publishing Productivity 1995; Budd, Increases in Faculty 1999). Baughman and Kieltyka also found a positive relationship between faculty publications and library holdings (Baughman and Kieltyka 1999). Librarians can also investigate how many citations faculty use that could have been accessed via the institutional library (Poll and Payne, 2006), a practice that can decrease faculty research cycle time (Webster and Flowers 2009, 306). Ahtola (2002) and Smith (2003) employed this approach to study dissertations. Yet another study showed that a particular library supplied 95% of the journals in which their faculty publish, and 90% of faculty citations were available from campus libraries (Wilson and Tenopir, 2008). In other research, library expenditures (Dundar and Lewis 1998; Franklin, 2002) and “perceived adequacy of university library facilities” (Fairweather, 1998: 15) were connected to increased research productivity.

In addition to input/output assessments of faculty research productivity, some researchers have investigated the connection between faculty research and reading, a connection that may be explored in future academic library value research. Faculty productivity and award recognition have both been linked to increased reading (Tenopir and King, 2007). In one study, researchers questioned faculty about the last scholarly article they read and about how much time they spent identifying, obtaining, and reading the article (Tenopir and King, 2007). They found that faculty spend about 8-17 minutes reading to identify and obtain articles and 34 minutes actually reading
the articles; this adds up to 143-159 hours of reading annually (Tenopir and King, 2007). More than half stated that their reason for reading was research; 20% attributed reading to teaching preparation. Other purposes included grant proposal preparation, current awareness, and consulting (Tenopir and King, 2007). They also stated that reading helped them develop new ideas, improve research results, or alter the focus of their research work (Tenopir and King, 2007). Studies like this one can be replicated or adapted to further explore the nature of academic library value in the context of faculty research productivity.

2.4 Valuing the Impact of Academic Library

A few academic libraries have attempted to estimate their monetary value. For example, at California State University Northridge, Oviatt Library conducted a valuation study. They showed that, “if our users had to pay for [library] resources and services in 2006/07, they would have paid at least US$31,977,586” (Oviatt Library 2008, 1). At Cornell University, librarians estimated library value at US$90,648,785 in 2008/2009. However, they did not attempt to value some electronic collections, public computers, library instruction, and some special collections (Cornell University Library, 2010). Such large-scale valuation studies are challenging and may not be feasible for all libraries. According to Poll, assessment “is most difficult when one tries to measure the effect of the library as an entity”; it is more feasible to measure outcomes of individual services.

Reference assessments have focused on different aspects of quality reference service provision. One study covered the skills that make librarians “great” (Quinn, 1994). Another study researched the amount of time needed for quality reference transactions (Stalker and Murfin 1996). Still another explored how reference librarians conceptualize reference work (Gerlich, 2006). Additional studies focus on how much effort reference transactions require (Gerlich and
Several studies have estimated the “functional cost” of reference services, an approach described in detail by Abels, Kantor, and Saracevic (Abels, Kantor and Saracevic 1996) using data from Kantor, Saracevic, and D’Esposito-Wachtmann (Kantor, Saracevic and D'Esposito-Wachtmann, 1995). Through an interview protocol, researchers identified labor costs associated with staff times, direct costs, and the annual number of reference transactions (Abels, Kantor and Saracevic 1996). In 1995 Dollars, Abels, Kantor, and Saracevic found that reference costs range from US$1.24 to US$38.00 (Abels, Kantor and Saracevic 1996). Previous studies identified different ranges: US$9.00 to US$28.00 (Kantor, Three Studies 1986), US$0.86 to US$8.93 (Association of Research Libraries 1980, 1994), and an average of US$14.29 (Cable 1980). These studies reveal a wide range of variation, probably attributable to quality of the service, operational policies and procedures, or a mismatch between capacity and demand (Abels, Kantor and Saracevic, 1996).

Furthermore, electronic resources help library users, especially faculty, to be more productive. For example, electronic resources allow faculty to integrate resources into their proposals, articles, and reports regardless of location and to explore interdisciplinary research (Luther, 2008). Consequently, a number of studies have investigated the value provided by academic library electronic resources. These studies have explored usage counts, contingent valuation, return-on-investment calculations, and cost/benefit analyses.

Academic librarians often equate use and value; therefore, many seek to capture the usage of electronic resources. Two sources for e-resources usage data are vendor supplied datasets and web log use statistics Usage logs and vendor reports show usage, which could indicate value. However, they “do not show why someone used or requested a source or the outcomes on their
work from using that source. Downloads may not be equal to actual use or satisfaction—someone may download an article and find it worthless for their task or they may be unhappy because they did not find what they needed” (Tenopir, Value 2009). Also, “the utility of vendor statistics is hampered by inconsistent measurement frames, differing metrics, and different definitions for the same metrics (Counter, 2007). Web logs suffer from a lack of granularity, standardized metrics and reporting protocols that allow comparison among institutions. More importantly, neither method captures the ‘why,’ or the purpose of the use. Without this information, it is virtually impossible to determine if the resources are being used to advance student learning or any other desirable outcome. One established solution is the Association of Research Libraries (ARL) MINES for Libraries protocol. It is an online ‘transaction-based survey that collects data on the purpose of use of electronic resources and the demographics of users’ (Association of Research Libraries, 2005, in Ackermann, 2007).

Contingent valuation compares the time or other costs of not having a service with the time or cost of the service. This method has been used to estimate the value of electronic resources, especially journals. One study asked library users to indicate what they would do if the last journal article they read was not available to them from the library and estimate the costs to get it another way. The results showed that the library journal collection saved over 100 faculties, having electronic access saved another 23 faculty, an overall return-on-investment of 2.9:1 (King, Aerni, et al. 2004). Another study “estimated [the value of] the Portuguese electronic scientific information consortium B-on, using the estimated value of time saved to measure the benefits, obtaining a ratio of 5.35:1” (Melo and Pires 2009, 8). Kantor and Saracevic also developed a model for the evaluation of digital library impact that includes “the assigned dollar value of the service, the length of time spent using the service and the question ‘was the value worth the time?’(Kantorand Saracevic, 1999).
Return-on-investment can be defined as “income received as a percent of the amount invested” or “return value for the life of an investment, not just a gain or loss, or a year-to-date return” (Luther 2008, 5). The goal of academic library return-on-investment studies is to “establish a relationship between the library and its university that could be expressed in quantifiable terms that could satisfy administrators” (Tenopir, 2009, 111). Perhaps the best known academic library return-on-investment study took place at the University of Illinois at Urbana-Champaign (UIUC). At that institution, university administrators have numerous strategic goals; one is to attract and retain top faculty (Luther 2008). A key factor in recruiting top faculty is the ability of an institution to obtain grants (Luther, 2008) and, indirectly, prestige (Weiner 2009, 4). Therefore, the UIUC study set out to link the library to grant income generation (Luther 2008) by connecting citations to resources in the library collection to successful grant proposals and the income they generate (Luther, 2008). Researchers focused on the ways in which electronic resources increase faculty productivity, productivity increases grant applications, and grant funding generates an environment that is attractive to top faculty recruits (Kaufman, 2008). The UIUC study demonstrated that the library produced a return-on-investment of 4.38:1 (Kaufman, 2008) in 2006.

In a similar international study, Kaufmann, Luther, Mezick, and Tenopir measured the value of electronic journal collections in academic libraries focusing on grant income. ROIs ranged from under 0.27:1 to 15.54:1 (Tenopir, Love, et al. 2009, 3). According to Tenopir, “this variation has much to do with the purpose of the institution, with the high being for a pure research institute and lower for teaching/research universities in countries without a high number of competitive grant funds. [The researchers recommend] caution...when comparing ROI across institutions” (Tenopir, Love, et al. 2009, 3 and 12).
In light of these studies, librarians can examine the degree to which citations impact whether or not faculty are awarded grants. Certainly, many non-library factors impact grant funding (Lehner, 2009). Grant literature indicates that “the whole grant system rests on the assumption that the best proposals or the best researchers are winning in the competitive grant application game” (Laudel, 2006, 376). According to Laudel (2006, 398, “empirical findings demonstrate that a scientist’s successful acquisition of competitive grants is influenced by a variety of factors such as a country’s general investment in research, a scientist’s research field, the availability of enabling funds, and the continuity of the research trail. These factors depend either partly or not at all on a scientist’s or a proposal’s quality….Rejecting the quality-only assumption casts doubt on external funding per se as a useful performance indicator. It seems especially problematic to use it in a comparative manner or to aggregate it” (Laudel, 2006, 400). Neither of these uses are the intention of current library return-on-investment studies; future researchers can investigate the merits of various data uses.

In the future, researchers might expand library contributions to return-on-investment targets, including patents or technology transfer (Kaufman, 2008). They might also explore non-income outcomes (Lehner 2009), like tuition (Luther, 2008), learning outcomes, civic engagement, and campus relations with local, state, national, and international communities (Kaufman, 2008).

A substantial volume of literature explains why institutional rank is not a valid indicator of quality. Rankings-based cross-institutional comparisons “can drain time and energy from more significant and more often internally motivated assessments of learning, effectiveness, and outcomes” (Keeling, et al. 2008). From an institutional perspective Capaldi, Lombardi and Abbey, et al. (2008) maintains that they trap many institutions in “a self-defeating effort to manipulate data to make us look better than we are”. According to Keeling et al. (2008, 3) it is unlikely that the annual ranking of colleges and universities by popular magazines have
improved student learning or educational outcomes. There is no evidence that institutions with ‘higher rankings’ have better student outcomes and there is certainly no evidence that rankings in magazines have any relationship to the ability of institutions of higher education to serve the public good.

Still other authors argue that institutional rankings do not measure the “real value” of a university (Guskin, Reducing Student 1994; Guskin, Restructuring 1994; Guskin, Facing 1996; Pike, Measuring Quality 2004). The real value of an institution of higher education is “the processes and outcomes of what we do…not what is taught, but what is learned” (Levesque 2002, 3). Pike believes that “educational quality seems to have little to do with resources and reputation” (Pike, Measuring Quality 2004) citing the lack of alignment between institutional benchmark scores.

Even so, many students make application and matriculation decisions based, at least in part, on institutional rank; changes in U.S. News and World Report rankings impact admission outcomes. Faculty also are influenced; U.S. News and World Report rankings affect faculty recruitment (Lang 2005) and faculty retention (Matier 1989). They can also impact and university pricing policies (Monks and Ehrenberg 1999), especially at public institutions (Meredith 2004, 459), as well as donations to institutions and other economic factors (Brewer, Brewer and Goldman 2002; Griffith and Rask 2004; Dahlin-Brown 2005; Zhang 2005; Marginson 2006; Smith-Doerr 2006; Lang 2005). Because “most rankings have some value for some observers interested in some characteristics of higher education institutions” (Capaldi, Lombardi and Abbey, et al. 2008, 3), institutional rankings maintain their importance.

According to U.S. News and World Report (2001), they assign greatest weight in their ranking formula to academic reputation; however, many authors dispute this claim. For example, one study found that “the most significant ranking criterion is the average SAT scores of enrolled
students” (Webster, 2001, 235), and after SAT, the next most important ranking criterion is graduation rate (Webster 2001, 243). For top national doctoral universities, one more factor is especially significant: endowment funds. Endowment funds are positively associated with almost all the variables used to rank these institutions. Endowment per student provided an even stronger positive association (Michael, 2005). This indicates that “money plays a significant role in how an institution is ranked” (Michael, 2005).

Not only is institutional rank a controversial topic in higher education, it is problematic from a library perspective. It is difficult to demonstrate the impact of the library on institutional rank because library services and resources are “intertwined” with other institutional activities and hard to isolate (Bertot and McClure, 2003; Thompson, Cook and Kyrillidou 2005). For example, studies exist that indicate that higher per student expenditures affect student learning (Toutkoushian and Smart 2001), graduation rates (Goener and Snaith 2003/2004; Blose, Porter and Kokkelenberg 2006), prestige (Volkwein and Sweitzer 2006; Francis and Hampton 1999), and library resources (Goener and Snaith, 2003/2004; Weiner 2009, 8). In fact, Weiner shows that the contribution of the library to institutional reputation is “disproportionately high” relative to its cost (Weiner 2009, 9). However, common sense suggests that institutions that spend more money per student are better in many areas and none of those areas can take “credit” for their value.

In a similar situation in the United Kingdom, a university’s academic excellence (based on its Research Assessment Exercise (RAE)) and its library expenditures have been proven to be indirectly linked (Oppenheim and Stuart, 2004). However, this correlation could mean at least three different things: the RAE rating is affected by library expenditures, the RAE rating leads to increased library expenditures, or both are caused by a third factor that increases them both (Oppenheim and Stuart, 2004). According to Oppenheimer and Stuart (2004), “the most likely
reason for the positive correlation…is that the best institutions have both the best RAE ratings and the best libraries” (Oppenheim and Stuart, 2004). Oppenheimer and Stuart conclude, “There needs to be a more detailed study as to how the money is spent rather than just how much money is spent.”

Liu demonstrates a connection between university prestige and library collections and library serials collections. The study purports to “reconfirm that indeed library collections contribute significantly to the prestige of universities” (Liu 2003, 277). Liu argues that “academic research libraries seek to maximize their utility by expanding the size of their library collections” and “the results show that there is a fairly strong association between library volume and serial collections and prestige of universities. Library volume and serials collections accounted for a significant amount of the contribution [26-40%] to prestige of universities” (Liu 2003, 290).

Libraries of all types value service to society. Academic libraries are underpinned by their value of an “educated populace for a democratic society” (Hisle, 2005, 4). Therefore, it is not surprising that some authors suggest “positive societal return” and “social return-on-investment” as frameworks for identifying criteria for examining the value of academic libraries (Kaufman, 2001). Positive societal return is the return-on-investment to society for what a university spends (Kaufman, 200).
CHAPTER THREE

MEHTODOLOGY

3.0 Introduction

This chapter provides an explanation of the methods employed for the study. This enables further understanding of the research as well as the results presented in the next chapter. The chapter begins with preconception of the researcher and furthered with explanations of how the study was conducted. The main areas covered in this chapter are research design, population, sampling procedure and sample size, research instruments, data collection procedure and data analysis method.

3.1 Research Paradigm

Research methodology is an important aspect any research endeavour and it seeks to provide procedures followed in collecting and analyzing data for a study. These methods/procedures must comply with scientific process. For this to happen, one needs to specify the research design (Kumar, 2011:94). According to (Kumar, 2011:94), a researcher’s chosen design is informed by the adopted research paradigm. This is because different researchers have different beliefs and how they view, interact and understand issues within their environment or surroundings and these affect the way in which researches are conducted. Despite these facts, all research studies are guided by standards, principles and rules which must be followed accordingly. It is these standards, principles and rules that referred to as “research paradigm”. According to Weaver and Olson (2006:78), a research paradigm is a pattern of beliefs, practices and standards that regulate an inquiry into phenomenon and provide researchers with guides for accomplishing an investigation. There are two broad research paradigms namely positivism and interpretivism. The positivist approach is more specific and well structured (Kumar, 2011). On the other hand
the interpretivist approach also known as the qualitative approach seeks to “understand, explain, explore, discover and clarify situations” but lends to bias (Kumar, 2011:’104).

According to Guba and Lincoln (1994:92), positivist paradigm is referred to as the “received view” that dominates an inquiry both in social and physical sciences. Positive paradigm holds researchers to be objective as much as possible and requires that researchers are dethatched from main object of research study so as to capture the “real” reality of a phenomenon. The purpose of positive paradigm is to enable the researcher predict and explain any changes in knowledge of inquiry (Guba & Lincoln, 1994:92). With regards to interpretivist paradigm, it is the philosophical foundation of an inquiry which holds the view that there exist multiple realities and many truths to an inquiry into a phenomenon. According to Weaver and Olson (2006), interpretivist paradigm is a holistic perspective of the inquirer and the environment and that there are many methodological approaches to an inquiry into a phenomenon. The purpose of interpretivist paradigm is to interview various stakeholders to obtain the depth and value of the content of data obtained.

Having explained the two research paradigms, it is important to state that due to the complexities associated with research studies, none of the paradigms can single handedly meet and satisfactorily address all the requirements of research mythologies. It is therefore of interest for this study to blend both the positivist and interpretivist paradigms. Combining both paradigms provides strong basis and ability to examine the role of the academic library in RMU in facilitating research.

### 3.2 Research Design

The design research for this study is descriptive research and this focused on the question: what is the role of the academic library in RMU in facilitating research? The descriptive survey attempts to measure what exists with respect to variables or conditions in a situation. According
to Creswell (2003) a descriptive survey basically inquires into the norms. It is preferred because of the economy of the design and the rapid turnaround in data collection. It is easy to identify attributes of a large population from a small group of individuals. Again there is no administration or control of treatment as is found in experimental research (Ary, Jacobs and Razavieh, 1990; Babbie, 1990).

The study employed a combination of qualitative and quantitative methods which focuses on the question “what role does academic library play in facilitating research?” The decision to combine quantitative and qualitative methods for this study was justified on the grounds that the researcher wanted to explore the research questions from two different perspectives which will lead to a broader understanding of issues relating to topic. The decision to use qualitative method was justified on the grounds that it helped the study to explore the research questions from the perspective of the students and lectures which in turn leads to broader understanding of issues relating to the topic. Also, the study employed qualitative method in order to assess the views of the students, librarians and lecturers of the Regional Maritime University, Ghana on the role of academic library in facilitating research works. The knowledge that is sought-after has to be measured in order to answer the research problem hence the use of qualitative method and this involved seeking of views of the respondents. Saunders et al. (2007) posited that qualitative research relates to the method of gathering variety of empirical data through introspection, individual opinions, interviews and observation to understand the subject under study or views of peoples on the subject under study.

Also, the use of questionnaire requires that questions are asked using questionnaire to extract the needed data for the purposes of increasing the trustworthiness of the results and achieving the research objectives hence quantitative method. Bryan and Bell (2007) referred to quantitative design as “a research strategy that emphasises quantification in the collection and analysis of data” (Bryan and Bell, 2007, pg. 24). Also, Martins (1996) stated that quantitative research is an
“inquiry into a social or human problem based on testing a theory composed of variables, measured with numbers, and analysed with statistical procedures, in order to determine whether the predictive generations of the theory hold true” (Martins 1996; pg. 32). Saunders et al (2007) posited that qualitative research relates to the method of gathering variety of empirical data through introspection, individual opinions, interviews and observation to understand the subject under study or views of peoples on the subject under study.

3.2 Study Population

Research population has been defined by Parahoo (1997:34) as the total number of units from which data can be collected and this includes individuals, artefacts, events or organisations. In addition to this definition Burns and Grove (2003:21) define population as all the elements that meet the criteria for inclusion in a study. The population for this study consisted of students, librarians and lecturers of the Regional Maritime University, Ghana. These categories of the population were considered suitable for the purpose of this study and the researcher is of strong belief that they are best placed to provide relevant data for this study.

3.3 Sampling Method and Procedure

Sekaran (1992) wrote that sampling is the process of selecting a sufficient number of elements from a population so that by studying the sample and understanding the properties or characteristics of the sample, researchers would be able to generalize the properties of the sample to the population.

Several methods can be employed in the selection of the study sample population. For the purpose of this study the respondents were selected using simple random sampling method. A simple random sample is meant to be an unbiased representation of a group. The respondents are
chosen randomly, so that they all have the same possibility of belonging to the sample; it guarantees that all the possible samples that we can take from the population have the same probability of being chosen (Tagoe, 2009). In a simple random sample, as in the case of this study, individuals are chosen at random and not more than once to prevent a bias that would negatively affect the validity of the result. A very simple method was employed to generate the samples by assigning numbers to the list of names. The numbers assigned to each name were copied on a piece of paper. These numbers were cut into pieces and folded and put in a box. These were shuffled very well and numbers picked without replacement until the desired sample size was reached.

Due to the nature of the study, no element was selected twice or gain after being selected once, to give a random sampling without replacement in order to produce an unbiased representation of a group. Given that the study sought responses in connection with the role of academic libraries in facilitating academic research, it was not interesting to ask the same respondent twice. Time and resource constraints influenced the determination of the sample size. In the case of the student respondents, a total of 73 were selected out of the total student population of the Regional Maritime University. A total of 10 lecturers were involved in the study. The main advantage of the simple random sampling method is that it offers each respondent an equal chance of being chosen.

3.4 Research Instruments and Data Collection

Data collection is an important exercise in any research activity. This is because inadequate or inaccurate data can have an adverse impact on the results obtained which can eventually lead to invalid conclusion. The main research instruments employed for the data collection were both questionnaire and interview. According to Yin (1994), questionnaires are the most appropriate method for case study. For the purpose of this study questionnaire was used because it helped to
collect the relevant data from the large number of respondents in various selected locations. Also, because of the social climate it is opened enough to allow full and honest answers. It also ensured that standardized data were collected from identical questions without the need to have face to face interaction. Apart from these, it saves time and resources. The questionnaire also enabled the researcher to collect standardized information in respect of the same variables for everyone in the sample selected (Zahari, 2007:21). This makes the questionnaire an indispensable tool in gathering primary data about people, their behaviour, attitudes, opinions and awareness of specific issues.

Another important research instrument employed in the study was interview. Although interview is expensive in terms of time and cost, the reasons for using interview was that face-to-face encounters which helped in seeking clarification on some issues arising from the questionnaire process. The interviews were also conducted with librarian of the university to obtained additional data for the study. Interview was used due to its flexibility and adaptability in the face-to-face encounter. It allowed for follow-up questions to be made on the spot.

In addition to the primary data collection instruments, secondary data were also sourced from the published articles, journals and other relevant published researches which were used for the literature review. The secondary sources were used because they were documented evidence and readily available. These sources provided the background information for study and also helped the researcher to have more insights on the topic under consideration of the study. These sources of data were less expensive access in terms of time and money. It also afforded the researcher the opportunity to collect high quality data which would not have been of the same quality if the researcher were to be collected in its primary form. Saunders et al., (2007) quote Stewart and Kamins (1993) as stating that “secondary data are likely to be of higher-quality than could be obtained by collecting empirical data” (Saunders et al., 2007). However, some other researchers
advised against secondary data being collected prior to primary data collection and arguing that the literature review might influence the researcher’s conceptualisation of the study. Field and Morse (1996:27) stated that a literature review may mislead the researcher’s ability to make accurate decisions in the study.

The researcher believed that the literature review was important and necessary in providing guidance and identifying bias in previous studies. Furthermore, the reasons for employing this type of secondary data in this study were based on the views of Boslaugh (2007) who argues that, secondary data is economical and saves efforts, expenses, time and helps to make primary data collection more specific since with the help of secondary data, researchers are able to make out what the gaps and deficiencies are and what additional information needs to be collected. It also helps to improve the understanding of the problem and provides a basis for comparison for the data that were collected by the researcher.

Based on the research questions and objectives, questionnaires were designed to seek the views of the students and lecturers of the Regional Maritime University on the role of the academic library in facilitating research. The questionnaires were designed in line with the main research objectives. The questionnaires were semi-structured involving closed and opened-ended questions. Each respondent was given the same set of questionnaire to respond to. Two librarians of the Regional Maritime University were also interviewed.

3.5 Pre-Testing

In order to collect accurate and reliable data, it was appropriate to conduct a pre-test using the initial questionnaire. Thus before the questionnaires were finally administered to the respondents, initial questionnaires were developed piloted or pre-tested with seven students and two lecturers of the university. During this process suggestions were made to answer some of the questions and later revised accordingly. The questionnaire was given to the research supervisor
for final approval before administering. This is to ensure consistency, legibility, accuracy, understanding and avoidance of ambiguity.

3.7 Reliability and Validity

According to Morse et al. (2002), research is a fiction and has no value if it is not based on validity and reliability criterion. They stated that validity and reliability are required in all research methods. Ekall (2009) also explains that validity and reliability of the research are two factors that intend to verify the results of the research process and ensure the credibility of the research. According to Coleman and Briggs (2002) reliability is the extent to which a test or procedure produces similar results under constant conditions on all occasions. Wallen and Fraenkel (2001) state that validity is meaningfulness, appropriateness and usefulness of data collected of which researcher based their inferences on and that, reliability has to do with the consistency of these inferences over time”. Kuzel and Engel (2001) argued that all the research aim to find the believable and credible outcome which demands the application of validity and reliability. The literature on validity has become muddled to the point of making it unrecognizable, as Wolcott notes: whatever validity is, apparently ‘have’ or ‘get’ or ‘satisfy’ or’ demonstrate’ or’ establish’ it”’ (Wolcott, 1990).

Ekwall (2009) explains that validity and reliability of the research are two factors that intend to verify the results of the research process and ensure the credibility of the research. Validity is a method and means to measure what is really supposed to be measured. There are more hurdles involved in getting valid information or data in qualitative pattern as compared to quantitative pattern because qualitative paradigm gives certain proximity to the researcher and the subject; this implies that researcher and subject influence each other.

Artebrant et al. (2003) discussed that credibility of a study includes three dimensions validity, reliability and objectivity. Validity connects the theoretical and empirical area of the study.
although it is difficult to connect, it must be present while reliability means to what extent reappearance of the research will generate the same result. According to Coleman and Briggs (2002) reliability is the extent to which a test or procedure produces similar results under constant conditions on all occasions.

Guba and Lincoln (1999) stated that although the nature of knowledge in each of the quantitative and qualitative paradigm is quite different, all research must have “truth value”, “applicability”, consistency”, and “neutrality” in order to be rigour, so therefore, both paradigm needs specific criteria in order to be considered worthwhile. Within the quantitative paradigm, internal validity, external validity, reliability, and objectivity are the criterion to reach the goal of rigour while the qualitative research includes credibility, fittingness, audit ability, and conformability in order to be rigour. According to Guba and Lincoln (1999) verification strategies that ensure both reliability and validity of the data are activities such as ensuring methodology coherence, sampling sufficiency, developing a dynamic relationship between sampling, data collection and analysis, thinking theoretically and theory development.

In order to ensure quality of validity and reliability, the researcher exhibited a great deal of carefulness and skill in the data collection, analysis and presentation processes. Also, the data collected were subjected to thorough and critical examination in order to ensure that the quality of data collected is not compromised.

### 3.8 Ethical Considerations

Ethical considerations were paramount in the conduct of this research. According to Kumar (2011), ethical consideration should involve all the stakeholders in the research. These stakeholders include the research participants, the researcher and the funding institution. Ethical research considerations such as seeking consent, seeking and collecting sensitive information,
maintaining confidentiality, avoiding bias, avoiding incorrect reporting, the use of appropriate research methodology and the appropriate use of the research information will be practiced throughout the course of this research and thereafter. This research study was done using the highest form of ethical considerations and standards bearing in minds that institutional information. Information will not be divulged to third parties and no disclosure of respondent identities.

3.9 Data Analysis and Presentation Techniques

Data analysis followed after the completion of data gathering from the field. Some amount of data analysis will happen simultaneously during interviews. Mouton (2001) has opined that data analysis begins while the interview is still underway. The preliminary analysis offers opportunities on how to redesign research questions to focus on central themes as the interview evolves. This then paves the way for a more detailed analysis of participant responses which might lead to discovery of additional themes and concepts. Some of the analysis of data was done using simple descriptive statistical tools mostly in the form of frequency distribution and statistical averages such as mode, mean and median. This helped in illustrating the distribution of variables across categories. This was done using computer software such as Statistical Package for Social Sciences (SPSS version16) and Microsoft Excel 2007.

Thematic analysis was employed where necessary. Since the research touches on a variety of topics and themes, resorting to thematic analysis will contribute in contextualizing and “making connections between those themes to build a coherent argument supported by data” (Bazeley, 2009). The qualitative approach provided a deeper understanding of responses whilst the statistical analysis help in providing detailed assessment of patterns and responses (Driscoll, Appiah-Yeboah, Sahib and Rupert, 2007).
The responses obtained from the questionnaire were measured using 5-Likert Scale for measuring people’s opinions or views on given subjects with the following indicators:

1 = Strongly disagree
2 = Disagree
3 = Not sure
4 = Agree
5 = Strongly agree

The weighted average method was used to obtain the result for each variable as on the questionnaire. The responses to the questionnaire were measured using the formula below:

\[ WA = \frac{\sum W}{AN} = \frac{5n_5 + 4n_4 + 3n_3 + 2n_2 + 1n_1}{5N} \]

The above formula is explained as follows:

- WA denotes Weighted Average
- A denotes the highest weight
- N denotes total sample size
- \( n_1 \) denotes number of responses for Strongly Disagree
- \( n_2 \) denotes number of responses for Slightly Disagree
- \( n_3 \) denotes number of responses for Not Sure
- \( n_4 \) denotes number of responses for Slightly agree
- \( n_5 \) denotes number of responses for Strongly agree

Based on the results obtained from the above calculations, the study employed the Vagias (2006) Anchor for measuring the respondents’ opinions. Table 3.1 below shows the scale for measuring and interpreting the results obtained from the above calculations.
Table 3.1: Scale for measuring and interpreting respondents’ views

<table>
<thead>
<tr>
<th>Mean Range</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.81 – 1.00</td>
<td>Extremely High</td>
</tr>
<tr>
<td>0.61 – 0.80</td>
<td>Very High</td>
</tr>
<tr>
<td>0.41 – 0.60</td>
<td>High</td>
</tr>
<tr>
<td>0.21 – 0.40</td>
<td>Low</td>
</tr>
<tr>
<td>0.01 – 0.20</td>
<td>Very Low</td>
</tr>
</tbody>
</table>

Source: Vagias (2006)
CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF RESULTS

4.1 Introduction

The results obtained from the responses to the questionnaire were presented and analysed statistically using percentages and average mean. In order to aid understanding of the results obtained, tables and charts are used in presentation. The findings were also discussed and related to empirical studies in this study. The main issues covered in this chapter are the personal characteristics of the respondents and the four research objectives.

4.2 Respondents Characteristics

This section in this chapter analyses the personal background of the respondents and these include their gender, age, educational programme and level. According to the questionnaire results, out of the 73 respondents, 59 representing 81% of the respondent were males while 14 making 19% of the respondents were female. The pie chart below presents the gender distribution of the respondents.

Figure 4.1: Gender of Student Respondents

Source: Field Data, 2015
Table 4.1: Ages of Student Respondents

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-25</td>
<td>23</td>
<td>32</td>
</tr>
<tr>
<td>26-30</td>
<td>20</td>
<td>27</td>
</tr>
<tr>
<td>31-35</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td>36-40</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>41-45</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>46 and above</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field Data, 2015

According to the questionnaire results as shown in Table 4.1 below, 23 constituting 32% were between 20-25 years, 20 making 27% were 26-30 years while 13 being 18% were 31-35 years, 12 representing 16% were between 36-40 years, 5 constituting 7% of the respondents were 41-45 years. From these results, none of the respondents were 46 years and above.

According to Figure 4.2 below, out of 73 respondents, 17 representing 23% stated that they were international students while the remaining 56 constituting 77% said they are national. This therefore suggests that majority of RMU are Ghanaian students. Figure 4.2 illustrates the categories of the students.

Figure 4.2: Categories of Students

Source: Field Data, 2015
According to the results shown in Table 4.2, 13 being 18% of the respondents indicate that they were pursuing Master’s in Ports and Shipping (MPS) programme, 14 representing 19% said they pursue Bachelor in Ports and Shipping (BPS), while 7 being 10% of the respondents stated that they were pursuing Bachelor in Logistics Management (BLM), 10 making 14% were pursuing Bachelor in Nautical Studies (BNS), while 19 constituting 26% also indicate that they were pursuing Bachelor in Marine Engineering (BME) and the remaining 10 representing 14% of the respondents were pursuing Bachelor in Electronic Engineering (BEE).

### Table 4.2: Programme being pursued

<table>
<thead>
<tr>
<th>Programme</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPS</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td>BPS</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>BLM</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>BNS</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>BME</td>
<td>19</td>
<td>26</td>
</tr>
<tr>
<td>BEE</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>73</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Field Data, 2015

The study results shown in Figure 4.3 below illustrate the degree level of the respondents. In this response, out of 73 respondents, 9 representing 12% of the respondents stated that they were in level 100, 20 making 27% said they are in level 200 while 12 constituting 17% are in level 300, 18 being 25% were level 400 students. However, the remaining 14 being 19% are undertaking a Masters Degree programme.
The researcher wanted to know the employment status of the respondents and according to the study result as shown in Figure 4.4 below, 5 stated that they were engaged in white collar jobs (clerical or administrative), 8 said they have been in blue collar job (industrial or manual), 1 of the respondent stated professional, 3 indicate that they were non-professional, 51 of the respondents said they were unemployed while 5 said they were entrepreneurs.

**Figure 4.4: Employment Status**
4.3 Frequency of Users Visiting the Library

This section sought to find out the frequency of the student visiting the library. According to the questionnaire results, out of the 73 of respondents 51 representing 70% of the respondents said they usually attend the library while 22 indicated that they do not often attend the university’s library. Based on these results, the researcher wanted to know about how they access information for their research works. In their responses, it was found that 2 use their mobile telephone, 11 stated that they use their tablets, while 19 said they use the internet cafe and the remaining 41 said from their personal computer.

Figure 4.5: Means for seeking information

According to the study results obtained from the questionnaire shown in figure 4.6 below out of the 73 respondents, 12 stated that they often visit RMU library once weekly, 19 stated that they have been visiting RMU Library twice weekly, 39 of the respondents said they visit the RMU library three times weekly, while 2 said they often go there four times weekly and the remaining 1 indicate that they visit RMU library on every school day. From these results it can be said that majority of the respondents patronise the University’s library three times a week.
Traditionally, library is seen as the heart of the academic institution, a place of fundamental importance to every researcher, teacher and student on campus. Traditionally, too, researchers as well as students visited the library regularly, consulted the contents of its shelves, talked to library staff, filled in forms to order books or articles from that library or one in another institution, and spent time browsing, reading and working within its walls.

### 4.4 Purpose of Users Visiting the Library

The study wanted to find out purpose for the student visit the library. The results are illustrated in Figure 4.7 below. According to Figure 4.7, 15 representing 21% of the respondents stated that they do go to the RMU library to read their notes, 39 making 53% said they go there to do their researches while 19 constituting 26% state that they go there to do their assignments.
Figure 4.7: The purpose for visiting the Library

![Pie chart showing purposes for visiting the library: To do my research (53%), To read my notes (21%), To do my assignment (26%)]

Also, Figure 4.8 below shows the types of materials the respondents access in the library. From Figure 4.8, it is seen that 35 making 48% said they purposely go there to seek for text books, 18 being 25% of the respondents also seek for thesis, 9 representing 12% stated that they go to the library to seek for newspapers while 11 constituting 15% of the respondents seek for journals.

Figure 4.8: Type of materials the respondents find in the library

![Pie chart showing types of materials found: Text books (48%), Thesis (25%), Journals (15%), Newspapers (12%)]

University of Ghana http://ugspace.ug.edu.gh
4.5 Available resources and how they answer research needs

The questionnaire in this section was designed to find out how the available resources at the library meet the research needs of the users. All of the 73 respondents indicated that they were able to get access to material in the RMU library. According to the study results, 46 making 63% of the respondents stated that the libraries resources are appropriate for their course, while 27 being 37% said that the libraries resources are not appropriate for their course. Based on these results, 41 constituting 56% of the respondents said the resources were up-to-date are relevant while 32 making 44% stated that the resources were up-to-date are not relevant. In order to have a clear understanding of availability of resources at the library, the respondents were asked about how available the resources were. In their response, 1 of the respondent indicated that the needed resources were never available for their assignments, 59 stated that the resources were available sometimes, and 9 said the resources were available most of the time, while 4 said the resources were available always. The researcher asked about easy to find the resources at the library. According to results, out of 73 respondents, 3 stated that the resources were never easy to find, 43 said they were easy to find sometimes and 19 indicates the resources were easy to find in most of the time while the remaining 8 of the respondents said the resources were easy to find always.

Furthermore, the researcher wanted to know how the respondents usually ask library staff for assistance when they could not find any library resources. Out of 73 respondents, 6 indicated that they have never asked library staff for assistance, 40 said they sometimes ask the library staff for assistance whenever they could not find any library resource, 21 of the respondents said most of the time they do ask for assistance from the library staff, while the remaining 6 said they always ask library staff for assistance whenever they could not find any library resource. In this regard, the study went further to find out how relevant the suggestions given by the librarians were. According to the results shown in Figure 4.9 below, Out of 73 respondents, 2 stated that
they never found the suggestions relevant to finding alternative resources apart from the RMU library, 35 said they sometimes the suggestions were to find resources from RMU library while 31 indicates that most of the time the suggestions were to find resources from RMU library, while the remaining 5 of the respondents said they always find the suggestions useful in finding resources apart from the RMU library.

Figure 4.9: Suggestions to find resources at the RMU Library

![Bar chart showing the distribution of responses to the question: How often do you find the suggestions useful in finding resources apart from the RMU library?]

4.6 Applications of New Technologies in Accessing Electronic Sources

This section sought to examine how new technologies were being applied in assessing electronic sources at the RMU library. According to the results as shown in Figure 4.10 below, out of the 73 respondents, 14 representing 19% indicated that the school has an electronic database in the library while 52 making 71% stated that the university has no electronic database in library. However, 7 being 10% of the respondents said they are not aware the school had an electronic database in library. Out of the 73 respondents, 15 representing 21% indicated that they use databases in their research works while 58 making 79% stated that they do not use databases in their research works.
It must be noted from results that the use of technology in research works is very important especially in today’s increasing technological innovations. It is imperative to state that academic library is moving from a somewhat static organization to a dynamic one in which the rates of innovation are increasing. This trend is evident, not only in the recognition of the need to innovate, but also in the diversity of roles academic libraries play in research activities. Innovation can be viewed as a continuum, where dynamic-idea creating organizations generate considerably more innovations than design future teaching and learning approaches. As higher education increasingly emphasizes competencies over courses and utilizes technology and instructional modalities that accentuate individualized learning, students will experience learning and lecturers experience teaching environments that are less structured-making it even more important for them to be self-directed learners with strong information literacy skills.

The researcher wanted to know if users are given training in database application in researching from the library and in response to this question, 20 representing 27.40% of the respondents said they were given training in the use of database applications for researching from the library, while 52 making 71.23% said they were not given such training on database and the remaining 1
constituting 1.37% said they did not remember being given training concerning database applications for researching. With regards to those who were given training, the results indicate that 60 constituting 82% said such training was necessary, 11 making 15% indicated that such training was not necessary while the remaining 2 being 3% of the respondents were not sure on whether such training was necessary.

Furthermore, the study wanted to find out the nature of interpersonal relationship of the librarians. The results obtained from the questionnaire are illustrated in Figure 4.11 below.

**Figure 4.11: The Library Staff are friendly**

![Pie Chart](image)

According to the study result as illustrated in Figure 4.11 above, 6 representing 8% of the respondents said the library staff were never friendly, while 19 making 34% said sometimes the staff were friendly, 25 constituting 34% said most of the time the staff were friendly, while 23 being 32% also indicated that the staff always were friendly.

Figure 4.12 below, showed that out of the 73 respondents, 4 being 5% were of the view that are never treated them fairly and without discrimination, 21 making 29% indicated that sometimes the library staffs treated them without discrimination, 29 constituting 40% of the respondents said the library staff treated them most of the time without discrimination while 19 representing 26% of the respondents were of the view that the library staffs treated them always been treat...
fairly and without discrimination. Figure 4.12 below illustrates the views of the respondents on whether the library staff treated them well.

**Figure 4.12: Librarians treated users fairly and without discrimination**

![Diagram showing responses to whether the library staff treated users fairly and without discrimination.](image)

Out of the 73 respondents as in Figure 4.13 below, 4 making 6% stated that the library staff are never professional, 22 constituting 30% of the respondents indicated that the library staff were professional sometimes, while 33 representing 45% said most of the time, the library staff professional deal with them as professionals, 14 being 19% said the staff were always professional in their dealings with the students.

**Figure 4.13: Professional Competence of Librarians**

![Diagram showing responses to the professional competence of librarians.](image)
Out of 73 respondents, 4 of the respondents said the librarians never gave appropriate time and attention to their information needs, 28 said the librarians sometimes give appropriate time and attention, while 22 said the librarians most of the time gave appropriate time and attention, 19 indicates that the librarians always gave enquiries appropriate time and attention.

According to the study results as shown in Figure 4.14 below, 4 of the respondents said the librarians never responded clearly and accurately, 30 said the staff sometimes respond accurately, while 30 also said most of the time the library staff do respond accurately, while 9 indicates that the library staff always respond accurately.

**Figure 4.14: Library staffs respond timely**

4.7 Library Creates a Better -Work Environment for Users

This section sought to examine the environment of the library with regard to its conduciveness to for research activities. In response to whether the RMU library building was spacious enough, 31.5% of the respondents were emphatic that the RMU library building was spacious enough but 68.5% of the respondents disagreed to this view. In terms of availability of furniture, 43.8% of the respondents stated in affirmative while 56.2% said the furniture were not enough to meet the growing capacity of the users.
In assessing the serine of the library, the results obtained from the questionnaire showed that majority of the respondents (83.7%) described it as quiet, while 16.3% described it as less noisy. With regard to the temperature in the RMU library, the questionnaire results indicate that 19% said it was very cold, 36% said it was fairly cold but 22% described it as warm while 23% said it was very hot. An observation conducted by the researcher at the library indicates that even though the library has air condition which sometimes go off, it not enough considering the high temperature. Figure 4.15 below illustrates the views of the respondents concerning coolness in the library.

**Figure 4.15: Conduciveness of library temperature for academic research**

Concerning the decorations in the library, the questionnaire results showed majority of the respondents said it was good. In assessing the satisfaction level of the respondents on the use of the library, the results as seen in Figure 4.16 indicated that 78% of the respondents described their satisfaction as poor but 22% said it was good.
Figure 4.16: Decor in the RMU library

4.8 Analysis of Results Obtained from the Lecturers

This section analysed the data obtained from the university lecturers. The analysis is categorised into two sub-sections thus, background information of the lecturers and their views concerning the role of academic library in facilitating academic research.

4.8.1 Background information about the Lecturers

Concerning the degree levels being taught by the lecturers, the results shown in Figure 4.17 indicate that 30% of the respondents teach at master’s level, 20% each teach level 300 and 400 students respectively while 10% each teach level 100 students and 200, respectively.
In finding out the number of years the respondents have been teaching in the university, the questionnaire results revealed that majority (50%) have been teaching in the university for 5 to 10 years, followed by 30% who have been teaching for the past 2 to 4 years while 20% have been with the university for less than 2 years.

4.8.2 Role of Academic Libraries in Facilitating Academic Research

This section, the study sought the views of the respondents concerning how RMU library is of help to lecturers in facilitating their research activities. To do this, the respondents were asked to rank roles of the library that contribute positively to research works using the scale 1 = Strongly disagree, 2 = Slightly disagree, 3 = Not sure, 4 = Slightly agree or 5 = Strongly agree. The results are shown in Table 4.3 below.
Table 4.3: The roles of Academic Library in facilitating research activities

<table>
<thead>
<tr>
<th>Roles</th>
<th>Weighted Average</th>
<th>Interpretation</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help in providing research materials for researchers</td>
<td>0.95</td>
<td>Extremely high</td>
<td>1st</td>
</tr>
<tr>
<td>Provide access to publishers for faculty journals publishing</td>
<td>0.67</td>
<td>High</td>
<td>2nd</td>
</tr>
<tr>
<td>Increases faculty research productivity</td>
<td>0.63</td>
<td>High</td>
<td>3rd</td>
</tr>
<tr>
<td>Promotes new technologies and new models for scholarly communication</td>
<td>0.61</td>
<td>High</td>
<td>4th</td>
</tr>
<tr>
<td>Help recruit and retain top researchers</td>
<td>0.21</td>
<td>Very low</td>
<td>5th</td>
</tr>
<tr>
<td>Help researcher win research grants and contracts</td>
<td>0.19</td>
<td>Very low</td>
<td>6th</td>
</tr>
<tr>
<td>Help design content of instruction for lecturing</td>
<td>0.17</td>
<td>Very low</td>
<td>7th</td>
</tr>
</tbody>
</table>

Source: Field Data, 2015

From Table 4.3 above, the main roles in which the university’s library facilitate research activities of lecturers are (1) it helps in providing research materials for researchers; (2) provide access to publishers for faculty journals publishing; (3) increases faculty research productivity; and (4) promote new technologies and new models for scholarly communication. It is important to stated that one main role of academic library is to helps provide research materials in terms of current books, articles, researches and other publications for researchers in the university. It also helps provide access to publishers to enable publishers (lecturers) to publish their research works. Furthermore, libraries promote and exploit new technologies and new models of scholarly communications. Libraries are critically important in helping researchers to exploit the full benefits and opportunities of the networked world, including such developments as open access and social media. But libraries are not always well-equipped to promote change, and researchers sometimes resist efforts to modify their behaviours and practices. Nevertheless, many libraries have succeeded in addressing such problems, by establishing stronger links with
researchers and re focusing their services to promote and exploit new technologies and new models of scholarly communication.

Also, libraries provide a common ground for faculty to work with librarians in helping students become more critical researchers and to offer faculty a basis for integrating the outcomes into their courses and help lecturers design the content of instruction for students and plan their lecture notes.

4.9 Analysis of Results Obtained from the University’s Librarian

The data obtained from the interview conducted with the university’s librarian are analysed in this section. This was to find out their views on the roles their department plays toward academic research activities. In response to whether the academic library is creating the conducive and innovative climate for research activities considering today’s contemporary and rapidly changing knowledge environment, the interviewee answered in the affirmative but with explanation. The librarian explained the RMU has not had the necessary support from the school authority to create such environment. Funds that are allocated to library per year are woefully inadequate to afford infrastructures that would give the library a face lift.

On whether the library facilities are available for efficient and effective research, the university’s librarian explained that the books on the shelves are not adequate. According to the university’s librarian, most books needed by users of the library are in limited quantity. In effect they are reserved and given upon request and these books are not given out because they are expensive to buy and hard to find. There are reference and reading books, few journals and periodicals for reading.

The university’s librarian indicated that the library facilities are not adequate enough to meet the demands of users and was quick to add facilities are not innovative in meeting the increasing research needs of its users.
Concerning the challenges affecting smooth running of the library, university’s librarian stated that the main challenges were lack of funds, logistics and management support to expanding access in meeting the growing needs of users.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter is the concluding part of this study. It presents the summary of the findings, and based on the research findings, conclusion is drawn. Also, recommendations are provided for policy implications as well as suggestions for further studies are presented for future researchers.

5.1 Summary of Findings

The study sought to examine the role of the academic library in Regional Maritime University in facilitating research. To be able to achieve this goal, six specific objectives were set and these objectives were achieved as follows:

**Objective One: To assess the frequency and purpose of users visiting the library**

The study found that the users usually visit the library at least three times weekly. These are mostly students who visit the library to do their assignments, read their lecture notes and acquire reading materials for their research works. Many are those who visit the internet, thus, they access the internet to collect information instead of using the library in the traditional way.

**Objective Two: To find out the sort of materials accessed at the Regional Maritime University library**

The study revealed that the sorts of materials accessed at the Regional Maritime University library by lecturers and students were articles, publications in journals, textbooks and thesis. However, the study found that the material and facilities at the library were not adequate and up-to-date considering the growing needs of users.
Objective Three: To ascertain how the library meets the research needs of users

According to the results, it was found that most books, research materials as well as other facilities in the library are inadequate. In effect facilities are reserved and given upon request. Again, even though the library is incapable of meeting the research needs of users, it helps in facilitating research activities. In this regard, it was found that the university’s library:

i. helps in providing research materials for researchers;
ii. provides access to publishers for faculty journals publications;
iii. increases faculty research productivity; and
iv. promotes new technologies and new models for scholarly communication.

Despite these outcomes, the academic library is faced with challenges in its quest to contribute to the research needs of users. The main challenges were lack of funds, logistics and management support in expanding access so as to meet the research needs of users.

Objective Four: To determine whether the library promotes and exploits new technologies and new models of scholarly communications

The study found that the university has an electronic database and promotes new technologies in library hence the library, through the support of the university, make an effort to take this further to adopt and exploit new technologies and new models of scholarly communications.

Objective Five: To determine users’ satisfaction levels with library resources and services

The study revealed that satisfaction level of users regarding the library resources and services was poor. This was due to the inadequacy of the facilities to meet their research needs.

Objective Six: To determine if the library creates a better work environment for users

It was found by the study that even though the academic library is unable to meet increasing demands of users, it is creating a conducive and innovative climate for research activities
considering today’s contemporary and rapidly changing knowledge environment. The RMU library building was spacious enough, the temperature in the RMU library was cool and the decorations in the library were good and appealing.

5.2 Conclusion

The study has shed light on the role of the academic library in Regional Maritime University in facilitating research. After systematic evaluation of the results obtained from the field via questionnaire and interviews, it is important to state that the academic library play critical roles in facilitating research activities as well as serving as the knowledge repository for the university. To this end, the study concludes that the university’s library helps in:

i. providing research materials for researchers;

ii. providing access to publishers for faculty journals publishing;

iii. increasing faculty research productivity; and

iv. promoting new technologies and new models for scholarly communication.

Therefore, the library can only continue to contribute significantly to the university if it is provided with the needed support in terms of funding, logistics and technological innovations. For now, the available facilities in the library make it difficult to ensure efficiency and effectiveness in delivering the needed services required by its users as well as the university at large.

5.3 Recommendations

Based on the conclusion drawn, the following recommendations are provided for the university.

There is the need for management to provide the needed resources for the academic library. This is important because technology acquisitions, upgrades, and replacements of old facilities are very vital considering the rapidly changing global environment. Providing it with adequate
resources such as funds, logistics, inter-library borrowing, spacious learning environment and new technologies would enable the academic library to contribute significantly in facilitating research activities of the lecturers and students as well.

To win top management support, it is important for the head of the university’s library (university librarian) to well communicate to management to convince them of the changes, opportunities and values the library presents to the development of expansion of knowledge in the university. But in so doing, it is important to stress that the library must be judged beyond the immediate needs the library serves; and that the value of any library is inextricably linked to the values of the university.

Last but not the least, the university should implement adequate electronic databases, internet facilities and other electronic facilities so as to encourage more users to patronise the services of the library. This is highly important due to the fact that in this era of electronic age, the library must remain relevant to the rapidly growing needs of users. This environment of teaching, learning and research is changing rapidly. Therefore, university libraries need to maintain their position as a key partner in the diffusion of knowledge and promotion of research by understanding, anticipating, and emphasizing the challenges in their respective areas. This therefore creates opportunities for libraries to improve the quality of services to support academic and research activities more effectively.

5.4 Suggestions for Further Studies

This study has examined the role of the academic library in facilitating research. Even though the study has achieved its stipulated objectives, there are still issues that provide opportunities for future researchers to delve into in finding out the values, innovations and impacts of academic libraries on the academia in contemporary times. On the broader perspective, future
researchers could find out how the academic libraries contribute to the innovativeness of universities and how the roles of libraries contribute to knowledge acquisition in the 21st century.
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APPENDIX 1

QUESTIONNAIRE FOR STUDENTS

DISSERTATION TOPIC: THE ROLE OF ACADEMIC LIBRARIES IN FACILITATING ACADEMIC RESEARCH- A CASE STUDY OF REGIONAL MARITIME UNIVERSITY, GHANA

Dear Respondent,

I am a graduate student of the Regional Maritime University, Ghana. I am conducting a research on the above dissertation topic. This research is in partial fulfilment for the award of Master of Arts Degree in Ports and Shipping Administration. You have been selected to assist the study by providing candid answers to the following questions on the subject. Your responses will be used solely for the intended purpose and be treated with utmost confidentiality.

To indicate your free will to respond to this questionnaire, please sign below to acknowledge that, you have given your informed consent.

................................................
Respondent’s signature

Thanks in advance

This questionnaire is divided into various sections. These sections comprise of some closed-ended and open-ended question items. Please tick and comment where applicable. You are entreated to be as objective as possible. Thank you very much in advance.

* Tick [✔️] where appropriate.

SECTION A: PERSONAL DATA

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

2. Age : a. 20-25 [ ]  b. 26-30 [ ]  c. 31- 35 [ ]
      d. 36-40 [ ]  e. 41- 45 [ ]  f. 50 and above [ ]


4. What programme are you pursuing?
   a. MPS [ ]  b. BPS [ ]  c. BLM [ ]  d. BNS [ ]
   e. BME [ ]  f. BEE [ ]  g. BCE [ ]
5. What is your level?
   a. 100 [ ]  b. 200 [ ]  c. 300 [ ]  d. 400 [ ]  e. Masters [ ]

SECTION B: SOCIO-ECONOMIC BACKGROUND

6. Apart from being a student what work do you do?
   a. White collar job (clerical or administrative) [ ]
   b. Blue collar job (industrial or manual) [ ]
   c. Professional [ ]
   d. Non professional [ ]
   e. Unemployed [ ]
   f. Entrepreneur [ ]

SECTION C: Questions 7-11 have been designed to find out about your library attendance.

7. Do you attend the library?  a. Yes [ ]  b. No [ ]

8. If no, please explain why? ........................................................................................................................................

9. If no, how then do you access information for your research? Indicate one option.
   a. From my mobile telephone [ ]
   b. From my tablet [ ]
   c. From the internet cafe [ ]
   d. From my personal computer [ ]

10. If other, please briefly specify ......................................................................................................................

   If you have answered yes to question (seven) above then duly complete the following.

11. How often do you go the RMU library?
    a. Once weekly [ ]
    b. Twice weekly [ ]
c. Three times weekly [  ]

d. Four times weekly [  ]
e. On every school day [  ]

SECTION D: Questions 12 and 13 have been designed to find out the purpose for which you go to the library

12. Why do you go to the RMU library? Indicate only one reason.

a. To socialize [  ]
b. To read my notes [  ]
c. To do my research [  ]
d. To do my assignment [  ]
e. To watch videos related to my course [  ]
f. To listen to audio tapes related to my course [  ]

13. If other, please specify ........................................................................................................

SECTION E: Questions 14 and 15 have been designed to find out the sort of materials you access at the RMU library.

14. What type of materials do you seek in the library? Please tick as many as applicable.

e. Pamphlets[  ] f. Periodicals[  ] g. Electronic books [  ]

15. If other, please specify ........................................................................................................

SECTION F: This section is made up of questions 16-31 which are designed to find out about available resources and how they answer your research needs.

16. What types of resources do you access in the RMU library?

a. Material [  ] b. Electronic [  ]

17. Are the resources in the RMU library adequate to serve the needs of students and lectures?
18. Are the libraries’ resources appropriate for your course needs?
   a. Yes [ ]   b. No [ ]

19. Are the resources up to date and relevant?
   a. Yes [ ]   b. No [ ]

20. Do the resources available address assignment questions and research?
   a. Never [ ]   b. Sometimes [ ]   c. Most of the time [ ]   d. Always [ ]

21. Are the resources easy to find?
   a. Never [ ]   b. Sometimes [ ]   c. Most of the time [ ]   d. Always [ ]

**If you did not find the resources you need it is because**

22. They are not available?
   a. Never [ ]   b. Sometimes [ ]   c. Most of the time [ ]   d. Always [ ]

23. You cannot locate it?
   a. Never [ ]   b. Sometimes [ ]   c. Most of the time [ ]   d. Always [ ]

24. There are not sufficient resources on the topic?
   a. Never [ ]   b. Sometimes [ ]   c. Most of the time [ ]   d. Always [ ]

25. Do you usually ask library staff for assistance when you cannot find any library resource?
   a. Never [ ]   b. Sometimes [ ]   c. Most of the time [ ]   d. Always [ ]

26. Do you consider suggestions to find resources elsewhere apart from the RMU library?
   a. Never [ ]   b. Sometimes [ ]   c. Most of the time [ ]   d. Always [ ]

**Accessing electronic sources**
27. Does the school have an electronic database?
   a. Yes [ ]  b. No [ ]  c. I don’t know

28. Do you use databases in your research?
   a. Yes [ ]  b. No [ ]

29. If yes, how often do you access it?
   a. Never [ ]  b. Sometimes [ ]  c. Most of the time [ ]  d. Always [ ]

30. Are the resources in the database easily accessible?
   a. Never [ ]  b. Sometimes [ ]  c. Most of the time [ ]  d. Always [ ]

31. Do the database resources answer your specific needs?
   a. Never [ ]  b. Sometimes [ ]  c. Most of the time [ ]  d. Always [ ]

32. Have you ever been given training in database searching from the library?
   a. yes [ ]  b. No [ ]  c. I don’t remember [ ]

33. Do you think such training is necessary?  a. Yes [ ]  b. No [ ]  c. I don’t know [ ]

34. If yes, in what way is it going to help you? .................................................................

SECTION F: Questions 36-38 have been designed to find out your level of satisfaction on library services rendered in the RMU library.

35. Are library staffs friendly?
   a. Never [ ]  b. Sometimes [ ]  c. Most of the time [ ]  d. Always [ ]

36. Do library staffs treat you fairly and without discrimination?
   a. Never [ ]  b. Sometimes [ ]  c. Most of the time [ ]  d. Always [ ]

37. Are library staffs professional in their dealings with you?
a. Never [ ]     b. Sometimes [ ]     c. Most of the time [ ]   d. Always [ ]

38. Do library staffs give your enquiries appropriate time and attention?
   a. Never [ ]     b. Sometimes [ ]     c. Most of the time [ ]   d. Always [ ]

39. Do library staffs respond clearly and accurately to enquiries?
   a. Never [ ]     b. Sometimes [ ]     c. Most of the time [ ]   d. Always [ ]

SECTION G: Questions 40-44 have been designed to find out whether the RMU library is conducive for research.

40. Is the RMU library building spacious enough?
   a. Yes [ ]     b. No [ ]  c. I don’t know [ ]

41. Are the furniture in the library adequate and comfortable?
   a. Yes [ ]     b. No [ ]  c. I don’t know [ ]

42. How is the sound level in the RMU library?
   a. Very noisy [ ]  b. Less noisy [ ]  c. Quiet [ ]  d. Very quiet [ ]

43. How is the temperature in the RMU library?
   a. very hot[ ]  b. warm [ ]  c. Cool [ ]  d. Cold [ ]

44. How do you find the decor in the RMU library?
   a. very good [ ]  b. good [ ]  c. poor [ ]  d. Very poor [ ]

THANK YOU FOR YOUR RESPONSE
APPENDIX 2

QUESTIONNAIRE FOR UNIVERSITY LECTURERS

Dear Respondents,

DISSERTATION TOPIC: THE ROLE OF ACADEMIC LIBRARIES IN FACILITATING ACADEMIC RESEARCH - A CASE STUDY OF REGIONAL MARITIME UNIVERSITY, GHANA

I am a graduate student of the Regional Maritime University, Ghana. I am conducting a research on the above dissertation topic. This research is in partial fulfilment for the award of Master of Arts Degree in Ports and Shipping Administration. You have been selected to assist the study by providing candid answers to the following questions on the subject. Your responses will be used solely for the intended purpose and be treated with utmost confidentiality.

To indicate your free will to respond to this questionnaire, please sign below to acknowledge that, you have given your informed consent.

................................................
Respondent’s signature

Thanks in advance

INSTRUCTION:
Please tick [ ] the appropriate box that best represents your view or state where necessary.

SECTION A: BACKGROUND INFORMATION

1. Gender: Male [ ] Female [ ]
2. Highest educational qualification:
   Master’s Degree [ ] Doctorate [ ] Other (please specify):..............................
3. Which of the following degree levels do lecture?
   Level 100 [ ] Level 200 [ ] Level 300 [ ] Level 400 [ ]
   Master’s [ ] Other (please state):............................................................
4. How many years have you been lecturing in this University?
   Less 2 years [ ] 2 – 4 years [ ] 5 – 10 years [ ] More than 10 years [ ]
SECTION B: ROLE OF ACADEMIC LIBRARIES IN FACILITATING ACADEMIC RESEARCH

5. In which ways does the RMS library be of help in facilitating your research activities as well as the university? Please you are requested to rank them using the scale 1 = Strongly disagree, 2 = Slightly disagree, 3 = Not sure, 4 = Slightly agree or 5 = Strongly agree.

<table>
<thead>
<tr>
<th>Roles</th>
<th>Strongly disagree</th>
<th>Slightly disagree</th>
<th>Not sure</th>
<th>Slightly agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help recruit and retain top researchers</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>Help researcher win research grants and contracts</td>
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<tr>
<td>Promote new technologies and new models for scholarly communication</td>
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<td>Help in providing research materials for researchers</td>
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<td>Help design content of instruction for lecturing</td>
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<tr>
<td>Increases faculty research productivity</td>
<td>[ ]</td>
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<tr>
<td>Provide access to publishers for faculty journals publishing</td>
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6. Do you have any comments regarding the role of academic library play in facilitating academic research works? Please state them here.

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APPENDIX 3

THANK YOU VERY MUCH FOR YOUR CONTRIBUTIONS
INTERVIEW GUIDE FOR LIBRARIANS

RESEARCHER USE ONLY:

Designation of Interviewee:.................................................................

Date:........................................ Time:....................................................

TOPIC:

THE ROLE OF ACADEMIC LIBRARIES IN FACILITATING ACADEMIC
RESEARCH - A CASE STUDY OF REGIONAL MARITIME UNIVERSITY, GHANA

INTERVIEW QUESTIONS

i. In today’s contemporary and rapidly changing knowledge environment, do you think that
the academic library is creating the conducive and innovative climate for research
activities?

ii. What are the library facilities available for efficient and effective researches?

iii. Would you say that the library facilities are adequate enough to meet the demands of
users?

iv. How innovative are the facilities in meeting the increasing research needs of its users?

v. Are there challenges affecting smooth running of the library; and if yes, what are these
challenges?