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SERVICE QUALITY PERCEPTIONS AND EXPECTATIONS OF LIBRARY USERS: A
COMPARATIVE STUDY OF ACCRA AND KUMASI TECHNICAL UNIVERSITIES

BY

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THIS THESIS IS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES, UNIVERSITY
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DECLARATION

I declare that this thesis is the outcome of my own research towards the award of Master of Philosophy Degree in Information Studies. No part of this work has been presented by anyone for any academic award in any University except where due acknowledgement has been made.



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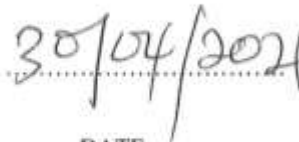
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DEDICATION

I dedicate this work to my family.

To my husband Christian Coffie Agbey, my lovely son Karl Edem Agbey and my sweet daughter Karen Edinam Agbey for their prayers and support.

Also to my dear late mother Victoria Yawa Wuver and my siblings Rose, Pearl and Benedicta.

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LIST OF ABBREVIATIONS

AHP- Analytical Hierarchy Process

A-Poly- Accra Polytechnic

ATI- Accra Technical Institution

ATU- Accra Technical University

B-TECH- Bachelor of Technology

CARLIGH- Consortium of Academic and Research Libraries in Ghana

CD-ROM- Compact Disc Read Only Memory

COVID-19- Corona Virus Disease of 2019

DEMATEL- Decision Making Trial and Evaluation Laboratory

DVDs- Digital Versatile Discs

HND- Higher National Diploma

ICT- Information Communication Technology

IT- Information Technology

KNLS- Kenya National Library Service

K-Poly- Kumasi Polytechnic

KsTU- Kumasi Technical University

KTI- Kumasi Technical Institute

LIBQUAL- Library Service Quality

MPHIL- Master of Philosophy

MTN- Mobile Technology Network

NABTEX- National Board for Professional and Technical Institute

PNDC- Provisional National Defense Council

SERVQUAL- Service Quality

TALF- Term Asset-Backed Securities Loan Facility

ABSTRACT

Technical universities have been embraced as conduits for delivering technical-oriented education in Ghana. Library service delivery is going to play a critical role in ensuring quality technical university education. Comparative research assessing library service delivery in technical universities in Ghana is limited. This study conducted a comparative analysis of library users' service expectations and how they perceive the quality of library services they receive at both Accra Technical University (ATU) and Kumasi Technical University (KsTU). Four objectives were assessed; extent of library use, perception of quality of library service delivery, user satisfaction among the library users and challenges faced in accessing library services. A sample of 250 respondents were selected from both universities, comprising 136 from KsTU and 114 from ATU. The findings showed that library use is low in both technical universities. However, library use was lower in KsTU than in ATU. Also, the perception of library quality and satisfaction with library services were relatively higher in KsTU, as compared to ATU. Respondents in KsTU rated their satisfaction with library services higher than those in ATU. The challenges of library service delivery were found to be more severe in ATU than in KsTU. The study recommends embarking on library use awareness drive particularly in KsTU. There is also the need for provision of library facilities, running information literacy training, and digitization of library services, especially in ATU.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Library user experiences have come to the fore front of research in library studies (Partap, 2019). The reason for the increased attention in library user experiences is based on the fact that there is a growing recognition that library users act like customers in the corporate or commercial world, and therefore they gauge their experiences in the library to decide whether or not to patronize library resources and services (Cunningham, 2016; Reid, 2019). Some scholars have argued that the quality of a library is not so much about the availability of vast resources, but also in addition to that, the feeling of satisfaction and fulfilment that users derive when they visit the libraries (Natesan & Aerts, 2016). In short, a library that lacks resources but gives great customer experiences will be preferred by library users over a library with all resources but poor customer experiences (Natesan & Aerts, 2016).

The fundamental purpose of providing library resources in academic institutions is for students and faculty to use these resources to advance teaching, learning and research. Within the context of academic libraries, library use is therefore defined as the patronage of library resources and services by students and faculty for academic purposes (Reid, 2019). However, in accessing library resources and services, library users sometimes face different challenges. Library use challenges are therefore defined as the difficulties that students and faculty members face in accessing library resources and services (Aslam & Seher, 2018). One of the key challenges that university libraries face in meeting service quality has been argued to be the increasing rising expectations of library users over their perceptions (Partap, 2019). Library use challenges have implications in how library users experience the services provided by their libraries.

User satisfaction of library users is a critical component of providing library services. In Ghana, technical university education is gaining popularity and momentum (Acheampong, Boakye, & Agyekum, 2019). Since 2016, a total of eight (8) polytechnics have been converted into technical universities, with plans underway to convert the remaining polytechnics into technical universities by end of 2020. With this trend, it is predicted that other private technical universities will spring up to meet the rising need for technical university education (Acheampong et al., 2019). The focus of technical universities is to provide high standard practical and skill-based tertiary education to students, to give them practical employable and entrepreneurial skills.

For this to be achieved, library resources and services are going to play pivotal roles in technical education in Ghana. Within all universities, libraries are the central pivot which aids teaching, learning, and research, both for students and faculty (Choshaly & Mirabolghasemi, 2018). Academic libraries house information materials and resources in various formats such as electronic information sources like CD-ROM, the internet, and so on (Natesan & Aerts, 2016). Library services are essential to support services to technical university students. There is therefore the urgent need to pay attention, not only to providing library resources, but also on how library users experience library services.

Globally, the field of library science is going through different changes (Choshaly & Mirabolghasemi, 2019). In current library practice, there is a strong call for delivering top-notch quality of service and experience to library users (Cox, Pinfield & Rutter, 2019). This is to ensure that libraries do not just become a place people access academic materials but rather places where users experience a sense of belonging and satisfaction (Sayre & Riegelman, 2018). Library service

quality has therefore gained popularity and attention. Researchers and scholars in the field of library science have therefore focused on devising strategies that can be applied to improve library service quality, regardless of the resources and physical infrastructure (Koloniari & Fassoulis, 2017).

The focus on library service quality has been on achieving customer satisfaction as a measure of service quality (Gottschalk, 2019). This entails that libraries strive hard to understand customers' expectations of library services, and then work hard to meet or exceed them (Britton & Robertson, 2019). Theoretically, the field of information studies in general and library science in particular has drawn on the business field to develop sound theoretical approaches to assessing service quality in library practice (Aslam & Seher, 2018). For instance, the SERVQUAL model was borrowed from the field of marketing and applied to develop the LIBQUAL model to investigate service quality and user satisfaction in the field of library practice and research (Partap, 2019).

Ghana has embraced technical university education as one of the fundamental routes to championing industrialization (Acheampong et al., 2019). This is to help provide highly educated, industry-focused and technically skilled professionals to fill various industries. The purpose is to provide high level occupational preparation in a more applied and less theoretical approach to equip students with requisite employability and entrepreneurship skills (Asemi, Kazempour, & Rizi, 2010; Vasishta, 2013). For this reason, the role of academic library resources and services become more critical to achieving this mandate as a university, than it has ever been.

In Ghana, library resources and services in traditional universities receive relatively higher funding allocation as compared to technical universities (Acheampong et al., 2019). Technical universities are however expected to match up the global standards of library resources and services, expected of a university. However, research suggests that historically, library resources and services in polytechnics have always lagged behind that of traditional universities (Acheampong et al., 2019; Kont, 2011; Vasishta, 2013). As such, library resources in these newly created technical universities are inadequate.

Kumasi Technical University (KSTU) and Accra Technical University (ATU) are the two leading technical universities in Ghana, which are being used to guide the transitions of other polytechnics into technical university status. However, in both institutions, patronage of library service is relatively low and library service delivery is below the optimal level compared to what exists in traditional universities. That influenced my motivation to conduct this study in order to help improve quality of library service delivery within the institutions, and other technical universities in Ghana.

1.2 Statement of Problem

In developing countries, patronage of library resources by students in technically-oriented tertiary institutions are reported to be low as compared to those in traditional universities (Vasishta, 2013). This makes library needs within technical university education even more critical, compared to traditional universities (Acheampong et al., 2019). This means that professional library staff in technical universities in Ghana have a big role to play in making library resources available to the students, and also giving them positive and stress-free experiences when accessing library

resources. Providing quality services and satisfaction to library users can go a long way to encourage library use in technical universities. Once library use increases among the students, it will compel policy makers to provide more library resources and materials to meet the students' library needs.

Despite the advancement of research on library service quality within the global literature, research in other areas of library research is lagging behind, particularly in developing countries (Rasul & Singh, 2017). Due to limited library resources, much of research on library science in many African countries for instance only focus on resource limitations of libraries and the challenges users experience in accessing these limited resources (Soria, Fransen & Nackerud, 2017). Research on achieving service quality with the limited resources available to libraries are limited (Gottschalk, 2019). The few studies on library service quality also tend to concentrate on traditional universities (Britton & Robertson, 2019).

In spite of the growing popularity of technical university education in Ghana, research on library services in technical universities in Ghana still lags behind. There are limited studies that have focused on library services and services in technical universities. In Ghana, research on library resources and services at the tertiary level have mainly focused on traditional universities (Larson & Owusu-Acheaw, 2012; Yeboah, Adams & Boakye, 2018). There are limited studies examining expectations and perceptions of library services and user satisfaction within the context of technical universities in Ghana. This study therefore focuses on examining library use experiences among students of Accra and Kumasi Technical Universities, in terms of their expectations,

perceptions of service quality and challenges they encounter in accessing library resources and services.

1.3 Purpose of the Study

The purpose of this study was to conduct a comparative analysis of library users' service expectations and how they perceive the quality of library services they receive at both Accra Technical University (ATU) and Kumasi Technical University (KSTU).

1.4 Objectives of the Study

The specific objectives of the study were:

- i. To assess the extent of library use among library users at Accra and Kumasi Technical Universities.
- ii. To examine the perceptions of the library users on the quality of library services they receive at Accra and Kumasi Technical Universities.
- iii. To examine user satisfaction of the library service delivery in the two technical universities.
- iv. To determine the challenges that the library users encounter when accessing library services in the two technical universities.

1.5 Scope of the Study

The current study was conducted among library users in two technical universities in Ghana: Accra Technical University (ATU) and Kumasi Technical University (KSTU). The scope of the study

was limited to students and faculty members who patronize the library resources and services mostly. Issues that were assessed include their expectations of library services in general, their perceptions about the quality of library services they receive, the challenges they encounter in accessing library resources and services, and their perspectives on improving the quality of library services.

1.6 Theoretical Framework

This section discusses the theoretical framework used for the study. In research, a theoretical framework plays critical roles, particularly in guiding how the entire research is conducted (Tewell, 2015). The basic unit of a theoretical framework is a theory or a model (Lloyd, 2010). A theory is defined as a system of ideas that are organized to explain a phenomenon (Lloyd, 2010). Within the context of social science research, the theories used in a study influence how concepts and ideas are organized together to achieve the overarching aim or purpose of a study (Mackey & Jacobson, 2011). In this sense, theories are formulated to help in explaining, predicting and understanding, or even challenging assumptions in pre-existing knowledge in order to broaden the boundaries of knowledge (Tewell, 2015).

A theoretical framework is, created by synthesizing the arguments and assumptions of more than one theory or model to provide a broader context for guiding research process (Lloyd, 2010). According to Mackey and Jacobson (2011) a theoretical framework acts as a structure that supports the entire research process. The current study is situated within the context of library services in general and library service quality in particular. There are two main models that are usually used

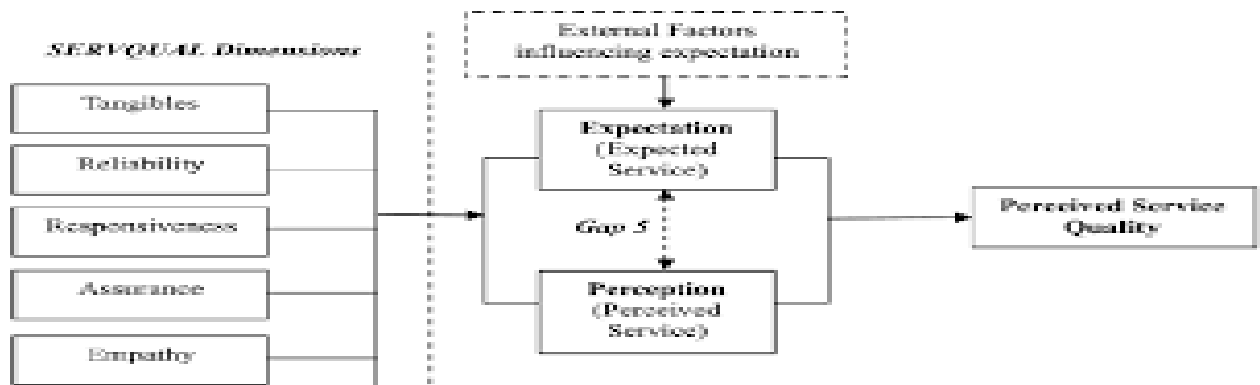
when it comes to service quality research in general and library service quality in particular. These are the SERVQUAL model (for service quality research) and the LIBQUAL model (for library service quality research). In the current study, the LIBQUAL model is used as the theoretical framework. In discussing the LIBQUAL model, the SERVQUAL model is discussed first, since the LIBQUAL model was derived from the SERVQUAL model.

1.6.1 The SERVQUAL Model

The SERVQUAL model was developed by Parasuraman, Berry and Zeithaml (1988) as a customer-based model for service quality within commercial marketing settings. The SERVQUAL model identifies five different dimensions of customer satisfaction experiences (Cunningham, 2016). They include reliability, responsiveness, assurance, empathy, and tangibles (Choshaly & Mirabolghasemi, 2019).

The reliability component of the model deals with the ability to perform the promised service dependably and accurately to library users (Parasuraman, Berry & Zeithaml, 1991). The responsiveness component focuses on the the willingness of academic libraries to help users and provide prompt service (Chen, 2016; Fithri, Adnan, & Syahmer, 2018). The empathy dimension deals with the ability to provide individualized attention to library users (Asemi et al., 2010; Partap, 2019). The assurance dimension focuses on the kind of relationship dynamics (such as trust and confidence) that exists between library staff and users (Namugera, 2014; Parasuraman et al., 1998). The tangibility dimension of the model deals with the physical appearance aspects of library resources and facilities (Adu, Appiah & Yamson, 2016).

Figure 1: SERVQUAL Model for assessing customer satisfaction



Source: Parasuraman et al. (1991)

1.6.2 The LIBQUAL Model

The SERVQUAL protocol has been widely accepted as a standard of service quality assessment in the business world since the mid-1980s (Partap, 2019). Over the years, the SERVQUAL model has been applied in information science and library research to assess customer satisfaction among library users (Partap, 2019). Some researchers adapted the SERVQUAL model to develop the LIBQUAL model, to contextualize user satisfaction and experiences in library research (Choshaly & Mirabolghasemi, 2019; Kumar & Mahajan, 2019; Xi, Zhao, Hu, Tong, & Bao, 2018). The LIBQUAL model is a derivative of the SERVQUAL model, rigorously re-grounded through both qualitative and quantitative means for the library research sector (Reid, 2019).

The LIBQUAL model undertakes to measure library users' perceptions of service quality and identifies gaps between desired, perceived, and minimum expectations of service (Natesan & Aerts, 2016). The LIBQUAL model therefore builds on the SERVQUAL model by identifying other dimensions of service quality which are relevant to the library context. Therefore, unlike the SERVQUAL, the LIBQUAL identifies three dimensions of service quality. The three overarching dimensions of the LIBQUAL model are; affect of service, library as a place and information

control (Xi et al., 2018). Each of these three dimensions has sub-dimensions which coincide with and expand on the dimensions of the SERVQUAL model.

The affect of service dimension encompasses some elements of the SERVQUAL model, which are responsiveness and empathy (Choshaly & Mirabolghasemi, 2019). The Library as a Place is reflective of a concept transcending the SERVQUAL tangibles dimension (Partap, 2019). The original concept had defined rather traditionally the appearance of physical facilities, equipment, personnel and communication materials. The concept of Library as a 'Place' assesses the ability to meet community requirements for utilitarian space for study, collaboration, or rendezvous, oftentimes especially important for library users (Choshaly & Mirabolghasemi, 2019). Information control looks at how best library staff have control in accessing and retrieving information for library users, which coincides with the reliability and assurance dimension of SERVQUAL (Xi et al., 2018).

1.6.3 Synthesizing SERVQUAL and LIBQUAL Models

The LIBQUAL and SERVQUAL models are synthesized together as a conceptual framework for the current study. In synthesizing them together, five elements of library service quality are identified and examined in the current study. These are responsiveness, empathy, assurance, reliability, and tangibility. Each of these elements of library service quality are discussed below:

1.6.3.1 Responsiveness

The responsiveness element focuses on the willingness of organizations in general to help customers and provide prompt service (Namugera, 2014). In applying to academic library contexts, responsiveness encompasses the willingness of libraries in Ghana to provide students and faculty members of technical universities with prompt services and help them address their challenges. In

this sense, the responsiveness dimension emphasizes attentiveness and promptness on the part of the libraries in dealing with the library users' concerns, including but not limited to questions, complaints, requests, and problems (Aslam & Seher, 2018). Responsiveness is therefore communicated to users by taking into consideration the length of time they must wait for assistance, answers to questions or attention to problems (Saija, 2017). Responsiveness also captures the notion of flexibility and ability to customize the service to the peculiar needs of the students and faculty, particularly those technical universities in Ghana.

1.6.3.2 Empathy

The empathy element focuses on the ability to provide individualized attention to customers (Qayyum & Zawacki-Richter, 2018). In some organizational contexts, it is essential to provide individual attention and care to show to the customers that the organization does best to satisfy their individual needs. Within the context of academic institutions, it is essential for the library to show empathy to students and tutors who use library facilities and resources (Roberts, 2018). Empathy is argued to be an additional plus or quality of organization that the trust and confidence of the customers and at the same time increase the loyalty (Roberts, 2018). In this competitive academic world, the library users' requirements are constantly increasing on daily basis and it is the duties of libraries to do their maximum best within their capacity to meet the demands of users, else users who do not receive individual attention will search elsewhere.

1.6.3.3 Assurance

The assurance element focuses on symbolic relationship dynamics such as trust and confidence (Namugera, 2014; Parasuraman et al., 1988). In other words, in the library context, do the staff inspire trust and confidence in the users? Thus, assurance is defined as staff's knowledge of courtesy and the ability of the library and its workers to inspire trust and confidence. The assurance dimension is likely to be particularly important for the services that the customers perceive as involving high rising and/or about which they feel uncertain about the ability to evaluate (Namugera, 2014). Trust and confidence may be embodied in the person who links the customer to the company, for example, the marketing department. Thus, workers are aware of the importance to create trust and confidence from the customers to gain competitive advantage and for user loyalty (Parasuraman et al., 1988).

1.6.3.4 Reliability

The reliability component deals with the ability to perform the promised service dependably and accurately (Parasuraman et al., 1991). In this sense, reliability means that, particularly within the context of commercial organizations, the company delivers on its promises-promises about delivery, service provision, problem resolutions and pricing (Benard & Dulle, 2014). In applying to the current study therefore, reliability looks at how libraries are able to capably provide the promised services to students and faculty of technical universities in Ghana. This is in line with the fact that customers in general, and library users in particular want to do business with organizations, including libraries that keep their promises, particularly their promises about the service outcomes and core service attributes (Fressen, 2018). It is therefore imperative that libraries become aware of customer expectation of reliability.

1.6.3.5 Tangibility

The tangibility dimension of the model deals with the tangible aspects of library resources and facilities. Since some aspects of library services are tangible, library users derive their perception of service quality by comparing the tangible associated with these services provided. Within the library context, tangibility focuses on the appearance of the physical facilities in the library, in terms of books, equipment, personnel and communication materials (Roberts, 2018). In this study, on the questionnaire designed, the students and tutors respond to the questions about the physical layout and the facilities that their libraries offer to them in their respective institutions.

1.7 Study Setting

In research, settings are fundamental, particularly when it comes to where a research problem is located, and data gathered. Basically, a study setting is defined as the place or the location where researchers collect or gather data for their studies (Creswell & Creswell, 2017). Study settings can be categorized into institutions, organizations, communities, districts; regions or a country based on what the focus of the study is (Plonsky, 2017). In the current study, the research settings were institution-based.

Specifically, the study was conducted in two technical universities in Ghana: the Accra Technical University (ATU) and Kumasi Technical University (KSTU). Accra Technical University (ATU) and Kumasi Technical University (KSTU) constitute two of the largest technical universities in Ghana, and therefore a study in both such contexts would reveal the context of library service quality in other technical universities in Ghana. The profiles of both technical universities are provided in subsections 1.7.1 and 1.7.2.

1.7.1 Accra Technical University (ATU)

ATU is located in the Greater Accra region of Ghana. It was established in 1949, as a Technical School but was commissioned in 1957 as Accra Technical Institute (ATI), which became the first technical institute to be established in Ghana. In 1963, ATI assumed a new name as Accra Polytechnic (A-Poly), under the directive of the first president of Ghana (Dr. Kwame Nkrumah) to lead the country's drive in the industrialization process. A-Poly then gained a tertiary status in 1993-1994, following the operationalization of the PNDC Law 1992. The elevation into a tertiary status came with the autonomy to award Higher National Diploma (HND) through the National Board for Professional and Technical Examination (NABPTEX), following the coming into force of the Polytechnic Act (Act 745) in 2007, the PNDC Law 321 of 1992. In 2016, A-Poly was converted into a full technical university, together with 8 other polytechnics, through the Technical University Act, 2016, (Act 922).

As a technical university, ATU has a total of sixteen (16) departments, under five (5) faculties, Faculty of Engineering, Faculty of Built Environment, Faculty of Applied Sciences, Faculty of Applied Arts, and Faculty of Business. Across these faculties and departments, ATU runs four main Programmes: six (6) Bachelor of Technology (B-Tech) Programmes, fifteen (15) Higher National Diploma (HND) Programmes, Diploma Programmes and Professional Certificate Programmes.

ATU offers library resources and services to both students and faculty. The library's prime responsibility is to provide high quality, up-to-date and relevant information resources and services to support teaching, learning and research needs of students and faculty. The library operates from two sites; (i) the top floor of the N Block where Engineering and Applied science materials are kept, and (ii) the 2nd floor of the B-Tech Block where Business Administration and management

collections are kept, which also houses the Library's E-resource unit. The library has an Acting Librarian and a staff strength of sixteen (16).

1.7.2 Kumasi Technical University (KsTU)

Kumasi Technical University (KsTU) is one of the Polytechnics in Ghana converted into University. KsTU is located at the heart of Kumasi, the capital city of the Ashanti region of Ghana. KsTU was established in 1954 as Kumasi Technical Institute (KTI), but actual teaching and learning began in 1955, focusing mainly on craft courses. The Institute was converted into a polytechnic on 30th October 1963, but not as a full tertiary institution. Following the enactment of the Polytechnic Law 1992, PNDC Law 321, Kumasi Polytechnic (K-Poly) ceased to exist in its previous form and became a tertiary institution, offering various Higher National Diploma (HND), Diploma and Certificate programmes.

In 2017, K-Poly was converted into a full technical university (i. e. Kumasi Technical University, KsTU), through the Technical University Act, 2016, (Act 922). KsTU is currently organized into 9 faculties, schools and institutes, which are;

- Faculty of Engineering
- Faculty of Built and Natural Environment
- Faculty of Medicine and Health Sciences
- Faculty of Applied Sciences
- Faculty of Creative Arts and Technology
- School of Business
- Institute of Entrepreneurship and Enterprise Development
- Institute of Distance and Continuing Education

- School of Graduate Studies, Research and Innovation

Within these 9 faculties, schools and institutes, KsTU comprises 27 Departments offering Full – time and Part – time Programmes at tertiary and non – tertiary Levels, attracting international students from African countries including Uganda, Nigeria and Sierra Leone. KsTU seeks to be “a Centre of Excellence for tertiary level training of technical and professional human resource with entrepreneurial skills”. For them to achieve this vision, library resources and services would play a pivotal role. KsTU has a library that consists of the Lending and Reference Libraries located on the First and Second Floors of the Administration Block. They also have the B – Tech Library located on the Third floor of the B-Tech Block. The primary function of the library is to provide resources, facilities and services needed for study, teaching and research in the Polytechnic.

The Library also provides access to electronic resources to assist students, lecturers and other users of information to develop skills that will ensure better use of available knowledge base. The KsTU libraries are air-conditioned and have a seating capacity of 556 readers and are estimated to have a total stock of 21,125 volumes and subscribes to a number of core print academic journals. KsTU’s Library is a member of the Consortium of Academic and Research Libraries in Ghana (CARLIGH) and has access to a number of electronic journals and databases through CARLIGH. The Library also has a Bindery provided under the TALF Project.

1.8 Significance of the study

The findings from the current study are relevant to practice, policy and research. In terms of practice, the study informs library professionals in both Accra and Kumasi Technical universities in particular, and other technical universities in Ghana in general about ways to improve the quality of library services within the context of technical universities. Thus, the findings and

recommendations could be used as a benchmark for improving the learning environment of the students in both technical universities.

In terms of policy, the findings from the study will provide policy makers in technical universities, information on how to improve library resources and services for users. This would help in designing appropriate library systems to support appropriate learning experiences within technical universities in Ghana. In terms of research, this current study on user satisfaction and library service quality in technical universities in Ghana is limited in the field of library and information studies. Therefore, the findings from the current study will help fill gaps in the literature on academic library service quality and user satisfaction, by providing perspectives from library users in technical universities in Ghana. In addition, the research could serve as a secondary source of information to other researchers.

1.9 Organization of chapters

The study is organized into six chapters as follows:

Chapter One which is the introductory aspect of the study covers areas such as background to the study, statement of the problem, objectives of the study, scope of the study, theoretical framework, study settings, significance of the study, organization of the study.

Chapter Two presents a review of relevant literature on the variables captured within the study. It reviewed pertinent literature which includes related empirical studies on service quality expectations, service quality perceptions, challenges in accessing services within the context of library resources and services.

Chapter Three covers the research methodology, which consists of research design and approach, research setting, selection of respondents (population, sample size and sample technique), data collection instruments (questionnaire), ethical considerations, data collection process and data analysis.

Chapter Four presents the analysis and findings of the study. The results in this chapter are presented in systematic order based on the specific objectives of the study.

Chapter Five presents the discussions of the findings.

Chapter Six is the final chapter of the study. This chapter contains the summary of the findings, conclusion and recommendations from the study based on the findings.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This study assesses service quality perceptions and expectations among library users in two technical universities in Ghana. The focus of the study is situated within the broader research context of library service quality and user experience. This chapter therefore presents a critical discussion of the literature regarding concepts and findings from empirical studies. In research, literature review plays a critical role. This is because, among other things, a literature review helps researchers to understand what has been done so far and the findings from previous studies, in order to identify gaps and build on it (Hart, 2018).

In this current study, the literature critically highlights the quality of academic library services and user satisfaction, particularly within universities in general and technical universities in particular. In this regard, the concepts, models, and principles relevant to the study are reviewed. In discussing the sections of the literature, the global view of research is discussed first, followed by studies on Africa and then studies on Ghana.

Research studies are built around concepts (Mathiesen, 2015). Concepts therefore play a fundamental role in research within all scientific fields of endeavours (Yongjun, 2013). *Concepts* are defined as abstract ideas or general notions that occur in the mind, in speech, or in thought (Simpson, 2019). Within research, concepts are understood as the fundamental building blocks, upon which thoughts and beliefs of research are hung (Nicholson, 2004). This suggests that, in

research, concepts become the main pillars on which all other parts of research are built (Perng, 2009). Within the field of information science in general and library studies in particular, there are several concepts developed to simplify information flow and research (Simpson, 2019).

2.2 Technical University Education in Ghana

This section presents a discussion on the area of technical university education in Ghana. The section aims to provide broader context of the dynamics of technical universities in Ghana and how that shapes access to library resources and services for library users. Globally, technical university education is situated within the broader context of technical education (Kont, 2011). In its general sense, technical education is defined as the academic and vocational preparation of students for jobs involving applied science and modern technology (Asemi, Kazempour & Rizi, 2010). Technical education has as its objectives the preparation of graduates for occupations that are classed above the skilled crafts but below the scientific or *engineering* professions (Kont, 2011). However, in its narrower sense, technical education refers to technical university education, particular at the tertiary level (Benneh, Kyeremeh & Sarfo, 2017). Technical universities are therefore defined as the type of universities or colleges that specialize in applied technical and hands-on job training in the areas of applied engineering and technology, applied science, and natural sciences (Kont, 2011).

In Ghana, even though the principle of technical education has a long history, the idea of technical university education in practice is a recent phenomenon (Benneh, Kyeremeh & Sarfo, 2017). Technical education in Ghana has historically been delivered within polytechnics. Successive

governments in Ghana therefore established one polytechnic per every regional capital. Until 2019, there were ten (10) regions in Ghana, and so there were 10 polytechnics in Ghana delivering technical education at the tertiary level. The Government of Ghana created six (6) additional regions in Ghana in 2019, making the total number of regions 16, but the number of polytechnics still remained ten. Most of the polytechnics themselves started as Technical Institutes before attaining a polytechnic status, gaining a tertiary status in 1993-1994, following the operationalization of the PNDC Law 1992. The elevation into a tertiary status came with the autonomy to award Higher National Diploma (HND) through the National Board for Professional and Technical Examination (**NABPTEX**), following the coming into force of the Polytechnic Act (Act 745) in 2007, the PNDC Law 321 of 1992.

Following the global trends in technical education at the tertiary level, coupled with the increasing demand for university education in Ghana, the Government, in 2016 decided to convert polytechnics into universities. The conversion of polytechnics into universities was done in the fulfillment of the objects of the Technical universities Act 2016 (Act 922), to provide higher education in engineering, science and technology-based disciplines and vocational education and training, applied arts and related disciplines leading to the award of degrees including honorary degrees, Higher National Diploma, diplomas, certificates and other academic qualifications.

Currently, technical education in Ghana is delivered through technical universities. The Government of Ghana converted 8 out of the 10 polytechnics into technical universities. As at now, there are eight (8) technical universities in Ghana. These are Accra Technical University,

Tamale Technical University, Takoradi Technical University, Sunyani Technical University, Kumasi Technical University, Koforidua Technical University, Ho Technical University and Cape Coast Technical University. These technical universities are tasked to lead the way in technical education in Ghana and the West African sub-region to providing global level top-notch degree programmes. If this mandate is to be achieved by these technical universities, library resources and services are going to play critical role. There is the need to ensure high service quality and satisfaction among students and faculty who use the library resources in these technical universities.

2.3 Academic Libraries

The current study is situated within libraries in technical universities in general, and those in Ghana in particular. This means that the study is fundamentally situated within the context of academic libraries. An academic library is defined as a library that is attached to institutions of learning (Weiner, 2017). Institutions of learning in their broader sense are defined to include basic schools, high schools and tertiary institutions (Hoffman, 2016). The tertiary institutions are classified as institutions of higher learning (Rasul & Singh, 2017), which is the focus of this study. Therefore, academic libraries are narrowed down to libraries attached to institutions of higher learning (Sayre & Riegelman, 2018). Such institutions of higher learning include traditional universities, technical universities and polytechnics (Cox, Pinfield & Rutter, 2019). Therefore, for the purposes of the current study, an academic library is operationally defined as a library attached to technical universities in Ghana.

Academic libraries serve two fundamental and complementary purposes (Koloniari & Fassoulis, 2017). First, academic libraries support the curriculum used for teaching (Gottschalk, 2019). Secondly, academic libraries support research of faculty and students within institutions of higher learning (Britton & Robertson, 2019). Traditionally, academic libraries have been the source of reserves for materials for class readings, intended to supplement lectures as prescribed by lecturers or instructors (Karplus, 2017). In the period before electronic resources became available, the reserves were supplied as actual books or as photocopies of appropriate journal articles (Soria, Fransen & Nackerud, 2017). However, with the advancement of technology, there has been the inclusion and expansion of electronic resources. Modern academic libraries therefore generally also provide access to electronic resources (Montenegro et al., 2016).

Within institutions of higher learning, academic libraries determine the focus for collection development since comprehensive collections are not feasible (Sayre & Riegelman, 2018). Academic librarians do this by identifying the needs of the faculty members and the student body, as well as the mission and academic programmes of the university (Weiner, 2017). When there are particular areas of specialization in academic libraries, these are often referred to as niche collections (Rasu & Singh, 2017). Niche collections are often the basis of special collections for specific departments (Sayre & Riegelman, 2018), and may include original papers, artwork, and artefacts written or created by a single author or about a specific respondent (Sayre & Riegelman, 2018).

2.4 Library Resources

Library resources are basically defined as the sources of information in libraries (Koloniari & Fassoulis, 2017). Academic libraries fundamentally curate collection of information sources selected by experts and made accessible to faculty, students and the general public for reference and/or borrowing (Soria, Fransen & Nackerud, 2017). In the current global best practices in library studies and practice, library resources are defined to include material resources, electronic resources, and symbolic resources (Gottschalk, 2019). The material resources are the traditional library resources which have been mostly physically accessible hardcopy sources such as books, journals, newspapers and other reference materials such as dictionaries and encyclopaedias (Montenegro et al., 2016). Other material resources also include the physical and material infrastructure that libraries have (Gottschalk, 2019). These include the physical building within which the library is housed, the tables and chairs and other facilities that library users have access to (Britton & Robertson, 2019).

The electronic resources include the digital resources that libraries have due to the advent of technology (Gottschalk, 2019). With technological advancements in the last few decades, digital or electronic resources of academic libraries have increased in diversity and form (Montenegro et al., 2016). The digital resources include; databases (i. e. online libraries and journals), electronic discs (such as CDs, cassettes, videotapes, DVDs, Blu-ray Discs, e-books, audiobooks), online encyclopaedias (such as Wikipedia and library blogs), video logs (such as library channels) among others. The symbolic resources of academic libraries are discussed under the next sub-section on library services.

2.5 Library Services

Library services are conceptualized as the symbolic resource of libraries (Britton & Robertson, 2019; Gottschalk, 2019). The symbolic resources entail the human factor elements involved in how libraries make their material and electronic resources available to library users (Gottschalk, 2019). Library services therefore include all the assistance provided to library users to make their use of library resources easy and stress-free (Britton & Robertson, 2019). These services come in various forms. Services provided by libraries include (i) Reference Service, (ii) Circulation Service, (iii) Online reservation of books, (iv) Recommendation of library material, (v) Current Awareness Service, (vi) Inter Library Loan Service, (vii) Photocopying / Printing Service, (viii) Orientation and Information Sessions, (ix) Selective Dissemination of Information, Audio Visual Service and Multimedia Section (Britton & Robertson, 2019; Gottschalk, 2019). Other services include instructions on how to access and use library materials, reference services to provide quick and in-depth answers to student questions; and materials delivery services that provide students with access to library materials online or items delivered to students' homes (Montenegro et al., 2016).

2.6 Library Service Quality

The concept of service quality in general, stem from how well service providers perform in relation to the customers' expectations about how the provider should perform (Choshaly & Mirabolghasemi, 2019). In institutions of higher learning, academic libraries are the fundamental conduit for information storage and delivery to students and faculty members (Cunningham, 2016). The quality of services offered in the library is therefore critical to the advancement of teaching and learning. Library services are mainly assessed on three dimensions, which are library

information resources, library services and library facilities (Yeboah, Adams & Boakye, 2018). The synergy between these three dimensions defines what library service is (Kachwala, Dasgupta & Mukherjee, 2017). Therefore, the quality of library information sources, the quality of services offered in the library and the quality of facilities available in the library all combine to form library service quality (Yeboah et al., 2018).

Library service quality is therefore defined as the quality of resources available in a library, services delivered to library users and the facilities available for use to library users (Haruna, Kiran & Tahira, 2017). This suggests that the extent to which library service quality is assessed depends on the availability of information resources (both printed materials and electronic materials), services rendered, and facilities utilization by the university library users (Kachwala et al., 2017). The assessment of library services, especially in universities, is argued to constitute critical management tool, that is purposely applied to determine or investigate how university libraries serve the needs and expectations of its users (who are mainly students and faculty members) effectively and efficiently (Haruna et al., 2017). As management tool, assessment of library service quality also helps to identify the strengths and weakness of its services in order to recommend ways of sustaining and improving the quality of service delivery in an institution (Allen & Seaman, 2017).

As a result, the research tends to define service quality in terms of meeting or exceeding customer expectations, or, more precisely, as the difference or gap between customer perceptions and expectations (Allen & Seaman, 2017). Library service quality is therefore defined in the current study as the optimum quality of services and resources within libraries that are available for

students and faculty of technical universities in Ghana. The assessment is to provide a managerial insight for diagnosing or determining the extent to which technical university libraries in Ghana serve the needs of students and faculty, in order to know how best to improve areas that fall short of quality.

Advances in research have led to remarkable changes and improvement in the standards and criteria for measuring and assessing service quality in customer care in general (Montenegro et al., 2019; Soria et al., 2017). Similar trends have been observed in the ways of measuring service quality within the context of academic libraries (Choshaly & Mirabolghasemi, 2019). Several scholars such as Parasuraman et al. (2002) have argued that the traditional approach to library service delivery no longer holds in the current knowledge dispensation. Library services now goes beyond just material resources (Allen & Seaman, 2017), but more critically, in ways through which these material resources are made accessible to students, faculty members and other library users in academic settings (Natesan & Aerts, 2016).

This underlie why the SERVEQUAL model and instruments were adapted into the library service delivery, through the LIBQUAL model and instrument to measure or assess library service quality (Koloniari & Fassoulis, 2017). Therefore, in the current system of assessing the quality of library services, the outcomes, in terms of service quality and satisfaction are more focused on than just outputs in the form of circulation (Teixeira et al. 2019).

2.7 Library User Experience

In general sense, user experience is defined as the emotions and attitudes of people about using a particular product, service or system (Choshaly & Mirabolghasemi, 2019). User experience is well-researched within commerce (Natesan & Aerts, 2016), and is defined to include the practical, experiential, affective, meaningful and valuable aspects of human–computer interaction and product ownership (Hossain, 2018). Also, user experience includes people’s perceptions of system aspects such as utility, ease of use and efficiency (Britton & Robertson, 2019). Research suggests that user experience is inherently subjective in nature to the degree that it is about individual perception and thought with respect to a product or system (Xi, Zhao, Hu, Tong & Bao, 2018). User experience varies dynamically, constantly modifying over time due to changing usage circumstances. Simplified, user experience is about how a user interacts with and experiences a product (Karplus, 2017).

In recent years, the concept of user experience has been applied within library practice and research (Natesan & Aerts, 2016). The concept of library user experience is rooted within the context of how library users expect and perceive the services rendered by library staff (Natesan & Aerts, 2016). The expectations and perceptions that users have of libraries have been deeply rooted in library studies, in terms of both practice and research (Xi et al., 2018). User expectation is defined as the standards against which a service provider’s performance should be judged by customers or users (Montenegro et al., 2016).

In terms of library service provision Montenegro et al., (2019) have suggested that performing a needs analysis is a way of determining user expectations which can assist librarians in assessing their situation by means of conducting an information audit or creating a customer service plan that will outline the goals and standards of customer service. Technological advancement has brought fierce competition among academic libraries in terms of providing best user experiences (Soria et al., 2017). Improving library user experience involves providing the best quality of service to library users. Library service quality is discussed next as another critical concept.

2.8 User Satisfaction

User satisfaction in library service delivery denotes how well library users feel and how satisfied they are about their libraries ((Koloniari & Fassoulis, 2017). The satisfaction is looked into two dimensions; the satisfaction with the resources of their libraries (Gottschalk, 2019), and the satisfaction with the quality of the services rendered to them by library staff (Montenegro et al., 2016). Library user satisfaction is always assessed from the perspective of the library users (Britton & Robertson, 2019; Gottschalk, 2019). The users rate the level of their satisfaction on certain indicators such as satisfaction with staff, lending services, resources and others (Choshaly & Mirabolghasemi, 2019). For this reason, user satisfaction is solely about what the individual library users feel when they patronize library services (Choshaly & Mirabolghasemi, 2019; Natesan & Aerts, 2016).

For this study, satisfaction of the library users was also operationalized at the subjective level. User satisfaction was therefore measured in terms of how the students and faculty of Accra and Kumasi

Technical Universities experience the services offered by their institutional libraries. This helped to understand how the users evaluate the resources and services available in their libraries.

2.9 Library Service Quality and User Satisfaction

This section presents discussion of quality library service delivery. Research interest has increased in the area of library service quality and user satisfaction, particularly within the context of academic libraries. Library professionals, information science practitioners, and researchers have begun to delve deeper into the indicators of library service quality among users and how that affects their satisfaction levels (Aslam & Sehr, 2018). Current research shows two elements that are critical to evaluating library service quality from the perspective of the library user. These are expectations and perceptions (Choshaly & Mirabolghasemi, 2019). The expectation element entails what library users subjectively expect high quality library service to be (Middleton, Hall & Raeside, 2018). The perception element also entails how the library users evaluate the resources and services at the libraries they patronize (Kachwala, Dasgupta & Mukherjee, 2017).

What current researchers and practitioners do is to match the expectations with the perceptions to see if there are gaps (Choshaly & Mirabolghasemi, 2019). As a matter of judgement, when expectations far exceed perceptions, then the quality of library service is judged to be very low (Britton & Robertson, 2019). On the other hand, when perception far exceeds expectations, the quality of library services is judged to be high (Natesan & Aerts, 2016). However, when expectations equal perceptions, then the quality of library service is judged to be balanced (Choshaly & Mirabolghasemi, 2019).

Service quality is also linked to user satisfaction. Scholars such as Choshaly and Mirabolghasemi (2019) argue that the fundamental mandate of all libraries is to make satisfy the needs of library users. Therefore, user satisfaction is at the core of library science, both as a profession of practice and as a field of research. An argument is often made that if library users are not satisfied, then whatever libraries do cannot be classified as service quality. Service quality is therefore argued to work hand in hand with user satisfaction. Thus, if service quality is indeed high, then library users should have high levels of satisfaction. Inversely, if the service quality is low, library users will have low satisfaction. There have been several studies which have been conducted to examine each of the elements of library service quality and user satisfaction. The findings from current study points to the fact that expectations of library users are very high.

A study conducted by Ahmed, Soroya and Malik (2014) suggests that library users may have higher expectations of library service quality, which may be difficult to meet. They used the SERVQUAL model to measure the perceptions and expectations of library users at the Medical and Dental Colleges in Pakistan. The study involved a total of 202 respondents from 11 Medical and Dental Colleges in the Lahore City of Pakistan. The findings showed that the library users had highest mean score on expectations than perceptions across all five indicators of service quality. High expectations were found to be highest for female students than for male students.

A study by Tan, Chen and Yang (2017) investigated the association between service experience, perceived quality and user satisfaction influence user loyalty in public library settings in Taiwan. A total of three hundred and thirty-nine (339) library users were conveniently selected for the

study. Findings from the study showed that there were high levels of user satisfaction and positive service experience among the library users. Positive service experience was found to directly increase both user satisfaction and user loyalty. However, the association between service quality and user satisfaction was not significant. These findings suggest that, when library users subjectively experience positive service in library settings it is more important in influencing user satisfaction than any form of objective service quality measure. In essence, even if libraries are rated high on service quality by standard indicators, but the users do not feel positive experience, they (library users) still rate their satisfaction levels as low. Thus, when it comes to library services, the way the subjective assessment of how users experience services is more important than the objective assessment of service quality.

In a related study, Aslam and Sehr (2018) conducted user satisfaction survey of public libraries in Pakistan and reported that there is limited level of satisfaction from users of the public libraries. Data gathered from a total sample of three hundred (300) users of various public libraries indicated that the quality of services provided at the libraries were poor and therefore needed improvement. Namugera (2014) also examined how students rate university library services, using the Makerere University Library (MakLib) and its satellite libraries as case study. Qualitative data in the form of individual interviews was gathered from ninety-four (94) users. Findings from the study showed that there is high level of positive perceptions and user satisfaction among the students. The respondents rated the quality of service as high and also indicated that the library staff are very professional.

User satisfaction is also argued to be a critical element in gauging and improving service quality. Haruna, Kiran and Tahira (2015) have reported that user satisfaction is critical in generating user loyalty in library users. In modelling a web-based library service quality and user loyalty, Haruna et al., (2015) observed that library service quality did not have a significant effect on user loyalty. However, user satisfaction significantly predicted user loyalty. This suggests that user satisfaction may act as an intermediary between library service quality and user loyalty. In a study to evaluate library service quality in University of Kashmir, India, Kumar and Mahajan (2018) reported that library users have different indications of service quality they want. The researchers found out that the library users rated the serenity of the library as a place and information control as the most important indicators of service quality. The users rated affect of service as the least satisfied dimension of service quality.

Fithri, Adnan and Syahmer (2018) have reported that some library users rate tangibility over and above all other factors of library service quality. In a study that investigated the gaps between perceptions and expectations of library service users of West Sumatera Province Library, Fithri et al., (2018) found that, from the overall attributes of library service quality, only one attribute fulfilled the users' expectations (it has a positive gap), which was the tangibles element for the attribute of cool air circulation. Furthermore, the ranking of the gap, for all dimensions, is the dimension of responsiveness, assurance, empathy, tangibles and reliability. The findings indicate that the library users' expectations of service quality were not being fulfilled yet.

Choshaly and Mirabolghasemi (2019) examined the effect on library service quality dimensions on user satisfaction using the LIBQUAL+ dimensions. The LIBQUAL model has three dimensions of service quality which are; affect of services, information control, and library as a place. The study was conducted among a sample of 100 library users in the University Kebangsaan Malaysia (UKM). The findings showed that all the three dimensions of service quality had significant positive impact on user satisfaction. However, effect of service emerged as the most important predictor of user satisfaction among the Respondents. This suggests that emotive and affective elements of library service are critical in bringing about user satisfaction.

Some studies have also been reported in Ghana on satisfaction of library users. For instance, Sulemani and Katsepor (2007) have reported low level of satisfaction with accessing information among undergraduate science students at the University of Ghana. In a study that examined information seeking behaviour of a sample of 75 undergraduate science students at the University of Ghana, they observed that the students did not use the library's resources often because they were not satisfied with information services that they had access to. Kwadzo (2015) has reported similar findings to the effect of high level of satisfaction of information sources among graduate students in Ghana. The students reported that they are highly satisfied with the electronic information resources provided by the library for student research.

2.10 Academic Libraries and Service Quality Expectations of Users

The review in the section 2. 4 has shown that expectations of library users are critical, both in defining and assessing service quality. This means that academic libraries must focus on meeting the service expectations of library users. Research is increasing on how best university libraries

can meet the service quality expectations of both students and faculty, who are the main users of university library facilities. This is based on the fact that several studies show widening gap between service expectations and service perceptions. More specifically, library services and resources are found to be way below the expectations of library users, particularly those in developing countries. Several factors have been accounted for why academic libraries in developing countries struggle to meet the service expectations of library users. Some of the factors are institutional, particularly regarding accessing to the right resources and personnel to improve service quality.

This is because library users still consider facilities as an important component of service quality. Jackson (2015) has reported that library users rate physical features as important indicators of quality of service. This was discovered in a study that examined how well university rankings measure service quality in university libraries across the world. Fundamentally, the study compared library-related results of two university ranking publications with scores on the LIBQUAL survey to identify if library service quality is measured within the LIBQUAL dimension's affect of service, information control, and library as place is related to the standings. Findings from the study showed that majority of the indicators used in ranking universities mostly favoured libraries that had highly rated physical facilities, and largely ignored the actual services delivered in the libraries.

Fithri, Adnan and Syahmer (2017) have also proposed spatial focus on improving academic library service for users. In a study that examined the gaps between perceptions and expectations of library

users in Indonesia, Fithri et al., (2017) observed that the users perceived high disparities between library service expectations and service provision. The respondents indicated that there are not enough spaces within the libraries, which makes air circulation difficult due to overcrowding. The ranking of the gap, for all dimensions, is the dimension of responsiveness, assurance, empathy, tangibles and reliability. It indicates that users' expectations were not being fulfilled. Another study by Dahan, Taib, Zainudin and Ismail (2016) examined user perceptions of academic library services in Malasia. They found that the students perceived the libraries resources as adequate and services provided as high quality. Because of this, majority of the students reported of using the library often for academic purposes.

Other factors are behavioural regarding how library staff engages with library users. In terms of the behavioural barriers, customer service approach to delivering service in the library is argued to be very critical. For example, a study by Namugera (2014) assessed user's awareness, perceptions and usage of Makerere library services in South Africa by interviewing a total of 94 individuals. She found that majority of the users were undergraduate students and they indicated that the services offered there are of high quality. Thus, those who had high awareness and positive perceptions reported using the library more. This means that library staff should manage perceptions of library users. A related study by Ekere, Omekwu & Nwoha, (2016) has also assessed perceptions concerning facilities, resources and services of MTN digital library in Nigeria. The study used 196 registered users of the digital library and administered copies questionnaires to them. Respondents reported higher satisfaction towards the library due to available resources including books, computers and internet connectivity.

Nzivo (2014) examined user perceptions and satisfaction of public libraries and information services in Kenya National Library Service (KNLS), among adult users. Findings from the study indicated that there was a level of perceived quality of service and satisfaction among the adult users. Specifically, comparing to other libraries, KNLS library services and information resources are very positively perceived by most Respondents. The respondents indicated that. KNLS libraries had several positive performances indications that made it comparatively better off than universities and other public libraries.

In a related study, Kumar and Mahajan (2018) have reported that judging from users' perspective; universities are only able to satisfy minimum expectations of its users. In a study to evaluate library service quality in University of Kashmir, India, Kumar and Mahajan (2018) reported that while the university library is able to satisfy the information control dimension, it fell short on the serenity of the library as a place. This suggests that university libraries, in meeting the service quality for its users, may do well in some areas and fall short in other areas.

Some studies in Ghana have also reported similar findings. For instance, Buabeng-Andoh and Issifu (2015) examined students' perceptions of implementing information and communication technology (ICT) in learning in senior high schools. The study involved 3380 students from 24 different public and private schools from four different regions in Ghana. The findings from the study showed that even though students' perception of ICT was positive, they had concerns about the opportunities that ICT can offer them in their academic performance due to the high cost involved and therefore reported of not willing to utilize ICT assisted learning. Male students were found to perceive ICT more positively than female students.

Larson and Owusu-Acheaw (2012) have also examined satisfaction with library resources among undergraduate students in University of Education. The study involved a sample of 454 students from 9 different departments. They found that even though students reported being satisfied with library services, more needed to be done in terms of resources. The problem of inadequate resources was reported by the students to impede their efficient use of the library. Thus, the students also indicated that there are still more gaps that the libraries need to address to improve.

2.11 Challenges of Accessing Library Services in Universities

Challenges in accessing library services have received research interest. The challenges have been identified as multilevel. These include institutional level challenges which affect the capacity of academic libraries to provide the needed resources and services. The other challenges have to do with the ability of library users to competently engage in accessing relevant library services. Each of these critical challenges is discussed. One of the challenges that university libraries face in meeting service quality has been argued to be the increasing rising expectations of library users over their perceptions. Some researchers such as Waqar et al. (2014) have argued that while users are free to increase their expectations of libraries to any level, libraries on the other hand are constrained by structural level budget allocations which limits the level of services they are able to provide. For instance, financial constraints could limit the hiring of staff with the requisite professional library qualification, or even procure the necessary facilities needed to improve library users' experience.

This is in line with some of the studies reported in Ghana on the resource constraints affecting the quality of library services. For instance, Baada, Ayoung, Bekoe and Azindow (2019) in a recent study have argued the need to have a bill on libraries to improve service quality. Baada et al., (2019) assessed the adequacy and effect of attenuating resources on the quality of public library services and the barriers to accessing sufficient resources for the provision of quality services. The researchers used qualitative methods in gathering data for the study. They found that all three regional libraries were highly under resourced in terms of qualified personnel, physical resources, and current library materials which ultimately resulted in low patronage of the library facilities.

Another challenge has been identified in meeting service quality based on individual library user preferences. Research suggests that even basic differences in demographic characteristics makes library users evaluate service quality differently. For instance, Ahmed et al., (2014) have reported that male and female library users evaluate service quality differently. The researchers found that while expectations of library service quality were higher in tangibility and empathy dimensions for female users, the male users rated reliability, responsiveness and assurance as the highest in evaluating library service quality (Ahmed et al., 2014). These findings lend credence to the fact that university libraries are not only confronted with the challenge of meeting library service quality at the broader structural level, but also satisfying individualized needs and preferences at the micro level.

Another challenge that university libraries face in meeting library service quality is found to be the kind of SERVQUAL model used in assessing service quality. In a study that compared to

models of library service quality, Xi, Zhao, Tong and Bao (2018) found that some models work better than others. Specifically, they compared the LIBQUAL+ the Analytical Hierarchy Process (AHP) models to assess service quality of library in selected Chinese Universities. The findings showed that one model worked better than the other.

Specifically, the AHP model was found to be more effective when assessing library service quality between the libraries themselves, while the LIBQUAL was more effective in evaluating library service quality from the perspective of the users. This suggests that individual library users and regulatory institutions evaluate library service quality in different ways. Therefore, the need to improve user satisfaction of library services should take into consideration how individual library users feel or get positive experience when they visit the library.

Some studies also focus on the user-level challenges in accessing library services. For example, a study by Benard and Dulle (2014) investigated constraints and challenges impeding access to and use of library information resources by high school students in Tanzania. The findings revealed that the students faced severe constraints such as lack of up to date or current reading materials, secluded sitting of library facilities, restricted library use hours and lack of professionally trained library staff. The students therefore reported that their experience of using the library is marked by constant stress and frustrations, leading to many of them resolving not to visit their school library. In a related study, Baro et al., (2011) have also reported several challenges faced by university students in Nigeria in their information seeking. These challenges include lack of time, difficulties

with locating credible information, inability to effectively use the medical library and poor skills in information searching.

In Ghana, Agyekum and Filson (2012) assessed the challenges of school libraries following the implementation of the new educational reforms in Ghana. They observed that, school or academic library service provision did not see any remarkable changes, even five years post implementation of the new education reforms. Several challenges were identified to be facing academic libraries in Ghana, including poor funding, limited professionally trained staff, poor facilities and electronic resources. Also, In the Asibey et al. (2017) study, the students reported several challenges associated with accessing library services in Ghana. These challenges cohered around the fact that they are constrained by unreliability and slow connectivity of internet, high cost of internet and unreliable power supply. Sulemani and Katsekor (2007) have also reported several challenges among undergraduate students at the University of Ghana in accessing library services. The challenges enumerated by the students included unreliable service, long distance, lack of time and proximity of other resources.

2.12 Improving Library Services Quality within Technical Universities

The library needs of students and faculty members, as have been observed in the literature shows a growing trend. The needs of library users in university context keep growing in complexities and sophistication (Asemi et al., 2010). This is reflected in the high expectations that library users have in the resources and services their institutional libraries provide (Chen, 2016). There is therefore the responsibility of academic libraries in general to improve their library services in order to meet

the ever-increasing expectations of library users (Cunningham, 2016). This is particular so in technical universities in developing countries. The reason is that, as a developing country embracing technical university approach, there is the need to upgrade library resources and services needed to meet global best practices in university library resources and services (Kumar & Mahajan, 2019).

This section therefore focuses on what research says about the different approaches to improving library service quality in universities in general, and technical universities in particular. Indeed, by providing quality services and satisfaction to users, academic and research librarians can distinguish their services through friendly, helpful, and knowledgeable advice and the best technological resources available (Natesan & Aerts, 2016). Because students and faculty members in technical universities have varying needs and expectations, it is the responsibility of the library staff to know these needs and expectations and strive to meet them (Kont, 2011).

However, there have been limited research studies dedicated to ways of improving library service quality in universities in general, and technical universities in particular. Only a few studies provide suggestions on pragmatic ways to improve library service quality. Among these limited studies, there have been different propositions as to what needs to be done to improve service quality in university libraries. Fithri, Adnan and Syahmer (2017) propose spatial focus on improving academic library service quality for users. In a study that examined the gaps between perceptions and expectations of library users in Indonesia, Fithri et al., (2017) observed that the users perceived high disparities between library service expectations and service provision. The

respondents indicated that there are not enough spaces within the libraries, which makes air circulation difficult due to overcrowding. For this reason, Fithri et al., (2017) recommended that academic libraries need to provide enough spaces both to reduce overcrowding and allow for air circulation.

Chen (2016) has proposed that universities need to pay more attention to empathy than reliability. In a study that applied the Decision-Making Trial and Evaluation Laboratory (DEMATEL) model to validate service quality factors in academic libraries in Taiwan, Chen (2016) found that empathy emerged as the strongest causal factor for explaining user satisfaction. Based on these findings, the researcher suggested that library should pay more attention to “Empathy” rather than “Reliability”, “Responsiveness” and “Assurance” factors (Chen, 2016). Similar findings have been reported by other researchers such as Natesan and Aerts (2016).

2.13 Summary

The literature reviewed shows that interest in library service quality and user satisfaction has grown in recent decades. The main issues that emerge from the literature include the fact that expectations of library users keep rising. Users of academic libraries, particularly students and faculty members keep growing in sophistication, and this is showing in their high expectations of library services. The literature suggests that technological advancement is a contributing factor to the increasing expectations and demands of quality service from libraries.

It emerged from the literature further that there is a stark reality to the effect that most libraries in developing countries are not able to match up with service quality due to institutional, behavioural and other challenges that act as barriers to optimal service quality delivery. However, the focus on

technical universities is limited, particularly in developing countries such as Ghana. The current study, by focusing on library service quality in technical universities in Ghana would therefore make good contribution to current literature.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The methodology chapter presents a discussion of the design and procedures that were followed in gathering and analyzing data for the study. The section included here are; research design, selection of cases/study setting, selection of subjects for the study, data collection instrument, data collection procedures, presentation of data and analysis.

3.2 Research Design

A research design or approach is defined as the overall strategy that is chosen to integrate different parts of a study in a coherent manner to address a research question (Onwuegbuzie & Combs, 2011). A research design thus describes the ways, the process or techniques for gathering and analyzing data (Cresswell, 2009). There are three broad types of designs which are quantitative, qualitative and mixed methods. Quantitative research design is defined as the kind of studies that are usually undertaken using numbers as the basic data for analysis among a large sample of respondents (Plonsky, 2017).

Qualitative research design on the other hand is defined as research studies that use mostly narratives or observations as data for analysis among a small sample of respondents (Creswell & Creswell, 2017; Plonsky, 2017). However, in some cases, both quantitative and qualitative methods are combined to form a mixed-method design to gather data for research. The choice of which approach to use depends mainly on the research question under investigation and whether or not the issue is well researched within the context of the study (Plonsky, 2017).

The research strategy for the current study is a case study, focusing on Accra Technical University (ATU) and Kumasi Technical University (KsTU). Case studies provide opportunity for in-depth investigation of a single individual, groups of people or an institution (Plonsky, 2017). Within case studies, different research designs can be employed in gathering data. Specifically, the quantitative design is used to gather data for the study. The quantitative approach was used because the study sought to explore library service quality within two technical universities. The data was gathered using a cross-sectional survey, through the administration of a questionnaire. A cross-sectional survey allows researchers to collect data from a representative cross section of the population of interest in order to understand the situation.

3.3 Selection of Cases

The cases selected for this study were Kumasi Technical University (KsTU) and Accra Technical University (ATU). These two technical universities were selected for their leading role they play within the technical university landscape in Ghana. Before their conversion from polytechnics to technical universities, both institutions were among the first established technical institutions in Ghana. When polytechnics in Ghana were being converted into universities, ATU and KSTU were among the first batch of polytechnics piloted for technical university education. The two also constitute the largest technical universities situated in the two largest and cosmopolitan cities in Ghana – Kumasi and Accra, providing technical university education to students from different parts of Ghana and some neighbouring countries in West Africa. The two universities therefore constitute a good context for researching into quality library service delivery in technical universities in Ghana.

3.4 Selection of subjects

This sub-section describes how respondents are selected for the study. This sub-section therefore contains description of the population for the study, sample size and sampling techniques.

3.4.1 Population of the Study

In the current study, the interest is to investigate service quality expectations and perceptions among library users of two technical universities in Ghana; ATU and KsTU. Specifically, the study focuses on students and faculty members who are the main users of the library resources and services. The population of the two technical universities are provided on Table 3. 1.

Table 3. 1: Population of students and faculty members

Institution	Members	Population
Accra Technical University	Students	8,385
	Faculty Members	328
	<i>Sub-total</i>	8,713
Kumasi Technical University	Students	10,021
	Faculty Members	398
	<i>Sub-total</i>	10,419
Overall Total		19,132

Source: Accra Technical University (2018/2019); Kumasi Technical University (2019/2020)

As shown in Table 3. 1, the overall population for the study was 19,132, encompassing students and faculty members. In Accra Technical University, the overall population was 8,713, encompassing 8,385 students, 328 faculty members. In Kumasi Technical University, the total population was 10,419, encompassing 10,021 students and 376 faculty members.

3.4.2 Sample Size

A sample size is always selected from the population and used for the research for the purposes of practicality. A sample is defined as the proportion of a population that is selected for research (Shang, Wang & Shao, 2017). Creswell and Creswell (2017) also defined a sample size as a section of an accessible population that is selected and studied. A sample size determination is an important component of research. Sampling the right sample size ensures that a true picture is gained about the entire population of interest. As Nardi (2018) explains, both under-sampled and over-sampled studies all constitute a waste of resources for not having the capability to produce useful results. Because of this, sample size determination is very important, especially in survey research. However, the sample size should be large enough so that the findings from the study can be generalized to the entire population (Plonsky, 2017).

In this study, a sample of two hundred and fifty (250) subjects were selected for the study. Two different approaches were used in sample size determination. These are the percentage approach and the effect size approach. Using the percentage approach, some scholars suggest that for a research population of below 5000, a sample of 2 – 5% of the population is enough for a survey (Plonsky, 2017). However, when the population is above 5000, it is recommended that the effect

size approach is used to determine the required sample size (Nardi, 2018). In the current study, the population size was 19,142. Therefore, using the effect size approach was well suited to determine the sample size.

According to Cohen (1992), using 95% confidence interval, medium effect size of 0.50 and power of 0.25, the minimum sample size required to detect an effect in a population of 10,000 – 20,000 is 150. Other researchers suggest that the minimum sample size should be increased to take care of issues such as non-response and response errors (Patten & Newhart, 2017). The sample size of 250 was therefore enough to ensure that even after non-response and response errors, there will still be enough for analysis.

3.4.3 Sampling Technique

This subsection presents discussion on the techniques through which subjects for the study were sampled. A sampling technique is defined as the procedures used to select subjects for a research (Gravetter & Forsano, 2018). A sampling technique helps to select subjects from a population for a research so that the results are generalized to the entire population (Patten & Newhart, 2017). The two types of sampling techniques are probability sampling and non-probability sampling (Nardi, 2017). Probability sampling is the type of sampling procedure where all members of a population have equal chances to participate. With probability sampling the researcher has a significant measure of control over who is selected and it allows for representative cross sections, or particular groups to be identified or targeted (Patten & Newhart, 2017).

The different types of probability sampling are simple random sampling, stratified sampling, systematic sampling and cluster sampling. In non-probability sampling, members of a population do not have equal chances of being selected to participate in a study (Patten & Newhart, 2017). The main non-probability sampling techniques are purposive, convenience and snow balling (Gravetter & Forsano, 2018).

This study used stratified and convenience sampling to select the subjects for the study. The stratified sampling technique allowed for proportionate sample size to be selected from each of the members of the technical universities (i.e., students and faculty members). The sample was selected proportionately from each of the members as determined by the formula below:

$$P_s = \frac{\text{Population size of members}}{\text{Total Population Size}} \times 250$$

Table 3. 2: Distribution of sample size of Respondents

Sample	Accra Technical University	Kumasi Technical University	Total
Students	104	124	228
Faculty	10	12	22
Total	114	136	250

Source: Author's calculation

As shown on Table 3. 2, a total of 250 subjects was the sample size selected for the study. The sample size included 228 students and 22 faculty members from both technical universities. In selecting the 250 subjects, convenience sampling technique was used. The convenience sampling

technique helped the researcher to select respondents from each of the two technical universities who were available at the time of data collection and were ready to take part in the study.

3.5 Data Collection Instrument

This section presents discussion of the research instruments used to gather the data. Research instruments are various methods such as observation, questionnaire and interview that are used to obtain research data (Pattern & Newhart, 2017). In the current study, a questionnaire (appendix II) was used to collect the quantitative data. The questionnaire administered to the students had different sections. The sections in the questionnaire included demographic information, course information, library service expectations, and perceptions of library service quality, challenges encountered in accessing library resources and services, suggestions for improving library services.

The questionnaire was developed with the LIBQUAL and SERVQUAL dimensions as guide. These include reliability, responsiveness, assurance, empathy, and tangibles. For this reason, to measure potential gaps within the library service, the researcher adopted a 22-item questionnaire to investigate service quality and user satisfaction. The items in the questionnaire were measured on a Likert scale. The estimated time needed to fill the questionnaire was between 20 – 25 minutes.

The sections in the questionnaire included the following sections:

Section A: Demographic information

Section B: Library Use

Section C: Library Service Quality

Section D: Library User Satisfaction

Section E: Challenges of Accessing Library Services

Section A: Demographic Information: this section of the questionnaire elicited demographic information about the Subjects. Information elicited by this section included gender, status, department, programme of study and level of study of the students.

Section B: Library Use: examined the frequency and patterns of Subjects' use of the library facility in their institutions. Some of the information provided included; institution, how often respondents used the library, purposes for using the libraries and others.

Section C: Library Service Quality: assessed the extent to which respondents agree to the statements about various components of their academic library services and resources. The aspects of library service quality examined included reliability, responsiveness, empathy, assurance, access and tangibility. Responses were rated on 5-point Likert scale, ranging from; 1 = strongly disagree (SD), 2 = disagree (D), 3 = somehow (S), 4 = agree (A), 5 = strongly agree (SA)

Section D: Library User Satisfaction: this section examined the extent to which respondents were satisfied with the library services. All responses were rated on 5-point Likert scale, ranging from; 1 = very dissatisfied, 2 = dissatisfied, 3 = somehow, 4 = satisfied, 5 = very satisfied.

Section E: Library Use Challenges: this section examined the challenges that subjects faced in accessing quality library services.

3.6 Pilot Study

Pilot study was first conducted. The fundamental aim of the pilot component of the study was to assess how the questionnaire made sense to the library users in different institutional contexts. The pilot study helped to identify any challenges that the respondents may have. It also helped to correct all necessary errors to enhance the questionnaire for the actual study based on the feedback obtained.

The pilot study was conducted in Ho Technical University, to test how the data collection instruments made sense to the respondents. A total of twenty-five (25) respondents were used for the pilot study. Survey research scholars advise that a sample size of between 10 and 20% of the sample size for the main study is adequate for piloting a study (Pattern & Newhart, 2017). The sample of 25 subjects was therefore adequate for the pilot. The outcome of the pilot study showed that the students and faculty members generally understood the questions being asked in the questionnaire. The researcher therefore proceeded to gather data for the main study.

3.7 Data Collection Process

The data collection for the main study began in the first week of March 2020. When the pilot study was completed, the main study was conducted. After deciding on the proportionate sample, the convenience sample was then used to select Respondents. The researcher and the two research

assistants visited the two institutions (i.e., ATU and KsTU). Copies of the questionnaires were distributed to the library users at different target places; specifically targeting library users of the main libraries of each of the two universities. The data collection was anticipated to last for about two months, thus March and April 2020.

However, the data collection was truncated when the first case of corona virus cases was reported in Ghana on March 12, 2020. Due to the COVID-19 pandemic and its attendant lockdown and social distancing measures, the collection of the data through paper and pencil procedures halted. The questionnaires that had been given out could not be retrieved because students had been asked to go home. Virtual means were therefore utilized to collect the data. The questionnaire was setup on Google doc forms. This helped the questionnaire to be forwarded to the students and faculty through virtual means such as emails and social media platforms such as WhatsApp. The responses from the subjects were subsequently retrieved online.

By the nature of online data gathering, non-response rate is very high. Therefore, in order to get the sample size calculated for a study, the researcher had to send the link to the questionnaire to far more people than the estimated sample size in order to ensure that the sample size could be achieved. Therefore, in this study, the links to the questionnaire was sent to about 300 target sample, which was more than the 250 calculated sample. Responses from the subjects were then received until the anticipated 250 subjects were achieved. The online data collection lasted between May – July 2020.

3.8 Data Analysis

This section discusses how the data collected was analyzed. The quantitative data for the study was analyzed using descriptive statistics including frequency distribution table, percentages and analysis of variance, with the help of Statistical Package for Social Sciences (SPSS) software version 20. The descriptive statistics was used to analyse distribution and description of the students' expectations and perceptions of library resources and services among the subjects.

3.9 Ethical considerations

In carrying out the current study, high ethical standards were followed at all stages in the gathering and analyzing of the data. Ethics are very critical aspects of research because they ensure that research subjects are protected in all the stages of the research process (Plonsky, 2017). All researchers therefore are required to adhere to or follow professional ethical codes when conducting research. According to Patten and Newhart, (2017) research ethics helps in protecting Subjects, developing trust with them, promoting the integrity of research process, guarding against misconduct and help gain public confidence.

Before conducting the study, a letter of introduction (appendix I) from the Department of Information Studies, University of Ghana was first taken. The letter of introduction was given to the librarians at both Accra Technical University and Kumasi Technical University. The researcher also ensured high sense of confidentiality and anonymity by making sure the data collected was managed in such a way that it identified the subjects were always protected and that no information was directly traced or associated with any individual student participant. In the data collection process, informed consent of the subjects was sought, and subjects were guaranteed beforehand

the privacy of the information they provide. Subjects for this study were duly informed and their concern sought, by providing consent forms that had to be signed by all subjects. Information collected from subject was treated as confidential. This study also acknowledged all sources of knowledge to avoid any form of plagiarism.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This study assessed library users' service expectations and how they perceive the quality of library services they receive at both Accra Technical University (ATU) and Kumasi Technical University (KsTU). The objectives of the study were:

- To assess the extent of library, use among library users at Accra and Kumasi Technical Universities.
- To examine the perceptions of the library users on the quality of library services they receive at Accra and Kumasi Technical Universities.
- To examine user satisfaction of the library service delivery in the two technical universities.
- To determine the challenges that the library users encounter when accessing library services in the two technical universities.

As discussed in the data collection procedure, the link to the questionnaire was forwarded to 300 respondents, 150 in each of the two technical universities, to ensure that regardless of non-response, the sample size of 250 would still be achieved. The target of 250 was achieved. Table 4.1 gives a breakdown of how many responses were received from each of the two technical universities.

Table 4. 1: Response rate

Institution	Links sent out	Responses received	Response Rate
Accra Technical University	150	114	76.0%
Kumasi Technical University	150	136	90.7%
Total	300	250	83.3%

Source: Field data (2020)

Table 4.1 shows that overall, the total response rate was 250 (83.3%). Kumasi Technical University recorded the highest response rate of 136 (90.7%), with Accra Technical University recording 114 (76.0%). This chapter presents the analysis and findings from the study. The sections in the chapter are presented as follows:

- Demographic profiles of the respondents
- Library use characteristics of the respondents.
- Perceptions of the respondents on quality of library service
- User satisfaction among the respondents
- Challenges of library use among respondents in the two institutions.

4.2 Demographic profiles of Respondents

The demographic profiles of the respondents are presented in this section. The characteristics presented are institution of affiliation, status of the respondents, gender, age and level of study of the respondents. The information is presented in frequency and percentages, and where necessary, pie chart and graphs are used.

4.2.1 Respondents' Institutions of Affiliation

This sub-section presents information on the distribution of the respondents based on the universities they are coming from, provided in Figure 2.

Figure 2: Institutional affiliation of Respondents

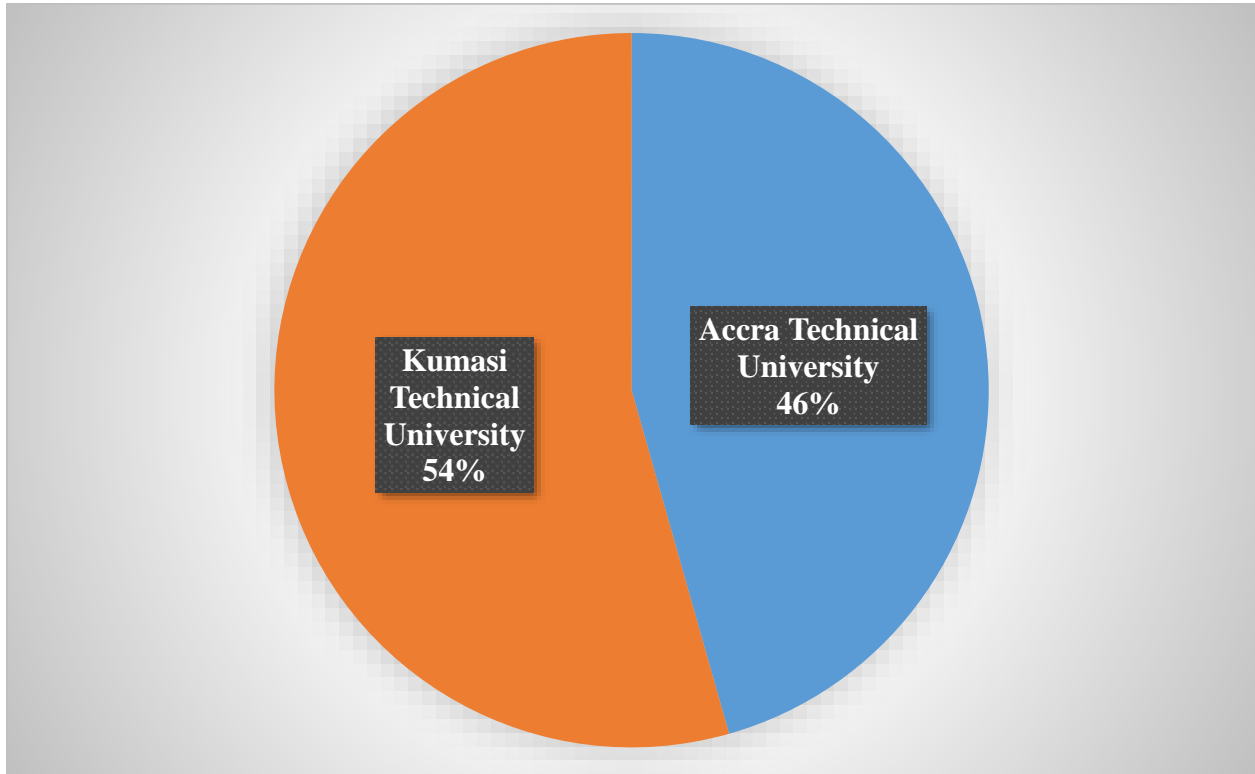


Figure 2 shows that fairly more than half of the respondents 136 (54.4%) were from Kumasi Technical University, followed by 114 (45.6%) from the Accra Technical University.

4.2.2 Status of Respondents

The distribution of respondents based on their status as students and faculty members are presented in this subsection. The distribution of the status of the respondents is provided in Table 4.2.

Table 4.2 shows that majority of the respondents, 228 (91.2%) were students. This was followed by faculty members with 22 (8.8%). Within both institutions, the student samples were greater than the faculty samples.

Table 4.2: Status of the Respondents

Institutions	Students		Faculty		Total	
	Freq.	%	Freq.	%	Freq.	%
ATU	104	94.5%	10	5.5%	114	45.6%
KsTU	124	91.9%	12	8.1%	136	54.4%
Total	228	91.2%	22	8.8%	250	100%

Source: Field data (2020)

4.2.3 Gender of Respondents

This sub-section presents the distribution of the respondents into males and females. The gender distribution of respondents is presented in Figure 3. There was relatively equal distribution of male and female respondents in the study. In the total sample, male respondents totalling 128 (51.2%) were slightly more than female respondents numbering 122 (48.8%). This is also reflected at the institutional level where more than half of the samples were males, both at ATU (males = 54.4%, females = 45.6%) and KsTU (males = 51.5%, females = 47.8%).

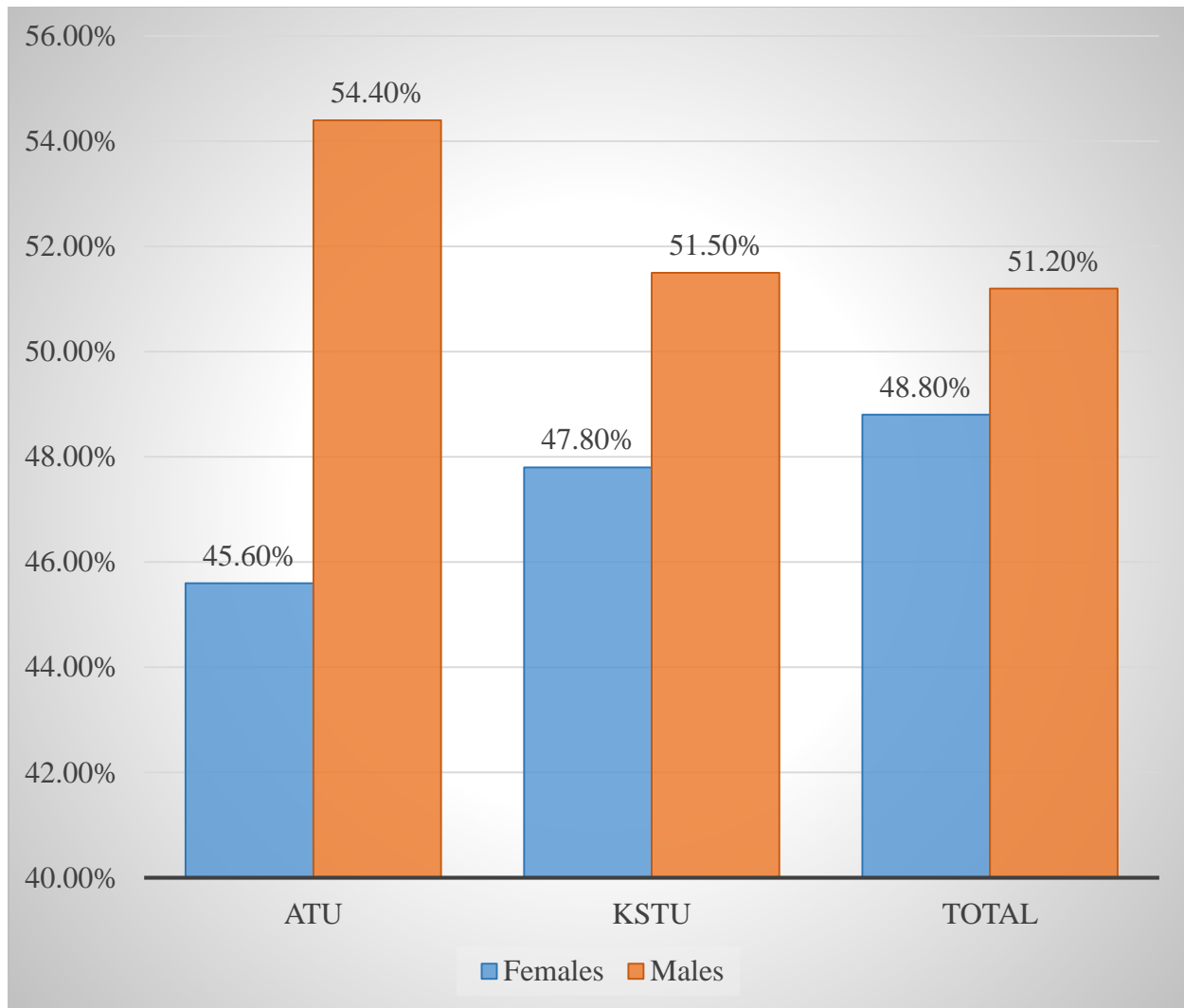


Figure 3: Gender distribution of Respondents

4.2.4 Age of Respondents

The ages of the respondents ranged between a minimum of 18 years to a maximum of 40 years.

The distribution of the ages of the respondents are provided on Table 4.3.

Table 4.3: Age distribution of the Respondents

Age	ATU		KsTU		Total	
	Freq.	%	Freq.	%	Freq.	%
Below 20 years	10	8.8%	19	14%	29	11.6%
20 - 24 years	47	41.2%	30	22.1%	77	30.8%
25 - 29 years	22	19.3%	35	31.8%	57	22.8%
30 - 34 years	25	21.9%	29	21.3%	54	21.6%
35+ years	10	8.8%	23	16.9%	33	13.2%
Total	114	45.6%	136	54.4%	250	100%

Source: Field data (2020)

Table 4.3 shows that in Accra Technical University, majority of the respondents were between 20 – 24 years, 47 (41.2%), followed by those between 30 – 39 years, 25 (21.9%). The least age categories were those below 20 years with 10 (8.8%) and those 35 and above also 10 (8.8%).

In Kumasi Technical University, majority of the respondents were between 25 – 29 years 35 (31.8%), followed by those between 20 – 24 years 30 (22.1%). Those between 30-34 years came next 29 (21.3%) followed by those between 35 and above 23 (16 %). The least age category was those below 20 years 19 (14%).

4.2.5 Level of Study of Respondents

This sub-section presents distribution of the level of study among the student sample. The levels of study are provided in Figure 4. In the distribution, student respondents in level 300 were more 118 (57.2%), followed by those in level 200, 62 (24.8%), and then 38 (14.4%) were in level 100.

Little differences were observed in the pattern of respondents across level of study in the two institutions. In Accra Technical University, respondents in level 200, 50 (48.1%) were more compared to all the other levels. In Kumasi Technical University, respondents in level 300, 89 (71.8%) were more than respondents in the other levels.

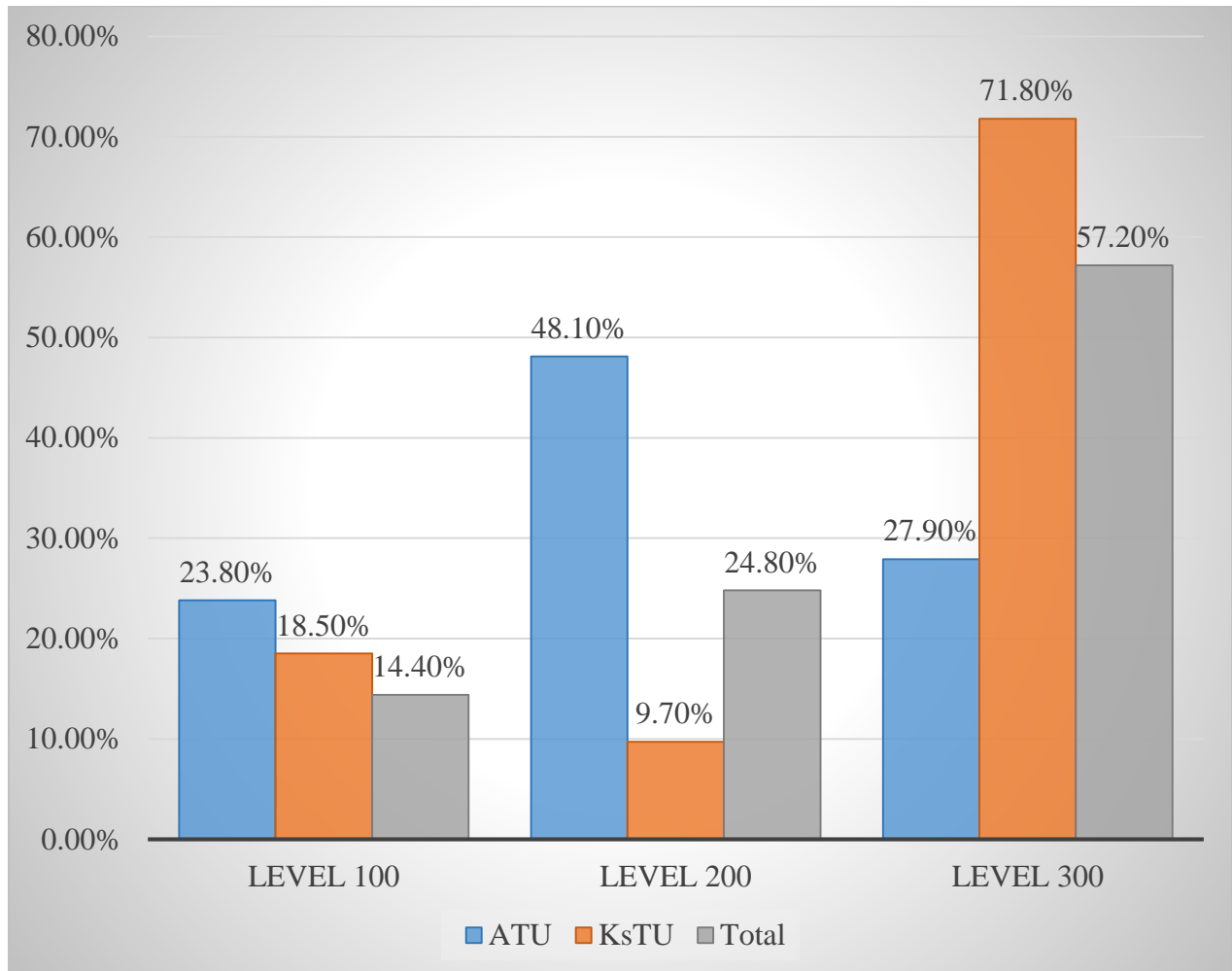


Figure 4: Bar graph of students' level of study

4.3 Library Use Profile of the Respondents

The first objective of the study assessed the extent of library use among the respondents. The extent of library use in the two institutions was assessed. Their library use profiles were assessed in terms of the frequency of their library use and the purposes for which they used library services. This section presents the library use characteristics of the respondents.

4.3.1 Frequency of library visits among Respondents

The respondents were asked to rate how often they visited the library, on a 5-point Likert scale, ranging from never, rarely, once in a while, often to very often. The results are presented on Figure 5.

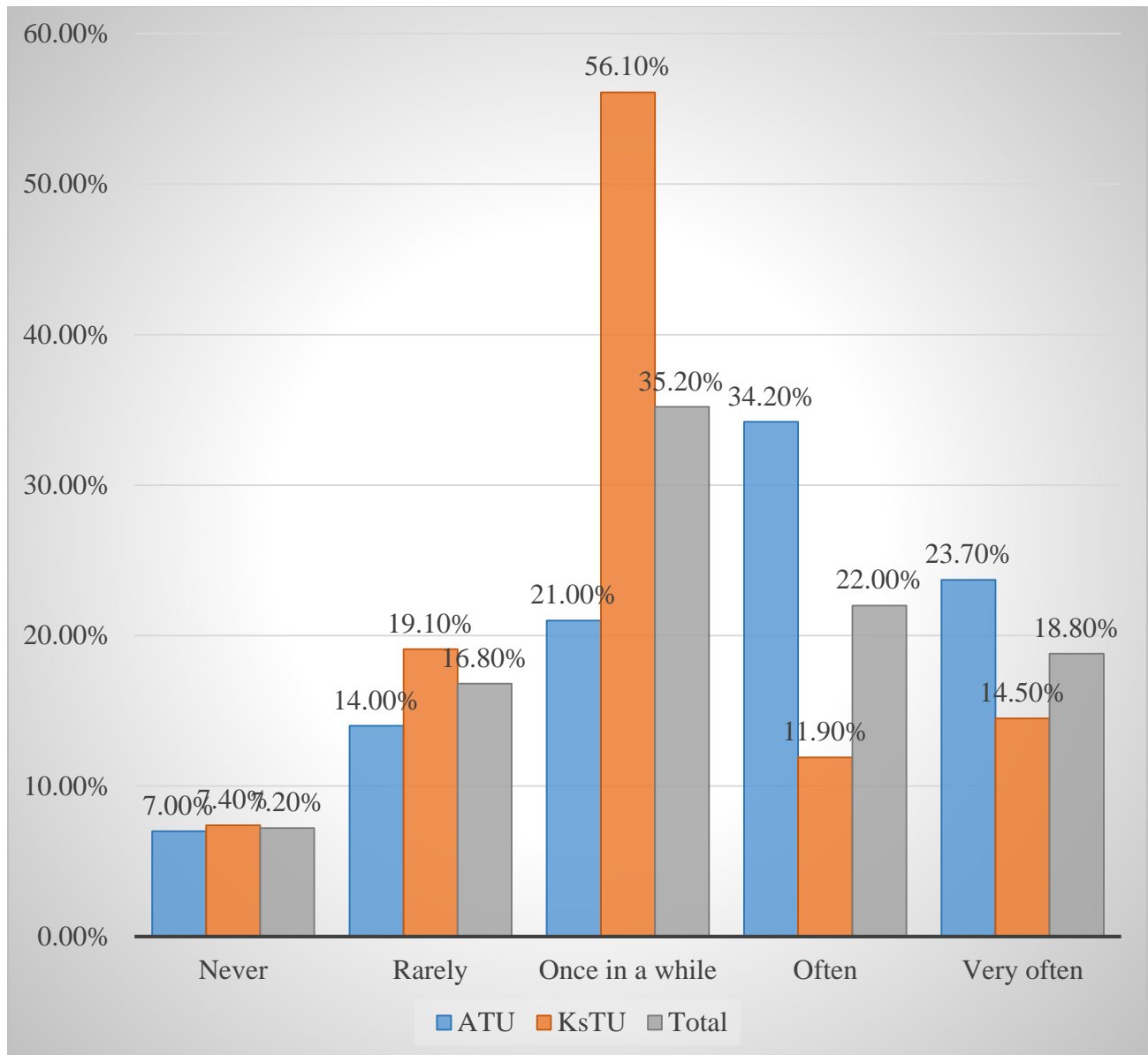


Figure 5: Bar graph of frequency of library visits

As shown in Figure 5, in the total sample, majority of the respondents indicated visiting the library once in a while 88 (35.2%), followed by those who visited the library often, numbering 55 (22.0%), those who visited the library very often were 47 (18.8%), those who rarely visited the library totaled 42 (16.8%) and those who never visited the library were 18 (7.2%) in that order. Subtle differences were found between the two institutions. Respondents who visited libraries once in a

while were more in Kumasi Technical University 64 (56.1%), while those who visited often were more in Accra Technical University.

4.3.2 Purposes for visiting the library

The respondents were also made to indicate the purposes for which they visited the libraries in their respective institutions. The results are provided in Figure 6.

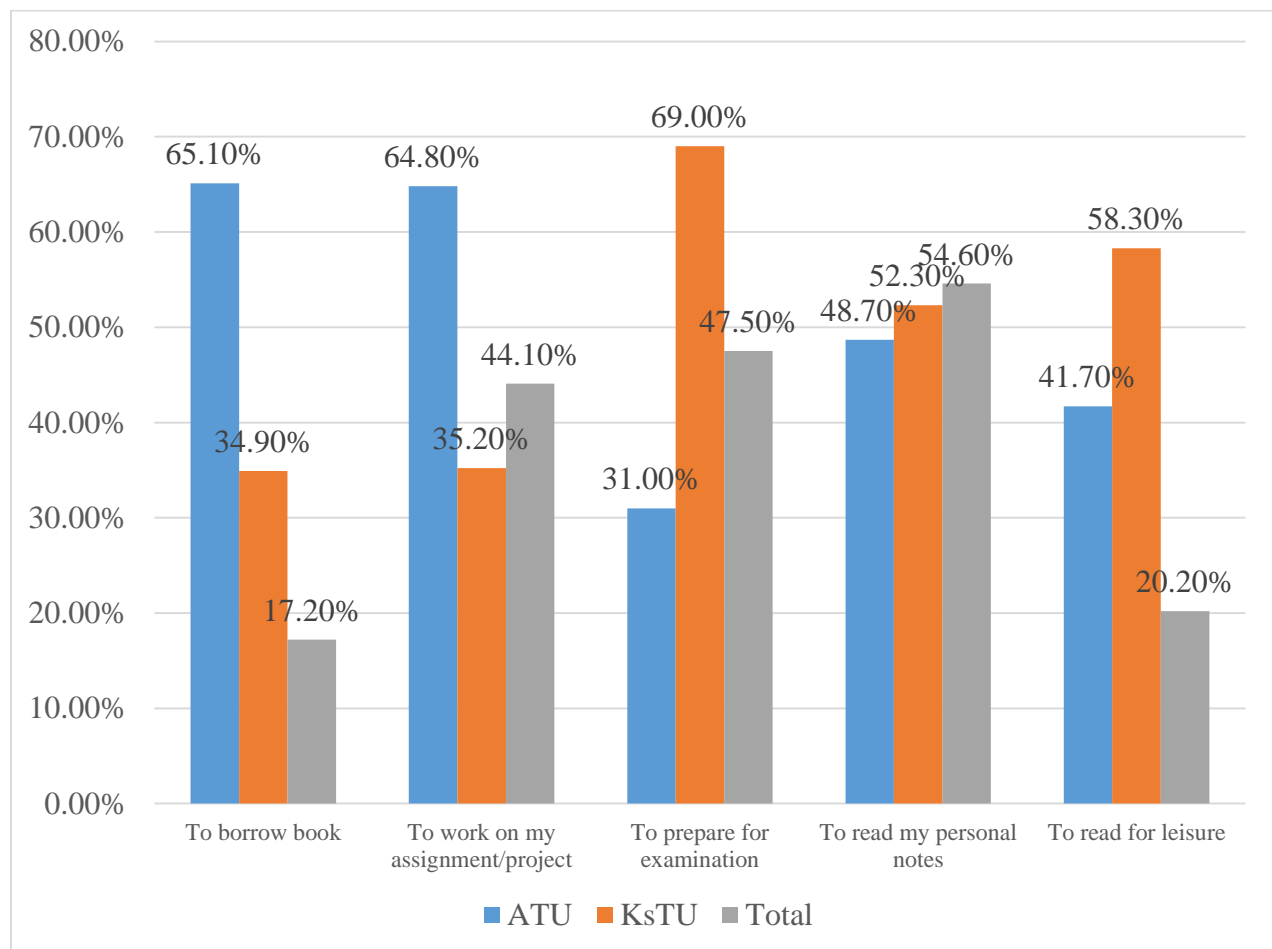


Figure 6: Bar graph of purpose of library visits

It can be seen from Figure 6 that, visiting the library to read personal notes 130 (54.6%) emerged the most dominant purpose for visiting the library. This was followed by those who visited to

prepare for examinations with 113 (47.5%), working on assignments or projects numbering 105 (44.1%), reading for leisure with 48 (20.2%) and finally borrowing of books 43 (17.2 %).

In terms of institutional differences, more than half of the respondents who go to borrow books 28 (65.1%) and work on their assignment 68 (64.8%) were from Accra Technical University. Majority of those who go to prepare for examination 78 (69.0%), read personal notes 68 (52.3%) and read for leisure 28 (58.3%) were from Kumasi Technical University.

4.4 Quality of Library Services among Technical University Users

The second objective of the study assessed how library users in both technical universities perceived quality library services. Library service quality was examined using five dimensions, tangibility, reliability, responsiveness, empathy, and assurance. The perceptions of library service quality in each of the five dimensions were assessed individually. Across all these dimensions, the two institutions were compared based on frequency of agreement by summing up agreed and strongly agreed responses (agree + strongly agree).

4.4.1 Tangibility of library infrastructures

The respondents rated tangibility of the library resources on six indicator items. The respondents' ratings of the internal environment of their libraries are provided on Table 4.4.

Table 4. 4: Internal environment for studying

Internal environment of the library is calm, welcoming and conducive to studying		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	16	9	25
	%	14.0%	6.6%	10.0%
Disagree	Freq.	25	20	45
	%	21.9%	14.7%	18.0%
Neither Agree nor Disagree	Freq.	26	13	39
	%	22.8%	9.6%	15.6%
Agree	Freq.	20	43	63
	%	17.5%	31.6%	25.2%
Strongly Agree	Freq.	27	51	78
	%	23.7%	37.5%	31.2%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

As shown in Table 4.4, in the total, 78 (31.2%) respondents strongly agreed and 63 (25.2%) agreed that the internal environment of their libraries was calm, welcoming and conducive for studies. In rating the internal environment of their libraries, respondents of Kumasi Technical University rated their library higher as compared to those in Accra Technical University. Specifically, in

Kumasi Technical University, 51 (37.5%) strongly agreed and 43 (31.6%) agreed. However, in Accra Technical University, 27 (23.7%) strongly agreed and 20 (17.5%) agreed.

Library as space for studying and research.

The respondents' evaluations of the suitability and sufficiency of the library space as encouraging studies and research are provided on Table 4.5.

Table 4. 5: Library space for studying and research

Library has suitable and sufficient space that encourages study and research		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	7	5	12
	%	6.1%	3.7%	4.8%
Disagree	Freq.	11	8	19
	%	9.6%	5.9%	7.6%
Neither Agree nor Disagree	Freq.	25	19	44
	%	21.9%	14.0%	17.6%
Agree	Freq.	40	56	96
	%	35.1%	41.2%	38.4%
Strongly Agree	Freq.	31	48	79
	%	27.2%	35.3%	31.6%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.5 shows that per the tabular presentation of the participants of both technical universities, 12 (4.8%) strongly disagreed and 19 (7.6%) disagreed that “library has suitable and sufficient space that encourages study and research”. Rating on the same theme as to whether they agreed or strongly agreed, 79 (31.6%) strongly agreed and 96 (38.4%) agreed that their library had suitable and sufficient space that encourages study and research.

However, there were differences as far as the responses of both institutions were concerned. Respondents from Accra Technical University rated their institution lesser. In all, 31 (27.2%) strongly agreed and 40 (35.1%) agreed as compared to Kumasi Technical University where 48 (35.3%) respondents strongly agreed and 56 (41.2%) agreed.

Library location as inviting

The respondents’ evaluation of the pleasantness and comfortability of the location of their libraries are provided in Table 4.6.

Table 4.6 shows that in relation to responses as to how library is a pleasant, comfortable and inviting location to carry out study, 74 (29.6%) respondents strongly agreed and 91 (36.4%) agreed. Respondents in Kumasi Technical University (KsTU) rated their institution higher as compared to the Accra Technical University (ATU).

Specifically, in Accra Technical University, 23 (20.2%) respondents strongly agreed and 40 (35.1%) agreed while in Kumasi Technical University (KsTU) 51 (37.5%) respondents strongly agreed and 51 (37.5%) agreed.

Table 4. 6: Library location as inviting.

Library is a pleasant, comfortable and inviting location to carry out study		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	12	8	20
	%	60.0%	40.0%	100.0%
Disagree	Freq.	13	4	17
	%	76.5%	23.5%	100.0%
Neither Agree nor Disagree	Freq.	26	22	48
	%	54.2%	45.8%	100.0%
Agree	Freq.	40	51	91
	%	44.0%	56.0%	100.0%
Strongly Agree	Freq.	23	51	74
	%	31.1%	68.9%	100.0%
Total	Freq.	114	136	250
	%	45.6%	54.4%	100.0%

Source: Field data (2020)

Condition of library materials

The evaluation of the library materials of the libraries by the respondents are provided in Table 4.7.

As can be seen from Table 4.7, 68 (27.2%) respondents strongly agreed and 91 (36.4%) agreed that the library materials were in good condition. However, differences existed in their responses.

More respondents in the Kumasi Technical University rated their institution higher, 38 (27.9%) respondents strongly agreed and 58 (42.6%) agreed to that effect. In Accra Technical University, respondents rated their institution lower, with 30 (26.3%) respondents strongly agreeing and 33 (28.9%) agreeing that the library materials were in good condition.

Table 4. 7: Condition of library materials

The library materials are in good condition		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	8	4	12
	%	7.0%	2.9%	4.8%
Disagree	Freq.	5	7	12
	%	4.4%	5.1%	4.8%
Neither Agree nor Disagree	Freq.	38	29	67
	%	33.3%	21.3%	26.8%
Agree	Freq.	33	58	91
	%	28.9%	42.6%	36.4%
Strongly Agree	Freq.	30	38	68
	%	26.3%	27.9%	27.2%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Adequacy of electronic resources

Table 4.8 also presents the respondents evaluations of the electronic library resources of their respective institutions.

Table 4. 8: Adequacy of electronic resources

Number and variety of electronic resources subscribed are adequate		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	9	14	23
	%	7.9%	10.3%	9.2%
Disagree	Freq.	13	18	31
	%	11.4%	13.2%	12.4%
Neither Agree nor Disagree	Freq.	34	38	72
	%	29.8%	27.9%	28.8%
Agree	Freq.	33	43	76
	%	28.9%	31.6%	30.4%
Strongly Agree	Freq.	25	23	48
	%	21.9%	16.9%	19.2%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.8 shows that with the total number of 250 (100.0%) respondents, 48 (19.2%) respondents strongly agreed and 76 (30.4%) agreed that the number and variety of electronic resources subscribed were adequate. Among these responses, 25 (21.9%) respondents which were in Accra Technical University (ATU) strongly agreed and 33 (28.9%) agreed. With the Kumasi Technical University (KsTU), 23 (16.9%) respondents strongly agreed and 43 (31.6%) agreed to the fact that the number and variety of electronic resources subscribed were adequate. This demonstrates that Kumasi Technical University (KsTU) rated their institution higher as compared to the Accra Technical University (ATU)

Modern technical equipment and facilities

As shown below in table 4.9, the results of the respondents' evaluations of the sufficiency of the modern technological equipment and facilities, the results show that 25 (10.0%) respondents strongly agreed and 60 (24.0%) agreed that the library has sufficient modern technological equipment and facilities. Respondents in Kumasi Technical University rated their institution higher with 16 (11.8%) respondents strongly agreeing and 38 (27.9%) agreeing as compared to Accra Technical University, where the respondents rated their institution lower. 9 (7.9%) respondents strongly agreed and 22 (19.3%) agreed.

Table 4. 9: Modern technical equipment and facilities

The library has sufficient modern technological equipment and facilities		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	28	23	51
	%	24.6%	16.9%	20.4%
Disagree	Freq.	17	18	35
	%	14.9%	13.2%	14.0%
Neither Agree nor Disagree	Freq.	38	41	79
	%	33.3%	30.1%	31.6%
Agree	Freq.	22	38	60
	%	19.3%	27.9%	24.0%
Strongly Agree	Freq.	9	16	25
	%	7.9%	11.8%	10.0%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

4.4.2 Reliability of library service

Reliability of library service was assessed using five indicator items. The findings are presented on Tables below.

Reliability of library staff

Table 4.10 represents the respondents' evaluation of the reliability of their library staff.

Table 4. 10: Reliability of library staff

The library staff are very reliable		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	7	9	16
	%	6.1%	6.6%	6.4%
Disagree	Freq.	15	17	32
	%	13.2%	12.5%	12.8%
Neither Agree nor Disagree	Freq.	19	23	42
	%	16.7%	16.9%	16.8%
Agree	Freq.	32	52	84
	%	28.1%	38.2%	33.6%
Strongly Agree	Freq.	41	35	76
	%	36.0%	25.7%	30.4%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.10 shows that 76 (30.4%) respondents strongly agreed and 84 (33.6%) agreed that the library staff are very reliable. Of these figures, in Accra Technical University 41 (36.0%) respondents strongly agreed and 32 (28.1%) agreed whiles in Kumasi Technical University 35 (25.7%) respondents strongly agreed and 52 (38.2%) agreed that their library staff were friendly. Per the responses, Kumasi Technical University rated their institution higher than the Accra Technical University

Courtesy and friendliness of library staff

Table 4.11 presents the respondents' assessment of the courtesy and friendliness nature of their library staff.

Table 4. 11: Courtesy and friendliness of library staff

Library staff are always courteous, showing friendly behaviour		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	8	10	18
	%	44.4%	55.6%	100.0%
Disagree	Freq.	13	14	27
	%	48.1%	51.9%	100.0%
Neither Agree nor Disagree	Freq.	24	22	46
	%	52.2%	47.8%	100.0%
Agree	Freq.	38	56	94
	%	40.4%	59.6%	100.0%
Strongly Agree	Freq.	31	34	65
	%	47.7%	52.3%	100.0%
Total	Freq.	114	136	250
	%	45.6%	54.4%	100.0%

Source: Field data (2020)

Table 4.11 shows that 65 (26.0%) respondents strongly agreed and 94 (37.6%) agreed that library staff are always courteous and showing friendly behaviour. Respondents in Accra Technical University rated their school lower as compared to the Kumasi Technical University. Specifically,

in Accra Technical University 31 (27.2%) respondents strongly agreed and 38 (33.3%) agreed. While in Kumasi Technical University 34 (25.0%) respondents strongly agreed and 56 (41.2%) agreed that library staff are always courteous, showing friendly behaviour.

Willingness and readiness of staff to help

Table 4.12 presents the respondents’ assessment of the willingness of their library staff to assist them.

Table 4. 12: Willingness and readiness of staff to help

Library staff are always willing and ready to help users		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	10	9	19
	%	8.8%	6.6%	7.6%
Disagree	Freq.	9	6	15
	%	7.9%	4.4%	6.0%
Neither Agree nor Disagree	Freq.	30	28	58
	%	26.3%	20.6%	23.2%
Agree	Freq.	27	54	81
	%	23.7%	39.7%	32.4%
Strongly Agree	Freq.	38	39	77
	%	33.3%	28.7%	30.8%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

The findings showed 77 (30.8%) respondents strongly agreed and 81 (32.4%) agreed that Library staff were always willing and ready to help users. Among these, 38 (33.3%) respondents of the

Accra Technical University strongly agreed and 27 (23.7%) agreed. 39 (28.7%) respondents of the Kumasi Technical University strongly agreed and 54 (39.7%) agreed. Respondents from Kumasi Technical University therefore rated their institution higher as compared to the Accra Technical University.

Ease of making complaint

Table 4.13 provides the respondents’ evaluation of the assessment of how one can make a complaint or suggestion easily about the existing conditions in the library.

Table 4. 13: Ease of making complaint

One can make a complaint or suggestion easily about the existing conditions in the library		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	13	13	26
	%	11.4%	9.6%	10.4%
Disagree	Freq.	8	17	25
	%	7.0%	12.5%	10.0%
Neither Agree nor Disagree	Freq.	39	43	82
	%	34.2%	31.6%	32.8%
Agree	Freq.	26	38	64
	%	22.8%	27.9%	25.6%
Strongly Agree	Freq.	28	25	53
	%	24.6%	18.4%	21.2%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

In the total respondents, 53 (21.2%) respondents strongly agreed and 64 (25.6%) agreed that one can make a complaint or suggestion easily about the existing conditions in the library. In the

ratings, respondents' compliant about the existing conditions in the library, respondents in Kumasi Technical University rated their library higher as compared to those in Accra Technical University. Specifically, in Kumasi Technical University, 25 (18.4%) strongly agreed and 38 (27.9%) agreed. However, in Accra Technical University 28 (24.6%) strongly agreed and 26 (22.8%) agreed.

Prompt attention to complaints

Table 4.14 presents the respondents' assessment of how promptly their library staff attend to complaints.

Table 4. 14: Prompt attention to complaints

The library staff attend to complaints promptly		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	18	13	31
	%	15.8%	9.6%	12.4%
Disagree	Freq.	5	17	22
	%	4.4%	12.5%	8.8%
Neither Agree nor Disagree	Freq.	31	40	71
	%	27.2%	29.4%	28.4%
Agree	Freq.	36	40	76
	%	31.6%	29.4%	30.4%
Strongly Agree	Freq.	24	26	50
	%	21.1%	19.1%	20.0%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

As shown in Table 4.14, 50 (20.0%) respondents strongly agreed and 76 (30.4%) agreed that the library staff attend to complaints promptly. Respondents in Accra Technical University rated their

school lower as compared to the Kumasi Technical University. Specifically, in Accra Technical University 24 (21.1%) respondents strongly agreed and 36 (31.6%) agreed. While in Kumasi Technical University, 26 (19.1%) respondents strongly agreed and 40 (29.4%) agreed that the library staff attend to complaints promptly.

4.4.3 Responsiveness of library services

Responsiveness of library services was assessed using five item indicators.

Efficiency of library staff

Table 4.15 presents the respondents' assessment of the efficiency and knowledge levels of their library staff.

Table 4.15: Efficiency of library staff

Library staff are efficient and knowledgeable to answer users' query		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	5	9	14
	%	4.4%	6.6%	5.6%
Disagree	Freq.	18	19	37
	%	15.8%	14.0%	14.8%
Neither Agree nor Disagree	Freq.	34	25	59
	%	29.8%	18.4%	23.6%
Agree	Freq.	30	57	87
	%	26.3%	41.9%	34.8%
Strongly Agree	Freq.	27	26	53
	%	23.7%	19.1%	21.2%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

As shown in table 4.15, 53 (21.2 %) respondents strongly agreed and 87 (34.8%) agreed library staff are efficient and knowledgeable to answer users’ query. Both institutions responded as follows, Accra Technical University 27 (23.7%) respondents strongly agreed and 30 (26.3%) agreed. In Kumasi Technical University, 53 (21.2%) respondents strongly agreed and 87 (34.8%) agreed. This therefore shows that respondents in Kumasi Technical University rated their institution higher as compared to that of the Accra Technical University on how library staff are efficient and knowledgeable to answer users’ query.

Prompt delivery of service

Table 4.16 presents the respondents’ assessment of the promptness and timeliness of their library services.

Table 4. 16: Prompt delivery of service

Library staff deliver prompt and timely service to users		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	8	11	19
	%	7.0%	8.1%	7.6%
Disagree	Freq.	15	15	30
	%	13.2%	11.0%	12.0%
Neither Agree nor Disagree	Freq.	32	39	71
	%	28.1%	28.7%	28.4%
Agree	Freq.	36	47	83
	%	31.6%	34.6%	33.2%
Strongly Agree	Freq.	23	24	47
	%	20.2%	17.6%	18.8%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

The findings in Table 4.16 shows that 47 (18.8%) respondents strongly agreed and 83 (33.2%) agreed that Library staff deliver prompt and timely service to users. With these responses, 23 (20.2%) respondents who are from Accra Technical University strongly agreed and 36 (31.6%) agreed. and with the Kumasi Technical University, 24 (17.6%) respondents strongly agreed and 47 (34.6%) agreed to the fact that Library staff deliver prompt and timely service to users. This shows that Kumasi Technical University rated their institution higher than the Accra Technical University.

Accuracy of service provision

Table 4.17 presents results of the respondents’ ratings of the accuracy of library service provision.

Table 4. 17: Accuracy of service provision

Library staff provide services accurately with minimum interruption		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	5	8	13
	%	4.4%	5.9%	5.2%
Disagree	Freq.	8	10	18
	%	7.0%	7.4%	7.2%
Neither Agree nor Disagree	Freq.	37	44	81
	%	32.5%	32.4%	32.4%
Agree	Freq.	39	49	88
	%	34.2%	36.0%	35.2%
Strongly Agree	Freq.	25	25	50
	%	21.9%	18.4%	20.0%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.17 shows that 50 (20.0%) respondents strongly agreed and 88 (35.2%) agreed that library staff provide services accurately with minimum interruption. Both ratings by the two institutions have a narrow difference among each other in terms of how they strongly agree and agree. Specifically, with the Accra Technical University 25 (21.9%) respondents strongly agreed and 39 (34.2%) agreed. While in the case of the Kumasi Technical University 25 (18.4%) respondents strongly agreed and 49 (26.0%) agreed that library staff provide services accurately with minimum interruption.

Subscription to other Information Centre

In table 4.18, results of the respondents’ ratings of the staff’ subscription for documents from other Information Centers if not already available in the library’s collection was assessed.

Table 4. 18: Subscription to other information centers

Library staff subscribes for documents from other Information Centers if not already available in the library’s collection		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	12	13	25
	%	10.5%	9.6%	10.0%
Disagree	Freq.	28	24	52
	%	24.6%	17.6%	20.8%
Neither Agree nor Disagree	Freq.	34	44	78
	%	29.8%	32.4%	31.2%
Agree	Freq.	15	34	49
	%	13.2%	25.0%	19.6%
Strongly Agree	Freq.	25	21	46
	%	21.9%	15.4%	18.4%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.18 shows that 46 (18.4%) respondents strongly agreed and 49 (19.6%) agreed that library staff subscribes for documents from other information centers if not already available in the library’s collection. with this, Accra Technical University rated their school lower as compared to the Kumasi Technical University although majority respondents in Accra Technical University strongly agreed. Specifically, Accra Technical University 25 (21.9%) respondents strongly agreed and 15 (13.2%) agreed. While with Kumasi Technical University 21 (15.4%) respondents strongly agreed and 34 (25.0%) agreed that library staff subscribes for documents from other Information centres if not already available in the library’s collection.

Staff use of IT

Table 4.19 presents findings on the library staff’s use of technology efficiently.

Table 4. 19: Staff use of IT

Library staff use technology (IT) efficiently		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	16	15	31
	%	51.6%	48.4%	100.0%
Disagree	Freq.	21	21	42
	%	50.0%	50.0%	100.0%
Neither Agree nor Disagree	Freq.	26	30	56
	%	46.4%	53.6%	100.0%
Agree	Freq.	26	36	62
	%	41.9%	58.1%	100.0%
Strongly Agree	Freq.	25	34	59
	%	42.4%	57.6%	100.0%
Total	Freq.	114	136	250
	%	45.6%	54.4%	100.0%

Source: Field data (2020)

Table 4.19 indicates that 59 (23.6%) respondents strongly agreed and 62 (24.8%) agreed that Library staff use technology (IT) efficiently. Both institutions responded as follows, Accra Technical University 25 (21.9%) respondents strongly agreed and 26 (22.8%) agreed. In the case of the Kumasi Technical University 34 (25.0%) respondents strongly agreed and 36 (26.5%) agreed. This therefore shows that Kumasi Technical University rated their institution higher than the Accra Technical University on how efficient the Library staff uses technology (IT).

4.4.4 Empathy of library staff

Empathy was assessed using four items. The findings are provided on Tables 4.20 – 4.23.

Sincerity of service delivery

Table 4. 20: Sincerity of service delivery

Library staff have sincerity in handling users' problems and making prompt solutions		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	9	11	20
	%	7.9%	8.1%	8.0%
Disagree	Freq.	12	13	25
	%	10.5%	9.6%	10.0%
Neither Agree nor Disagree	Freq.	42	47	89
	%	36.8%	34.6%	35.6%
Agree	Freq.	34	41	75
	%	29.8%	30.1%	30.0%
Strongly Agree	Freq.	17	24	41
	%	14.9%	17.6%	16.4%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

As indicated, table 4.20 shows that with the respondents view on the empathy of library staff, 41 (16.4%) respondents strongly agreed and 75 (30.0%) agreed that Library staff have sincerity in handling users’ problems and making prompt solutions. Among these responses, 17 (14.9%) respondents who are in Accra Technical University strongly agreed and 34 (29.8%) agreed. In Kumasi Technical University, 24 (17.6%) respondents strongly agreed and 41 (30.1%) agreed to the fact that Library staff have sincerity in handling users’ problems and making prompt solutions. This demonstrates that Kumasi Technical University rated their institution higher as compared to the Accra Technical University.

Individualized attention

Table 4.21 provides results of the respondents’ ratings of whether the library staff give individual attention to the users.

Table 4. 21: Individualized attention

Library staff give individual attention to the users		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	10	9	19
	%	8.8%	6.6%	7.6%
Disagree	Freq.	21	22	43
	%	18.4%	16.2%	17.2%
Neither Agree nor Disagree	Freq.	33	31	64
	%	28.9%	22.8%	25.6%
Agree	Freq.	30	50	80
	%	26.3%	36.8%	32.0%
Strongly Agree	Freq.	20	24	44
	%	17.5%	17.6%	17.6%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.21 shows that 44 (17.6%) respondents strongly agreed and 80 (22.8%) agreed that library staff give individual attention to the users. Kumasi Technical University rated their institution higher than the Accra Technical University. Specifically, with the Accra Technical University 20 (17.5%) respondents strongly agreed and 30 (26.3%) agreed. While in the case of the Kumasi Technical University 24 (17.6%) respondents strongly agreed and 34 (25.0%) agreed that library staff give individual attention to the users.

Friendliness of library staff

The results of the friendliness of the library staff are provided in Table 4.22.

Table 4. 22: Friendliness of library staff

Library staff treat users fairly and without discrimination		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	12	7	19
	%	10.5%	5.1%	7.6%
Disagree	Freq.	7	15	22
	%	6.1%	11.0%	8.8%
Neither Agree nor Disagree	Freq.	32	30	62
	%	28.1%	22.1%	24.8%
Agree	Freq.	32	44	76
	%	28.1%	32.4%	30.4%
Strongly Agree	Freq.	31	40	71
	%	27.2%	29.4%	28.4%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

As shown in Table 4.23, 71 (28.4%) respondents strongly agreed and 76 (30.4%) agreed that Library staff treat users fairly and without discrimination. With this, Accra Technical University rated their school lower as compared to the Kumasi Technical University. Specifically, in Accra Technical University 31 (27.2%) respondents strongly agreed and 32 (28.1%) agreed. While with

Kumasi Technical University 40 (29.4%) respondents strongly agreed and 44 (32.4%) agreed to the fact that Library staff treat users fairly and without discrimination.

Priority of users' interest

The results of the priority that the library staff gives the respondents are provided in Table 4.23.

Table 4. 23: Priority of users' interest

Library staff give priority to the users' interest		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	11	7	18
	%	61.1%	38.9%	100.0%
Disagree	Freq.	12	13	25
	%	48.0%	52.0%	100.0%
Neither Agree nor Disagree	Freq.	32	34	66
	%	48.5%	51.5%	100.0%
Agree	Freq.	28	51	79
	%	35.4%	64.6%	100.0%
Strongly Agree	Freq.	31	31	62
	%	50.0%	50.0%	100.0%
Total	Freq.	114	136	250
	%	45.6%	54.4%	100.0%

Source: Field data (2020)

Table 4.23 shows that 62 (24.8%) respondents strongly agreed and 79 (31.6%) agreed that Library staff give priority to the users' interest. The two institutions responded as follows, Accra Technical University 31 (27.2%) respondents strongly agreed and 28 (24.6%) agreed. Kumasi Technical University 31 (27.2%) respondents strongly agreed and 51 (37.5%) agreed. This therefore shows that Kumasi Technical University rated their institution higher than the Accra Technical University

on Library staff giving priority to the users’ interest, although both institutions had equal response on how they strongly agree about the item.

4.4.5 Assurance of library services

Assurance was assessed with four items. The findings are provided in Tables 4.24 – 4.27.

Table 4. 24: Clear and useful information guides

Library information guides are clear and useful		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	10	7	17
	%	8.8%	5.1%	6.8%
Disagree	Freq.	10	12	22
	%	8.8%	8.8%	8.8%
Neither Agree nor Disagree	Freq.	33	28	61
	%	28.9%	20.6%	24.4%
Agree	Freq.	39	59	98
	%	34.2%	43.4%	39.2%
Strongly Agree	Freq.	22	30	52
	%	19.3%	22.1%	20.8%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.24 indicates that 52 (20.8%) respondents strongly agreed and 98 (39.2%) agreed that library information guides are clear and useful. In ATU, 22 (19.3%) respondents strongly agreed and 39 (34.2%) agreed. Again, in Kumasi Technical University (KsTU), 30 (22.1%) respondents strongly agreed and 59 (43.4%) agreed that library information guides are clear and useful. This

demonstrates that Kumasi Technical University (KsTU) rated their institution higher as compared to the Accra Technical University.

User education programmes

Table 4.25 presents results on whether library provides user education programmes to help users make more effective use of resources.

Table 4. 25: User education programmes

Library provides user education programmes to help users make more effective use of resources		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	5	8	13
	%	4.4%	5.9%	5.2%
Disagree	Freq.	5	11	16
	%	4.4%	8.1%	6.4%
Neither Agree nor Disagree	Freq.	33	38	71
	%	28.9%	27.9%	28.4%
Agree	Freq.	36	49	85
	%	31.6%	36.0%	34.0%
Strongly Agree	Freq.	35	30	65
	%	30.7%	22.1%	26.0%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.25 indicates that in ATU, 35 (30.7%) respondents strongly agreed and 36 (31.6%) agreed that their library provides effective user education programs. In KsTU, 30 (22.1%) respondents strongly agreed and 49 (36.0%) agreed. This demonstrates that Kumasi Technical University (KsTU) rated their institution higher as compared to the Accra Technical University.

Safety and security of library services

Table 4.26 provides results of the safety and security of the library space.

Table 4. 26: Safety and security of library services

I feel safe and secure when I am using the services in the library		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	10	8	18
	%	8.8%	5.9%	7.2%
Disagree	Freq.	16	12	28
	%	14.0%	8.8%	11.2%
Neither Agree nor Disagree	Freq.	27	23	50
	%	23.7%	16.9%	20.0%
Agree	Freq.	33	46	79
	%	28.9%	33.8%	31.6%
Strongly Agree	Freq.	28	47	75
	%	24.6%	34.6%	30.0%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.26 indicates that in ATU, 28 (24.6%) respondents strongly agreed and 33 (28.9%) agreed that they feel safe and secure when using library services. In KsTU, 47 (34.6%) respondents strongly agreed and 46 (33.8%) agreed. This demonstrates that KsTU respondents rated their institution higher as compared to those in ATU.

Inspiring library space for learning

Table 4.27 provides findings as to whether the library provides a space that inspires study and learning.

Table 4. 27: Inspiring library space for learning

The library provides a space that inspires study and learning		Institution		Total
		Accra Technical University	Kumasi Technical University	
Strongly Disagree	Freq.	7	5	12
	%	6.1%	3.7%	4.8%
Disagree	Freq.	1	4	5
	%	0.9%	2.9%	2.0%
Neither Agree nor Disagree	Freq.	39	24	63
	%	34.2%	17.6%	25.2%
Agree	Freq.	29	50	79
	%	25.4%	36.8%	31.6%
Strongly Agree	Freq.	38	53	91
	%	33.3%	39.0%	36.4%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.27 indicates that in ATU, 38 (33.3%) respondents strongly agreed and 29 (25.4%) agreed that that their library space inspired studying. In KsTU, 53 (39.0%) respondents strongly agreed and 50 (36.8%) agreed. This demonstrates that KsTU respondents rated their institution higher as compared to those in ATU.

4.5 Satisfaction of Technical University Library Users

The satisfaction levels of library users in both technical universities on the quality of service of their libraries were also assessed. The respondents rated the extent of their satisfaction of library services by rating certain indicators such as staff, reference service, lending service, internet services, orientation and training, access to resources, and library environment.

Satisfaction with Library staff

Table 4.28 provides results of the respondents' satisfaction with the staff of their library.

Table 4. 28: Satisfaction with Library

Satisfaction with Library staff		Institution		Total
		Accra Technical University	Kumasi Technical University	
Very dissatisfied	Freq.	32	17	49
	%	28.1%	12.5%	19.6%
Dissatisfied	Freq.	19	11	30
	%	16.7%	8.1%	12.0%
Somehow	Freq.	35	35	70
	%	30.7%	25.7%	28.0%
Satisfied	Freq.	13	44	57
	%	11.4%	32.4%	22.8%
Very Satisfied	Freq.	15	29	44
	%	13.2%	21.3%	17.6%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.28 shows that satisfaction with library staff was higher among respondents of Kumasi Technical University compared to Accra Technical University. Specifically, in Kumasi Technical University, 44 (32.4%) respondents were satisfied and 29 (21.3%) were very satisfied with their

library staff. In Accra Technical University, only 13 (11.4%) respondents were satisfied and 15 (13.2%) were very satisfied with their library staff.

Satisfaction with reference service

Table 4.29 provides results of the respondents' satisfaction with the satisfaction with the reference services of their library.

Table 4. 29: Satisfaction with reference service

Satisfaction with reference service		Institution		Total
		Accra Technical University	Kumasi Technical University	
Very dissatisfied	Freq.	11	6	17
	%	9.6%	4.4%	6.8%
Dissatisfied	Freq.	16	20	36
	%	14.0%	14.7%	14.4%
Somehow	Freq.	29	32	61
	%	25.4%	23.5%	24.4%
Satisfied	Freq.	40	51	91
	%	35.1%	37.5%	36.4%
Very Satisfied	Freq.	18	27	45
	%	15.8%	19.9%	18.0%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.29 shows that satisfaction with reference services was slightly higher among respondents of Kumasi Technical University compared to Accra Technical University. In Kumasi Technical University, 51 (37.5%) respondents were satisfied and 27 (19.9%) were very satisfied with their

reference services, compared to 40 (35.1%) and 18 (15.8) satisfied and very satisfied respectively in Accra Technical University.

Satisfaction with lending services

Table 4.30 presents the findings of their satisfaction with lending services.

Table 4. 30: Satisfaction with lending services

Satisfaction with lending services		Institution		Total
		Accra Technical University	Kumasi Technical University	
Very dissatisfied	Freq.	18	20	38
	%	15.8%	14.7%	15.2%
Dissatisfied	Freq.	16	10	26
	%	14.0%	7.4%	10.4%
Somehow	Freq.	37	44	81
	%	32.5%	32.4%	32.4%
Satisfied	Freq.	29	45	74
	%	25.4%	33.1%	29.6%
Very Satisfied	Freq.	14	17	31
	%	12.3%	12.5%	12.4%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.30 indicates that satisfaction with lending services was also slightly higher among respondents of Kumasi Technical University compared to Accra University. In Kumasi Technical University, 45 (33.1%) respondents were satisfied and 17 (12.5%) were very satisfied with their

lending services, compared to 29 (25.4%) and 14 (12.3%) satisfied and very satisfied respectively in Accra Technical University.

Satisfaction with internet services

The findings of the respondents' satisfaction with internet services are provided in Table 4.31.

Table 4. 31: Satisfaction with internet services

Satisfaction with internet services		Institution		Total
		Accra Technical University	Kumasi Technical University	
Very dissatisfied	Freq.	26	22	48
	%	22.8%	16.2%	19.2%
Dissatisfied	Freq.	10	15	25
	%	8.8%	11.0%	10.0%
Somehow	Freq.	30	25	55
	%	26.3%	18.4%	22.0%
Satisfied	Freq.	32	46	78
	%	28.1%	33.8%	31.2%
Very Satisfied	Freq.	16	28	44
	%	14.0%	20.6%	17.6%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.31 indicates that satisfaction with internet services was also slightly higher among respondents of Kumasi Technical University compared to Accra Technical University. In Kumasi Technical University, 46 (33.8%) respondents were satisfied and 28 (20.6%) were very satisfied

with their internet services, compared to 32 (28.1%) and 16 (14.0%) satisfied and very satisfied respectively in Accra Technical University.

Satisfaction with orientation and training

Table 4. 32: Satisfaction with orientation and training

Satisfaction with orientation and training		Institution		Total
		Accra Technical University	Kumasi Technical University	
Very dissatisfied	Freq.	36	26	62
	%	31.6%	19.1%	24.8%
Dissatisfied	Freq.	14	25	39
	%	12.3%	18.4%	15.6%
Somehow	Freq.	37	32	69
	%	32.5%	23.5%	27.6%
Satisfied	Freq.	15	32	47
	%	13.2%	23.5%	18.8%
Very Satisfied	Freq.	12	21	33
	%	10.5%	15.4%	13.2%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.32 shows that satisfaction with orientation and training was also slightly higher among respondents of Kumasi Technical University with 54 (38.5%) compared to respondents in Accra Technical University 27 (23.7%).

Satisfaction with access to information resources in the library

Table 4.33 presents their satisfaction with access to information resources in the library.

Table 4. 33: Satisfaction with access to information resources in the library

Satisfaction with access to information resources in the library		Institution		Total
		Accra Technical University	Kumasi Technical University	
Very dissatisfied	Freq.	11	5	16
	%	9.6%	3.7%	6.4%
Dissatisfied	Freq.	13	8	21
	%	11.4%	5.9%	8.4%
Somehow	Freq.	31	34	65
	%	27.2%	25.0%	26.0%
Satisfied	Freq.	36	56	92
	%	31.6%	41.2%	36.8%
Very Satisfied	Freq.	23	33	56
	%	20.2%	24.3%	22.4%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.33 shows that satisfaction with information resources was also slightly higher among respondents of Kumasi Technical University with 89 (65.5%) compared to respondents in Accra Technical University 59 (51.8%).

Satisfaction with library environment

The findings are presented in Table 4.34.

Table 4. 34: Satisfaction with library environment

Satisfaction with library environment		Institution		Total
		Accra Technical University	Kumasi Technical University	
Very dissatisfied	Freq.	9	3	12
	%	7.9%	2.2%	4.8%
Dissatisfied	Freq.	3	2	5
	%	2.6%	1.5%	2.0%
Somehow	Freq.	21	22	43
	%	18.4%	16.2%	17.2%
Satisfied	Freq.	57	55	112
	%	50.0%	40.4%	44.8%
Very Satisfied	Freq.	24	54	78
	%	21.1%	39.7%	31.2%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.34 shows that satisfaction with information resources was also higher among respondents of Kumasi Technical University with 109 (81.1%) compared to respondents in Accra Technical University 81 (71.1%).

The comparative ratings of user satisfaction on all the five indicators of both universities are further presented on Figure 7. As indicated in the Figure 7, respondents from Kumasi Technical University rated higher on all indicators of user satisfaction than respondents from Accra Technical University.

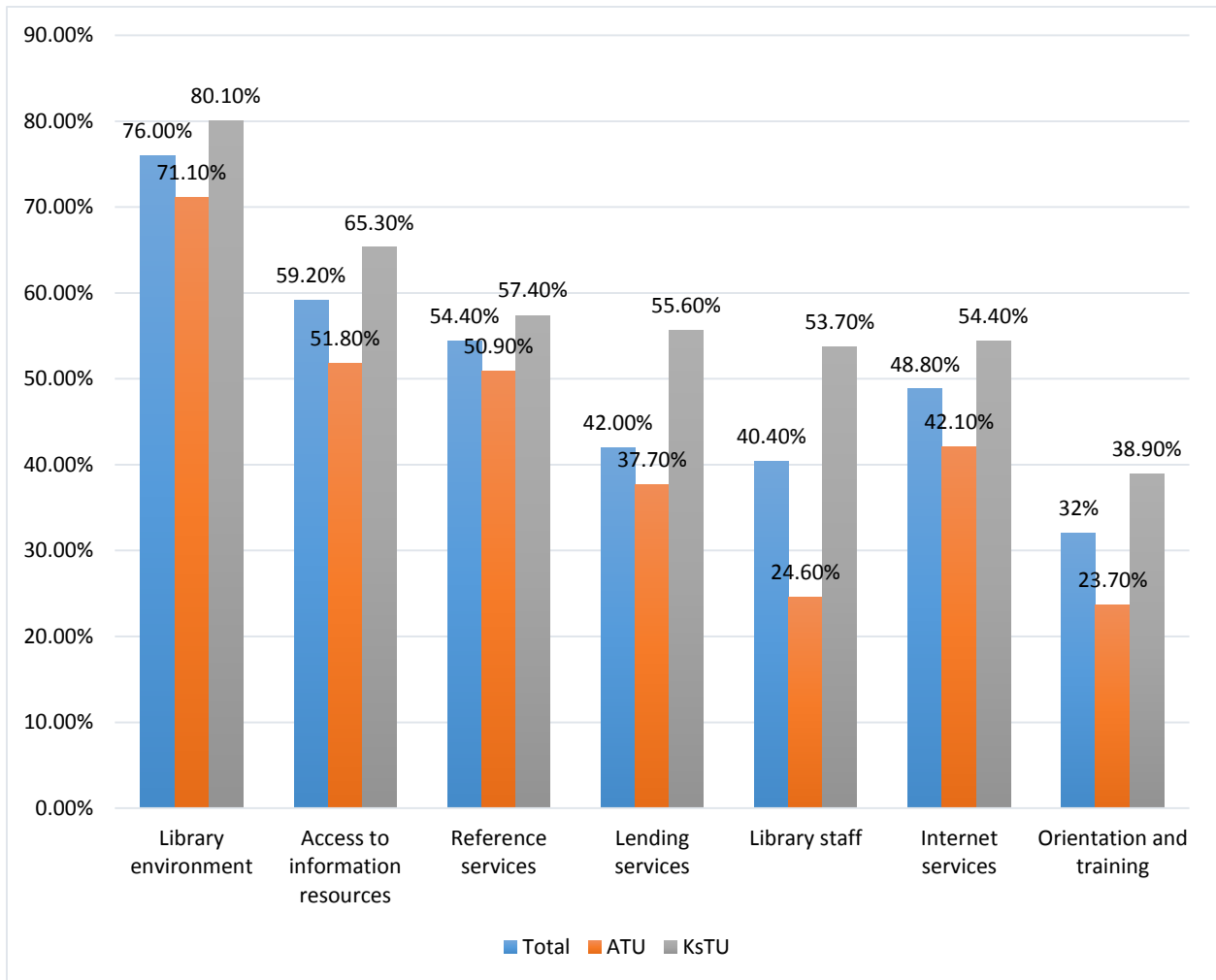


Figure 7: User satisfaction assessment

4.6 Challenges of Library Use among Technical University Library Users

Lastly, the study assessed the challenges facing the technical universities' users in accessing quality library services in the libraries of the technical universities. The respondents were asked to indicate the challenges they faced in accessing the library facilities of their respective institutions. Five challenges emerged strongly. The findings are provided in Tables 4.35 – 4.39.

Table 4.35: Lack of information retrieval skills

Lack of information retrieval skills		Institution		Total
		Accra Technical University	Kumasi Technical University	
Yes	Freq.	60	58	118
	%	52.6%	42.6%	47.2%
No	Freq.	54	78	132
	%	47.4%	57.4%	52.8%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

As shown on Table 4.35, lack of information retrieval skills was more severe among respondents in Accra Technical University with 60 (52.6%) than those in Kumasi Technical University 58 (42.6%).

Insufficient user education

The results are presented in Table 4.36.

Table 4. 36: Insufficient user education

Insufficient user education		Institution		Total
		Accra Technical University	Kumasi Technical University	
Yes	Freq.	58	61	119
	%	50.9%	44.9%	47.6%
No	Freq.	56	75	131
	%	49.1%	55.1%	52.4%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Again, Table 4.36 shows that insufficient user education was rated as challenging in more respondents in Accra Technical University with 58, (50.9%) than respondents in Kumasi Technical University 61, (44.9%).

Low level of computer knowledge

The challenge with regards to computer knowledge is presented on Table 4.37. The results on Table 4.37 also shows 71 (62.3%) respondents in Accra Technical University rated low levels of computer knowledge as challenging than 57 (41.9%) respondents in Kumasi Technical University.

Table 4. 37: Low level of computer knowledge

Low level of computer knowledge		Institution		Total
		Accra Technical University	Kumasi Technical University	
Yes	Freq.	71	57	128
	%	62.3%	41.9%	51.2%
No	Freq.	43	79	122
	%	37.7%	58.1%	48.8%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

ICT Facilities in their institutions

Table 4. 38: Limited ICT facilities for accessing information

Limited ICT facilities for accessing information		Institution		Total
		Accra Technical University	Kumasi Technical University	
Yes	Freq.	57	45	102
	%	50.0%	33.1%	40.8%
No	Freq.	57	91	148
	%	50.0%	66.9%	59.2%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.38 shows that limited ICT facilities for accessing information was rated as more challenging by more respondents in Accra Technical University with 57 (50.0%) than respondents in Kumasi Technical University 45 (33.1%).

Adequacy of library facilities

Table 4.39 provides their views on the inadequacy of the facilities in their library.

Table 4. 39: Inadequate library facilities

		Institution		Total
		Accra Technical University	Kumasi Technical University	
Inadequate library facilities	Freq.	73	66	139
	%	64.0%	48.5%	55.6%
No	Freq.	41	70	111
	%	36.0%	51.5%	44.4%
Total	Freq.	114	136	250
	%	100.0%	100.0%	100.0%

Source: Field data (2020)

Table 4.39 shows that again, more respondents in Accra Technical University totaling 73 (64.0%) rated inadequacy of library facilities as challenging, compared to the number 66 (48.5%) respondents in Kumasi Technical University who rated it as challenging.

The challenges, showing differences at the institutional level, are further represented in Figure 8.

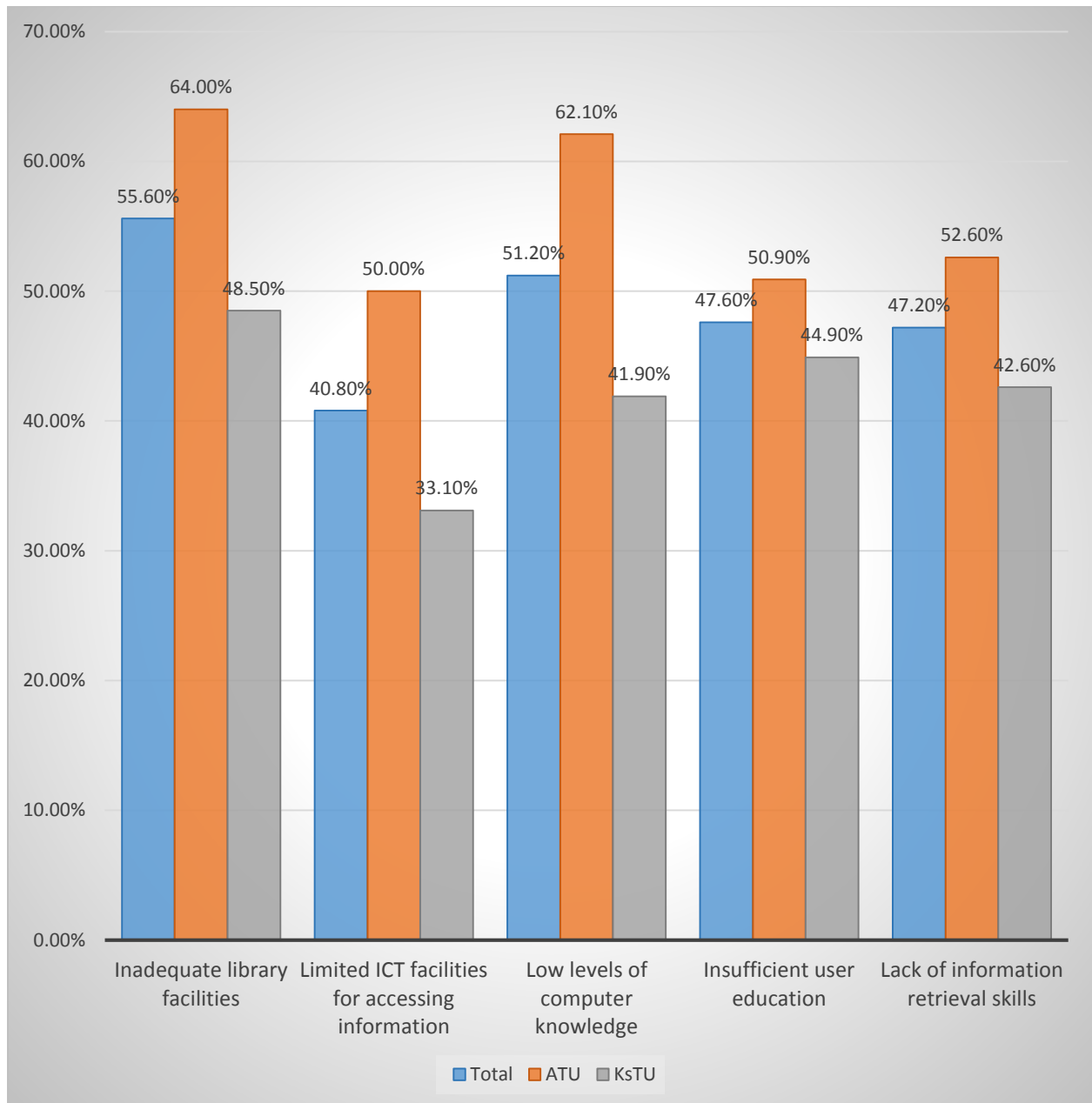


Figure 8: Comparison of challenges faced by library users

Figure 8 demonstrates that inadequacy of library facilities overrides the challenges facing the two technical universities. This challenge is partially severe for Accra Technical University as compared to Kumasi Technical University. This is followed by low computer literacy of the

students, again, also fairly higher for Accra Technical University as compared to Kumasi Technical University. Insufficient user education also emerged as a big challenge being more severe in Accra Technical University than Kumasi Technical University. Limited information retrieval skill was also a major challenge, being more pronounced in Accra Technical University as compared to Kumasi Technical University.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

In this chapter, the findings from the study are integrated and discussed. The discussion is organized according to the main objectives of the study. In discussing each of the objectives, the major findings from this study are situated within the context of theoretical and empirical literature on the quality of library service delivery. Based on the objectives of the study, the discussion follows this order:

- Library use among the respondents of the two technical universities
- Perceptions of library service quality in the two technical universities
- User satisfaction of library service delivery in the two technical universities
- Challenges of accessing library services in the two technical universities

5.2 Library Use among the Technical University Students

It is a well-established fact that library service delivery has assumed a commercial approach (Choshaly & Mirabolghasemi, 2019; Middleton et al., 2018). What this means is that, not only are library users made central to delivering quality library services, but also the extent of library patronage is also critical in attracting resources for improving library infrastructure. In essence, the more users and patronage a library gets, the more likely it is for such libraries to attract resources. Therefore, in this study, the first objective assessed the extent of library patronage among students and faculty of both Accra and Kumasi Technical Universities.

The findings from the study showed that, generally, library patronage in both technical universities was very low. Specifically, only 47 (18.8%) of the total respondents used indicated visiting their

libraries very often, while 55 (22.0%) indicated visiting their libraries often. Therefore, less than half 102 (40.8%) of the total sample size used reported using their library services frequently. The low patronage of library services recorded in this study is problematic due to the fact that the existing facilities may appear enough and therefore make it difficult to attract resources for infrastructural improvement and face-lifting.

This finding provides empirical support to existing argument that suggests that library use in technical universities are generally low, compared to traditional universities (Kont, 2011; Kumar & Mahajan, 2019). Previous studies in traditional universities report frequency of library use around 60 – 70% in developing countries and 75 – 85% in developed countries (Natesan & Aerts, 2016). However, when it comes to technical universities, the few studies from developed countries report frequency of library use between 45 – 55% (Kont, 2011).

In comparing the two institutions, frequency of library use was observed to be slightly higher in Accra Technical University than in Kumasi Technical University. In Accra Technical University, 27 (23.7%) respondents indicated visiting their library very often while 39 (34.2%) indicated visiting their libraries often. In Kumasi Technical University, 20 (14.5%) visited very often while 16 (11.9%) visited the library often. Therefore, in terms of frequency of library use, slightly more than half of the respondents in Accra Technical University 66 (57.9%) used their library frequently, compared to the less than half of the respondents in Kumasi Technical University 36 (26.4%) who used their library frequently.

These findings suggest that between the two technical universities, patronage of library services appear to be slightly higher in Accra Technical University than in Kumasi Technical University. This also suggests that comparatively, as per the respondents used in this study, library facilities in Accra Technical University may be more stressed than in Kumasi Technical University.

5.3 Perceptions of Quality of Library services

The second objective of the study examined the perceptions of the library users on the quality of library services in both universities. Based on the SERVQUAL model, five dimensions of library quality perceptions were assessed - tangibility, reliability, responsiveness, empathy and assurance (Choshaly & Mirabolghasemi, 2019). In integrating the SERVQUAL with the LIBQUAL model, the five dimensions also align with library as a place, affect of service and information control (Dahan et al., 2017). In line with the theoretical framework, library as a place comprised tangibility of library resources. Affect of service comprised empathy and responsiveness (Fithri et al., 2017). Information control encompassed reliability and assurance (Tan et al., 2017). These dimensions ensured that perceptions of library services were assessed in their holistic sense.

The findings indicated that overall, the perceptions of quality of library services ranged from moderate to low. In terms of tangibility for instance, the respondents rated their libraries fairly low. Elements of tangibility that were rated moderately high included; the libraries having sufficient space for reading and research (70%) and library materials being in good condition (63.6%). All the other indicators were rated very low by the respondents. For instance, 56.4% indicated that the internal environment is calm and conducive, 56% rated their libraries as pleasant and comfortable. Less than half of them indicated that the electronic resources are adequate

(49.6%) and technological sufficiency (34%). In comparing the two institutions, tangibility was rated fairly higher in Kumasi Technical University than in Accra Technical University.

In synthesizing the findings on tangibility of library resources together, in both universities, the respondents' perceptions of the quality of their libraries as a place was moderate. They perceive the physical environment of their libraries as of little quality. Nonetheless, their perceptions of access to the library services was moderately high. However, there were institutional differences, where respondents in Kumasi Technical University perceived their library as a place as higher than respondents in Accra Technical University. Physical environment of libraries has been argued to be an important determinant of how users perceive the quality of their libraries as a place (Namugera, 2014). In this study therefore, the quality of library as a place is low, but relatively poorer in Accra Technical University.

Affect of service was rated moderately high among the respondents. Affect of service encompassed empathy and assurance. Assurance entails the extent to which the library users feel assured of getting the best library services (Dahan et al., 2017). The findings show that the respondents rated assurance of library services to be moderately high. Across all the indicators of library service assurances, the frequency of respondents in agreement ranged between 60% - 68%. For instance, 68% indicated that the libraries provide spaces that inspire study and learning, 61.6% indicated that they feel safe and secure when using the library, 60% indicated that the library information guides are clear and useful, and then 60% also indicated that the library provides user education programmes to help users make more effective use of resources. Respondents in Kumasi

Technical University rated assurance of their library services higher than that of Accra Technical University.

In terms of information control, the respondents rated the reliability and responsiveness dimensions. The respondents rated the reliability of their library services as moderate. The number of respondents who agreed to the indicators of reliable library services ranged between 46 – 64%, which included; library staff are reliable (64%), staff are always courteous and friendly (63.6%), staff are willing to help users (63.2%), library staff attend to complaints promptly (50.4%) and easy to make complaints and suggestions (46.8%). Reliability was rated higher in Kumasi Technical University than in Accra Technical University.

In terms of responsiveness, the respondents' perceptions of responsiveness of library services were low. In all the items assessing responsiveness of library services, barely half of the respondents rated either agree or strongly agree. Specifically, 56% indicated that library staff were efficient and knowledgeable, 55% indicated that the staff provide services accurately with minimum interruption, 48.4% indicated that the staff use technology efficiently and 41% indicated that library staff deliver prompt and timely service to users. For responsiveness too, respondents in Kumasi Technical University rated their library service higher than those in Accra Technical University. In synthesizing the findings together, respondents in Kumasi Technical University rated their library higher in all three dimensions of library as a place, affect of service and information control.

5.4 Satisfaction with Library Services

There is an increasing trend of adopting commercial approach to library service delivery. The commercial approach to library service delivery indicates that library users are given utmost attention to ensure that they enjoy their experience of accessing library services (Ahmed et al., 2014; Choshaly & Mirabolghasemi, 2019). In line with the SERVQUAL model, the satisfaction of library users has come to the fore as among global best practices of library service delivery (Middleton et al., 2019). What this means is that, regardless of the library facilities available, library users should be made to have a sense of satisfaction even as they access limited library resources (Aslam & Sehr, 2018; Choshaly & Mirabolghasemi, 2019).

In this study therefore, the satisfaction of library users in the two technical universities were assessed in the third objective. The user satisfaction was assessed on seven key indicators – library staff, library environment, access to information, lending services, internet services, reference services and orientation and training. The findings showed that, across both institutions, user satisfaction was relatively high among the respondents, with total satisfaction levels reaching as high as 71.1%. The high user satisfaction from this study contradicts some previous studies that report that user satisfaction of library services is low in developing countries (Ahmed et al., 2014; Baada et al., 2019; Fithri et al., 2017; Namugera, 2014). The findings are rather in line with some other studies that report higher library user satisfaction in Nigeria (Ekere et al., 2016).

In this study, the satisfaction with library environment ranked highest in both institutions. This was followed by satisfaction with access to information resources, satisfaction with reference services, satisfaction with internet services, satisfaction with lending services, satisfaction with

library staff, and then satisfaction with orientation services. The ranks of these satisfaction indicators suggest that satisfaction of library as a place ranked highest among the satisfactions in both institutions. This was followed with satisfaction with affect of service and information control.

In comparing the two institutions, the library users in Kumasi Technical University rated their satisfaction levels significantly higher across all the indicators than library in Accra Technical University. The percentage of frequency of satisfaction levels in Kumasi Technical University reached as high as 80.1% compared to 76.0% in Accra Technical University, and as low as 38.9%, in Kumasi Technical University compared to 32.0% in Accra Technical University. These findings show that students and faculty members in Kumasi Technical University are more satisfied with their library facilities and service delivery compared to those in Accra Technical University.

As a library professional at Accra Technical University and having also visited the library facilities in Kumasi Technical University several times, the researcher is aware of existing library facilities in both technical universities. Library facilities and resources in Kumasi Technical University are relatively far advanced than what exists in Accra Technical University. There are more electronic databases and e-journals that are subscribed to by the Kumasi Technical University (Acheampong et al., 2019). What this means is that students and faculty members in Kumasi Technical University are more likely to have their library and information needs met when they access library services as compared to those in Accra Technical University where library resources are comparatively limited.

The ease of getting library needs met has been shown to increase library user satisfaction because perceptions of library services mostly exceed expectation (Haruna et al., 2015; Natesan & Aerts, 2016; Tan et al., 2017). Comparatively, with more improved library facilities in Kumasi Technical University, students and faculty are more likely to have their library and information needs easily met. This explains why user satisfaction is higher in Kumasi Technical University than in Accra Technical University.

5.5 Challenges faced with Library Services

The final objective of the study examined the challenges that the library users encounter when accessing library services in the two technical universities. The findings from the study showed that, generally across both institutions, five challenges emerged strongly among the respondents. These included; inadequacy of library facilities (65.9%), low level of computer knowledge for accessing e-resources (60.7%), insufficient education for users (56.4%), lack of information retrieval skills (55.9%) and lack of ICT facilities for accessing information (47.9%).

These findings indicate that, within both institutions, the library challenges go beyond just infrastructural problems, to also include both service delivery and service access challenges. The inadequacy of library facilities emerging as the topmost challenge is in line with what previous studies have reported in Ghana (Acheampong et al., 2019; Benneh et al., 2017; Kwadzo, 2015) and other parts of Africa (Kachwala et al., 2011; Namugera, 2014). Library facilities in academic institutions in Africa are found to be lagging behind compared to libraries in developed countries (Ekere et al., 2016; Nzivo, 2016).

Using the LIBQUAL model, the findings suggest that the challenges of the two technical universities cut across library as a place, affect of service and information control. The library as a place challenge encompasses inadequacy of library facilities, including the lack of ICT facilities. The information control challenge encompasses the limited capacities in the library users in retrieving information. The affect of service challenge encompasses the weaknesses in the service delivery, such as the insufficient user education identified by the respondents.

In comparing the two institutions, Accra Technical University rated higher than Kumasi Technical University on all the challenges identified. Inadequacy of library facilities emerged the topmost challenge in Accra Technical University, followed by low levels of computer literacy and then inadequate ICT facilities for accessing information. This pattern of high challenges in Accra Technical University can be explained using the existing library facilities and frequency of use. Among the two institutions, the library facilities in Kumasi Technical University is much more improved than that of Accra Technical University. As discussed earlier, in the first objective that examined the frequency of library use, it was observed that patronage of library services is higher in Accra Technical University than in Kumasi Technical University. Given that there are less library facilities in Accra Technical University, the high patronage of library services by students and faculty members put too much pressure on the existing limited library facilities in the school. This creates situation where many users are unable to have access to some of the facilities such as computers and other books when others are using them. The situation reflects in the challenges of inadequacy of library facilities being more severe in Accra Technical University than in Kumasi Technical University.

In Kumasi Technical University, analysis of the first objective showed that frequency of library use is lower as compared to patronage of library services in Accra Technical University. Acheampong et al., (2019) for instance have documented the existence of several electronic databases and e-journals in Kumasi Technical University (many of which are not available at Accra Technical University) and how many of the students there do not use the electronic resources because library use among students there is low. The findings in the current study therefore align with those reported by Acheampong et al., (2019) about the low patronage of library services in Kumasi Technical University. Given the existence of relatively more library facilities, coupled with low patronage from students, it is understandable that the challenges of accessing library resources in Kumasi Technical University is not as high as that of Accra Technical University.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This study conducted a comparative analysis of library service quality among library users of two technical universities in Ghana – Accra Technical University and Kumasi Technical University. This chapter presents concluding discussions. The summary of the findings is first presented. After that, the conclusion from the study is discussed, recommendations for improving library services in the two technical universities are discussed, and then suggestions made for future studies.

6.2 Summary of Findings

This section presents the summary of the key findings from this study. Four (4) objectives were assessed in this study. The objectives were; i) assessed library use profile among the users, ii) examined perceptions of library use among the students and faculty of the two technical universities, iii) examined the satisfaction of the users with their library services, and iv) assessed the challenges they encounter in accessing library services. The findings are summarized based on these objectives.

6.2.1 Library Use among the Technical University Students

The first objective examined the extent of library use in both institutions. In assessing library use profile of the library users in the two technical universities, the frequency of their library use and the reasons for using the libraries were investigated. The findings showed that, in terms of frequency of visits, library use in the two universities was generally low. In both technical

universities, very few of the respondents indicated that they visited the library often. In comparing the two technical universities however, finding the sum of frequency of often and very often, frequency of library use was found to be higher in Accra Technical University than in Kumasi Technical University.

In terms of purpose of visiting the library, reading personal notes emerged as the topmost purpose for visiting the library, followed by preparation for examination, working on assignment or research project, reading for leisure and lastly, borrowing books. In comparing the two institutions, there were differences in the purposes for visiting the library. In Accra Technical University for instance, working on assignments / research projects was the topmost reason for visiting the library, followed by reading personal notes, preparing for examinations, borrowing book and then reading for leisure. In Kumasi Technical University however, preparation for examination was the topmost purpose for visiting the library, followed by reading personal notes, working on assignments / research project, borrowing book and then reading for leisure.

6.2.2 Perceptions of Quality of Library services

The second objective assessed perception of quality of library services among respondents in both institutions. The perceptions of the library users of their library services in the two technical universities were also assessed. Based on the theoretical framework, the dimensions of library service assessed were tangibility, reliability, responsiveness, empathy and assurance.

6.2.2.1 Tangibility of library infrastructure

In terms of tangibility, more than half of the respondents rated the internal environments of their libraries as calm, welcoming and conducive for studying. Respondents in Kumasi Technical University rated the internal environment of their library higher compared to those in Accra Technical University. Majority of the users rated their libraries as having suitable and sufficient space encouraging studying. Users of Kumasi Technical University rated the sufficiency of their library space higher than those from Accra Technical University. Majority of them indicated that their libraries were pleasant, comfortable and had an inviting location. Again, more users from Kumasi Technical University rated their libraries as pleasant compared to users from Accra Technical University. More respondents from Kumasi Technical University also rated their Library as having sufficient modern technological equipment and facilities than Accra Technical University.

6.2.2.2 Reliability of library services

The respondents' percentage of agreement ratings on reliability of library services were moderately high. Specifically, they agreed that; the library staff were rated as very reliable, followed by library staff always being courteous and showing friendly behaviour and library staff always willing to help users . The respondents also indicated that library staff attended to complaints promptly and there was ease of making complaints and suggestions. In comparing the two institutions, percentage of agreement in Accra Technical University was a little higher in terms of ease of making complaints and prompt attention to complaints, while Kumasi Technical University was rated higher on courtesy and friendliness of staff, and staff being more willing and ready to help users.

6.2.2.3 Responsiveness of library services

Percentage of agreement of responsiveness of library services was relatively low across both institutions, followed by library staff are efficient and knowledgeable to answer users' query, library staff provide services accurately with minimum interruption, library staff deliver prompt and timely service to users, library staff use technology (IT) efficiently, and finally library staff subscribes to documents from other information centres if not already available in the library's collection. Across all the indicators of responsiveness, percentage of agreement were slightly higher in Kumasi Technical University than Accra Technical University.

6.2.2.4 Empathy of library staff

Ratings of empathy of the library staff was generally low. Across all the items assessing empathy, agreement among the total sample was around half, and also across both institutions. Narrowly more than half of the respondents agreed that library staff treat users fairly and without discrimination, followed by library staff give priority to the users' interest. Less than half of the respondents agreed that; library staff give individual attention to users, and library staff have sincerity in handling users' problems and making prompt solutions. Across all the indicators of empathy of library services, percentage of respondents in agreement were slightly higher in Kumasi Technical University than Accra Technical University.

6.2.2.5 Assurance of library services

Assurance entails the extent to which the library users feel assured of getting the best library services. Across both institutions, majority of the total respondents agreed that library information guides are clear and useful, being higher in Kumasi Technical University than in Accra Technical

University. Majority of respondents also agreed that their libraries provide user education programmes to help users make more effective use of resources, being moderately higher in Accra Technical University than Kumasi Technical University.

Majority of the respondents agreed to feeling safe and secured in their libraries, with the frequency being higher in Kumasi Technical University than in Accra Technical University. Majority of the respondents also agreed that their library space inspires learning, with ratings being higher in Kumasi Technical University than in Accra Technical University. Overall, assurance of library services was high in the total sample, but was higher in Kumasi Technical University than in Accra Technical University.

6.2.3 Satisfaction with Library Services

The third objective examined levels of satisfaction among the respondents in the two institutions. The findings showed that satisfaction with library environment ranked highest in both institutions. This was followed by satisfaction with access to information resources, satisfaction with reference services, satisfaction with internet services, satisfaction with lending services, satisfaction with library staff, and then satisfaction with orientation services. In comparing the two institutions, the library users in Kumasi Technical University rated their satisfaction levels significantly higher across all the indicators than library in Accra Technical University.

6.2.4 Challenges faced with Library Services

The last objective assessed the challenges faced by the respondents in accessing library challenges. The challenges faced by the library users in the two technical universities were also assessed. The

findings showed that when it comes to the challenges faced by the library users, in the total sample, inadequacy of library facilities was rated the highest challenge, followed by low levels of computer knowledge, insufficient user education, lack of information retrieval skills and then limited ICT facilities for accessing information. In comparing the two institutions, the library users in Accra Technical University rated their library challenges significantly higher than those of Kumasi Technical University in all the five challenges.

6.3 Conclusion

The findings point to the fact that library use is low in both technical universities. In both technical universities, library visits among the respondents were less frequent. Perceptions of library services in both universities are generally less favourable. Perceptions of quality of library services among the respondents were relatively higher on the dimensions of tangibility of library infrastructure and assurance of library services. The rest of the dimensions (i.e., reliability, responsiveness and empathy) were rated between moderate to low on service quality. In line with the perception of service quality, satisfaction of library services was moderately high. Several challenges were identified to be undermining their library services.

Comparatively, the perception of library quality and satisfaction with library services were relatively higher in Kumasi Technical University, as compared to Accra Technical University. The challenges of library service delivery were found to be more severe in Accra Technical University than in Kumasi Technical University. Synthesizing these findings in line with the LIBQUAL model, library infrastructure in Kumasi Technical University was rated higher in terms of library as a place than in Accra Technical University. However, when it comes to affect of service and

information control, both institutions were rated low, even though Kumasi Technical University was rated slightly higher on both dimensions. These findings speak to the urgent need to improve library infrastructure and library service delivery in both technical universities in general, but more so in Accra Technical University.

6.4 Recommendations

This section presents the discussions of the recommendations for improving library service delivery in the two technical universities, and other technical universities in Ghana. Based on the findings from the study, the recommendations made entails library use awareness drive, provision of library facilities, information literacy training, digitization of library services and suggestions for further research. These recommendations are discussed next.

6.4.1 Library use awareness drive

The study has shown that frequency of library use is extremely low in both institutions. There is the need to embark on massive library use awareness drive in both technical universities. The literature suggests that library use is generally low in technical universities, and the findings from this study contributes empirical evidence to that argument. What this means is that, the normal way of delivering library services, where it is assumed that students and faculty will come when they need information, may not work well in technical university context in Ghana. There is the need to embark on campaign drive that proactively take library services to the users. This can be done during orientation programmes for fresh students. Instead of just introducing library services to fresh students during orientation, there should be more emphasis on enticing the students to come use the services rather than just letting them know that those services are available. Other

avenues such as SRC week celebrations, Hall week celebrations and other student-led gatherings and programmes should be capitalized on to drive library use.

6.4.2 Provision of library facilities

The findings have demonstrated severe need for tangible library infrastructure in both technical universities. However, this was found to be more severe in Accra Technical University. There is the need to provide more physical infrastructure in both universities, especially in Accra Technical University. Government in general, working with management of technical universities should increase budgetary allocation to improving physical infrastructure of libraries in technical universities. The institutions should also allocate part of their internally generated funds to improve on the facilities in their libraries. These would ensure that library as a place is improved in technical universities to create serene and comfortable library environment for students and faculty.

6.4.3 Information literacy training

The findings from the study also showed that information control is problematic in both technical universities. In Accra Technical University for instance, insufficiency of user education emerged among the severe challenges. In Kumasi Technical University, limited information retrieval skills emerged among the topmost challenges. These speak to the fact that the library users have limited control over information retrieval and use. There is therefore the need to embark on information literacy programmes for library users in the two technical universities. Information literacy courses should be introduced in the technical universities as required courses in the first year of their studies, to ensure for instance that all students in both universities, and other technical universities become information literate to help their studies.

6.4.4 Digitization of Library Services

The study also demonstrates that electronic library services in both universities are limited. This was however found to be more severe in Accra Technical University than in Kumasi Technical University. The study identified limited ICT facilities, particularly in Accra Technical University, and limited computer knowledge in Kumasi Technical University. There is the need for embarking on digitizing library services in both universities. Both universities should increase their online databases and other electronic resources to ensure that students and faculty are able to access library services on virtual platforms. The library management in both universities should liaise with the computer systems departments in their respective institutions to incorporate accessing digital library resources as part of their ICT trainings to both students and faculty.

6.4.5 Future research

There is the need for more studies to be conducted among technical universities in Ghana in order to deepen understanding and improve library service delivery in these institutions. First, future studies should consider conducting comparative analysis of library service delivery between technical and traditional universities. This would help to provide insights into how what works well in traditional universities can be adapted and applied in technical universities.

Again, future studies should focus on assessing the prospects of using social media to deliver library services in technical universities in Ghana. Understanding how students in technical universities engage with social media and how they will relate to library services via social media platforms would provide a major boost to increasing frequency of library use within technical universities.

Lastly, other future studies in technical universities should consider using methodological innovation to focus on those who never use library services in their universities. Through survey, respondents who indicate not visiting the libraries can be identified and followed up to conduct in-depth interviews in order to understand why they do not utilize library services. Understanding the reasons and motivations of these students who never visit the libraries would provide valuable insights into how they can be reached with library services.

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APPENDICES

APPENDIX I: INTRODUCTORY LETTER



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

Ref. No.:.....

November 28, 2019

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

INTRODUCTORY LETTER

I write to introduce to you Ms. Evelyn Tawiah Aggor, an M. Phil student of the Department of Information Studies, University of Ghana, Legon.

She is researching on the topic "Service quality perceptions and expectations of library users A comparative study of Accra and Kumasi Technical Universities".

Please assist her with the necessary information that will be needed to undertake the research.

Thank you.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Ebenezer Ankrah'.

Dr. Ebenezer Ankrah
Head of Department

COLLEGE OF EDUCATION

• Tel: +233 (0) 303 937 957

P. O. Box LG 60, Legon, Accra, Ghana.
• Email: dislegon@ug.edu.gh

• Website: www.coe.ug.edu.gh

APPENDIX II: QUESTIONNAIRE

UNIVERSITY OF GHANA

DEPARTMENT OF INFORMATION STUDIES

**SERVICE QUALITY PERCEPTIONS AND
EXPECTATIONS OF LIBRARY USERS IN TECHNICAL
UNIVERSITIES**

Please your consent is required to take part in a study that examines perception of service quality and expectations of library services among library users in technical universities in Ghana. The study is for academic purposes and so participation is strictly voluntary with no associated penalty should you decline to participate. Your privacy and confidentiality are assured as you will not be required to provide any personally identifying information. If you need any further clarification, you can reach the researcher on (0243326738 / etaggor@gmail.com).

Should you choose to participate, you will be required to fill this questionnaire that examines your perceptions and expectations of the library's resources, environment, and the library staff. Please fill out each of the pages until the end where it is stated —**END OF SURVEY**. Specific guidelines and instructions are provided to guide you. You are simply required to be as truthful as possible as there are no personally identifying information on the questionnaire and therefore no personal identity information will be associated with responses. Please do well not to skip any of the questions. There is no right or wrong answer, only respond according to how the items reflect your personal experiences.

Date

SECTION A: DEMOGRAPHIC INFORMATION

This section examines basic demographic information about you. Please indicate responses where appropriate:

1. **Gender:** 1. Male [] 2. Female []
2. **Age** (Please state your age in years): _____
3. **Status:** 1. Student [] 2. Faculty []
4. **Department** (Please state): _____

For students:

5. **Programme** (please indicate) _____
6. **Level:** 1. Level 100 [] 2. Level 200 [] 3. Level 300 [] 4. Level 400 []

SECTION B: LIBRARY USE

This section examines the frequency and patterns in your use of the library facility in your institution:

7. **Institution:**
[] Accra Technical University (ATU)
[] Kumasi Technical University (KsTU)
8. **How often do you visit the library?**
Very often [] often [] Once in a while [] Rarely [] Never []

9. **For what purpose do you visit the library** [Tick as many as applied]

To borrow book []

To work on my assignment/project []

To prepare for examination []

To read my personal notes []

To read for leisure []

Other (please specify) _____

SECTION C: LIBRARY SERVICES QUALITY

This section examines your assessment of the quality of library services in your institution. Please rate the extent to which you agree to the following statements about various components of your academic library services and resources: *1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree*

Reliability

1. Reliability	SD	D	S	A	SA
a. The library staff are very reliable	1	2	3	4	5
b. Library staff are always courteous, showing friendly behavior	1	2	3	4	5
c. Library staff are always willing and ready to help users	1	2	3	4	5
d. One can make a complaint or suggestion easily about the existing conditions in the library	1	2	3	4	5
e. The library staff attend to complaints promptly	1	2	3	4	5

Responsiveness

2. Responsiveness	SD	D	S	A	SA
a. Library staff are efficient and knowledgeable to answer users' query	1	2	3	4	5
b. Library staff deliver prompt and timely service to users	1	2	3	4	5
c. Library staff provide services accurately with minimum interruption	1	2	3	4	5
d. Library staff subscribes for documents from other Information Centers if not already available in the library's collection.	1	2	3	4	5
e. Library staff use technology (IT) efficiently	1	2	3	4	5

Empathy

3. Empathy	SD	D	S	A	SA
a. Library staff have sincerity in handling users' problems and making prompt solutions	1	2	3	4	5
b. Library staff give individual attention to the users	1	2	3	4	5
c. Library staff treat users fairly and without discrimination	1	2	3	4	5
d. Library staff give priority to the users' interest	1	2	3	4	5

Assurance

4. Assurance	SD	D	S	A	SA
a. Library information guides are clear and useful	1	2	3	4	5
b. Library provides user education programs to help users make more effective use of resources	1	2	3	4	5
c. I feel safe and secure when I am using the services in the library	1	2	3	4	5
d. The library provides a space that inspires study and learning	1	2	3	4	5

Tangibility

5. Tangibility	SD	D	S	A	SA
a. Internal environment of the library is calm, welcoming and conducive to studying	1	2	3	4	5
b. Library has suitable and sufficient space that encourages study and research	1	2	3	4	5
c. Library is a pleasant, comfortable and inviting location to carry out study	1	2	3	4	5
d. The library materials are in good condition (not brittle or falling apart)	1	2	3	4	5
e. Number and variety of electronic resources subscribed are adequate	1	2	3	4	5
f. The library has sufficient modern technological equipment and facilities	1	2	3	4	5

SECTION D: USER SATISFACTION

This section examines your satisfaction with the library facilities and services in your institution. Please rate the extent to which you are satisfied with the library services and indicated below:

1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree

10. In general, how satisfied are you with the following about your library?	SD	D	N	A	SA
a. Library staff	1	2	3	4	5
b. Reference service	1	2	3	4	5
c. Lending service	1	2	3	4	5
d. Internet/computer services	1	2	3	4	5
e. Orientations and training	1	2	3	4	5
f. Information literacy instructions (Being taught how to use the library and searching for information)	1	2	3	4	5
g. Access to information resources in the library	1	2	3	4	5
h. Library environment	1	2	3	4	5

Challenges in Accessing Quality Library Services	Yes	No
a. Lack of information retrieval skills		
b. Insufficient user education		
c. Low level of computer knowledge		
d. No ICT facilities for accessing information		
e. Library facilities are inadequate		

Recommendations: please indicate suggestions for improving library services at your library
a.
b.
c.
d.
e.

END OF SURVEY – THANK YOU