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**FACULTY-LIBRARIAN COLLABORATION IN ENHANCING
STUDENTS' INFORMATION LITERACY SKILLS: A STUDY OF
SELECTED TECHNICAL UNIVERSITIES IN GHANA.**

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**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN
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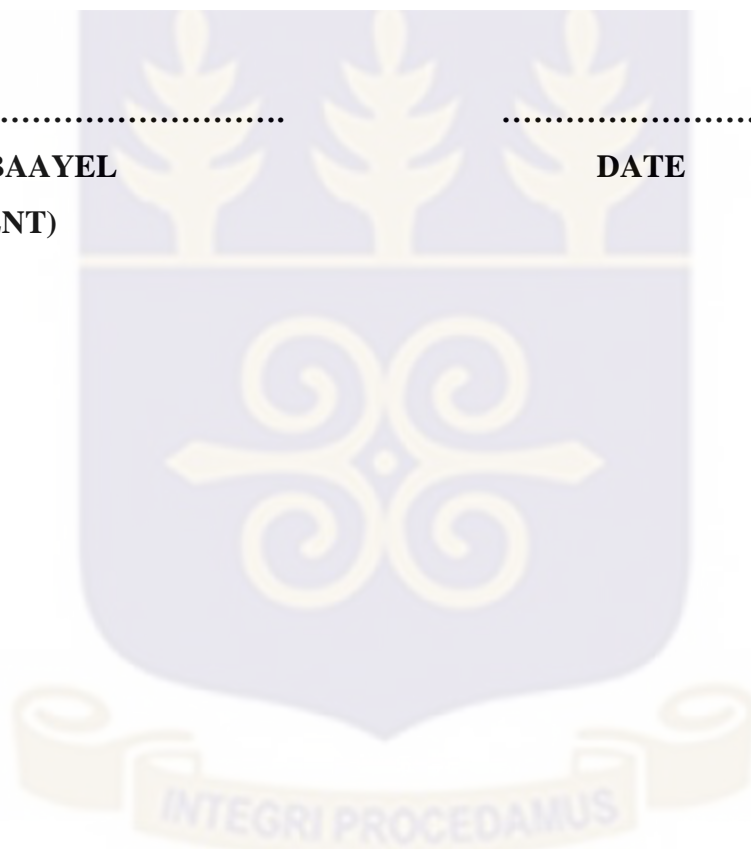
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DECLARATION

I Patrick Baayel hereby declare that this thesis, with the exclusion of quotations and references contained in published and unpublished works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted either in part or whole, for the award of another degree elsewhere.

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CERTIFICATION

I hereby certify that this thesis was supervised in accordance with University of Ghana, Lagon guidelines for supervision of thesis.

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DEDICATION

I dedicate this work to God the Almighty and the Baayel family.



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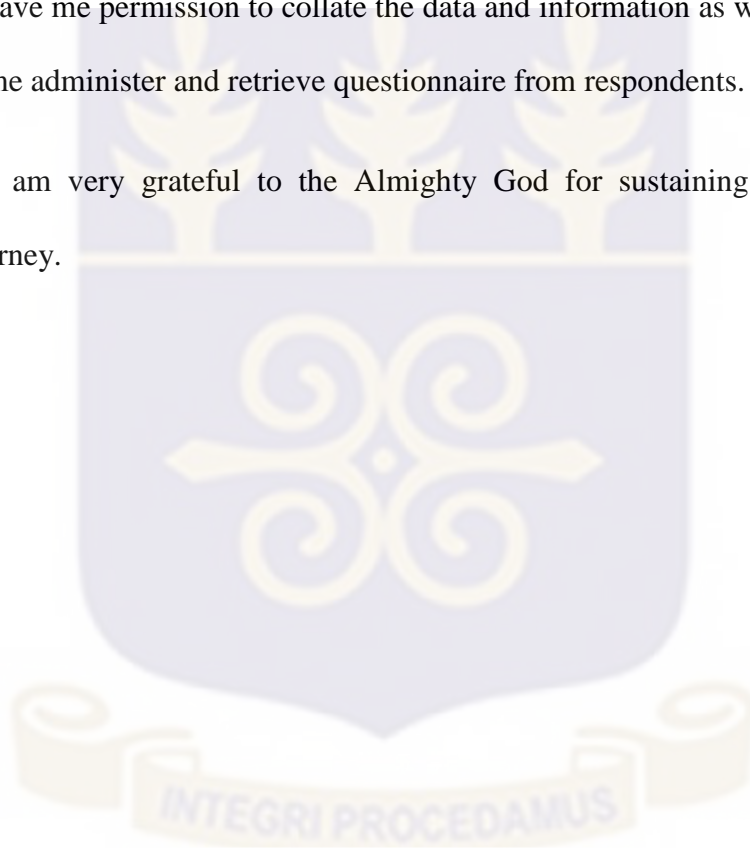


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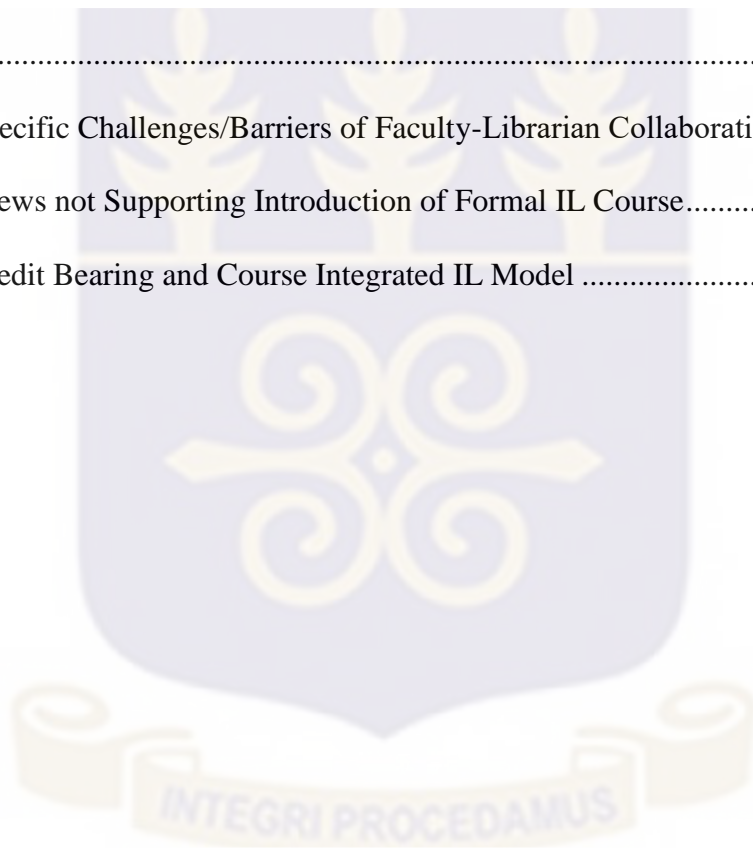
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LIST OF ABBREVIATIONS

ACRL	- Association of College and Research Libraries
ALA	- American Library Association
ATU	- Accra Technical University College
HTU	- Ho Technical University College
IL	- Information Literacy
KsTU	- Kumasi Technical University
KTU	- Koforidua Technical University
SCONUL	- Society of Colleges, National and University Libraries
SPSS	- Statistical Package for the Social Sciences



ABSTRACT

This study sought to explore the feasibility of faculty and librarian collaboration in developing a formal information literacy (IL) plan for inclusion in the normal academic curricula of Technical Universities in Ghana. The researcher adopted the mixed method approach by using both quantitative and qualitative methods as the research design for the study. Questionnaire and interview schedules were used as the main instruments in collecting data for the study. The entire population of ninety-two (92) respondents was targeted for the study with a respond rate of 82 (89.1%). Out of the total respondents, 66 (80.5%), were teaching faculty from the Liberal/Multidisciplinary Studies Departments of the selected study areas, while 16 (19.5%) were library professionals from the selected institutions. Seventy-six (76) questionnaires were distributed with 66 of them duly completed and returned. Sixteen library professionals were also successfully interviewed as part of the data collection process. The Statistical Package for Social Science (SPSS) version 20 was used to analyse the quantitative data while qualitative content analysis was used to analyse the information gathered from the interview schedules. The study revealed that all the selected technical Universities did not have formal IL training programmes for their students. The study brought to light that, majority of the respondents were aware of and had appreciable levels of understanding of IL concept. The study also revealed factors that determine successful faculty-librarian collaboration in IL instructional activities. The study further revealed that the faculty had positive perceptions of librarians and positive attitudes towards collaborating with them in IL activities. Further revelations of the study identified challenges that could impede the process of faculty-librarian collaboration in students' IL instructions. However, with availability of the required resources and management's support, faculty-librarian collaboration in implementing formal IL programme at technical universities was shown to be feasible. The study proposed the adoption of a formal IL programme of study for inclusion in the normal academic curricula of technical universities. A revised Integrated Instruction Model for faculty-librarian collaboration in IL instructional activities was also proposed for adoption in future studies.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The present time is considered the information era, owing to the fact that there is now abundant information. In fact, the present era is seen as the information age or time of information explosion. This development has necessitated the emergence of information literacy (IL) training programmes especially in institutions of higher learning. IL is the set of skills required by information seekers to identify, retrieve, analyze, and use information rightly and dutifully (Ranaweera, 2008). Also, acquiring IL skills have the tendency to empower users with the needed skills that will help them become independent lifelong learners. These required IL skills will allow individuals to apply their knowledge from their usually comfortable setting to the unfamiliar environments (Brasley, 2008).

Considering the vital role IL plays in the transformation of students, it is important that appropriate stakeholders take the teaching and learning of it very thoughtfully especially in institutions of higher learning. Information professionals and their faculty counterparts in higher institutions of learning are two major stake holders when talking about the promotion of IL instructions. It might be necessary to encourage them (i.e. librarians and faculty) to partner one another in order to design relevant IL plans that will help promote and enhance the teaching and learning of IL skills in academic institutions (Lindstrom and Shonrock, 2006)

The significance of librarians and faculty's collaboration in enhancing the academic success and research capacities of their students has been increasingly recognized in institutions of higher learning (Pham and Tanner, 2015). Teaching faculty and their librarians engaging in collaborative IL instructions is an evolving phenomenon where the

support for students to transform them into lifelong learners is paramount. Conventionally, faculty and librarians have been driven by separate agendas, which see faculty being engrossed in going to the class rooms to teach while librarians also concentrate on providing information resources (Wijayasundara, 2008).

However, the works of both librarians and faculty members could be driven by a single and a common purpose of building learners into lifelong intellectuals, critical thinkers and problem solvers. Increasingly, it is accepted that the student is the prime target of both librarians and lecturers. Therefore, it would be expedient for both to work collaboratively to train students as lasting learners. IL is indispensable for a fruitful academic life. Librarians and their faculty can mentor and partner one another in instructing learners especially in the area of IL (Lindstrom and Shonrock, 2006)

Doskatsch (2003) is one of such researchers who are of the view that collaboration in IL instructions has become a necessary concept in educational set-ups and even in research laboratories. He is of the opinion that it is not only librarians and faculty who should collaborate, but all other academics, professional bodies and even students at all levels of the educational system are increasingly being encouraged to operate collaboratively. Collaboration in the academic environment could be described as involving more than one individual working collectively to assess needed information so as to improve students learning outcomes (Montiel-Overall, 2005). In a related objective, Wijayasundara (2008) study referred to collaboration as the exercise of working together for a common goal while Oberman (2002) study identified terminologies like networking, coordination, cooperation, partnership, alliance, relationship, teamwork as being frequently used synonymously with the term collaboration. Oberman (2002) continued that faculty-librarian collaboration has become a very important phenomenon in the 21st Century where

there is an ongoing need for life-long learning. Also, the study identified that the world has become more knowledge - oriented as more and more information is generated and disseminated. This has further been compounded with the use of information technology (IT) for the purposes of dissemination. Students' needs have also become more complicated and these complex needs cannot be satisfied either by faculty or librarians only.

The need for faculty-librarian collaboration is justified particularly in this present era of information explosion because it will be prudent for librarians and faculty members to partner one another in purposeful ventures that promote skills that place the student on a platform of retrieving needed information. The practice of collecting and keeping and preserving information in libraries is being enhanced by focusing on acquisition of relevant skills in retrieving needed information. In view of this, McGuiness (2006) and Hollander (2004) express their idea that the traditional posture of a library as a quiet and orderly repository of books that users who need information consult is being replaced with a vibrant image of collaborative educational setting where information is chosen as the foundation for solving problems, rather than seeking to read, strictly, what has been prearranged by academic faculty.

Another justifiable reason for the collaboration in IL activities is that library professionals and their teaching faculty have common objectives and interests. All of them will want students to advance in their use, understanding, and admiration for sources of intellectual documents and property. All should work to advance students' literateness, principally in IL, and all should support learners to become critical thinkers, and self-directed, lifelong learners. Also they should all be interested in building the social and academic lives of students on campus and beyond (Hollander, 2004). Students, in this information age are

required to be independent in the retrieval of information, and have the skills to analyze and assess the retrieved information very well before using it ethically to address problems. This could be achieved when library professionals and faculty come together as a team. Librarians and faculty collaboration is again needed to bring information close to students, assist students to be familiar with access sources and resources of information (Hollander, 2004)

In fact, faculty themselves also need to be supported to improve their IL skills. And this may be why Wijaysundara's (2008) study opined that if faculty members are introduced to IL skills and information sources they are not aware of, they may incorporate them in their notes and probably inform students about them. The librarian therefore supports the teachers' role in building up the IL skills of learners and discovering methods to integrate them into the course content. In this responsibility, the librarian encourages, supports and nudges faculty in the establishment of learning priorities which ensure that student develop the abilities that will allow them to be effective life-long learners in this ever changing and increasingly digital world (Wijaysundara, 2008).

Deducing from explanations in literature, this researcher will explain faculty - librarian collaboration as the process of the two coming together with complementary skills to work towards achieving a common goal such as students' information literacy enhancements. This can be achieved by working hand in hand in various activities such as complementary teaching functions of library professionals and faculty such that they could help students develop their information literacy competencies. With the relevance of information literacy trainings being recognized in institutions of higher learning across the world, so is the relevance of the role librarians play in the teaching and acquiring of IL skills by learners (Lindstrom and Shonrock, 2006). More institutions of higher learning are presently

recognizing the importance of IL skills in students, and because of that, the need for library professionals is also growing (Ivey, 2003). Incorporating IL skills instructions as part of formal learning is a panacea to fruitful student learning outcomes; hence, information professionals are now adopting different methods (Brasley, 2008).

Looking at the significant roles librarians play in the advancement of IL instructions, it was not out of place when Ivey's (2003) study identified that the present age is an era of increasing prominence for the modern librarian to teach IL as part of his or her duties. In the modern era, there is also the pressing need for the librarian to network his way through to faculty in a bid to create the platform for collaboration in IL issues (Ivey, 2003).

An assessment of the literature and searching through the Web had revealed new forms of collaborations especially in academia. Faculty-librarian collaboration in promoting IL instructions of students are now making broad inroads into academic programs in institutions of higher learning. There is therefore the need for the current study to explore possible developments in collaborative interactions in which the role of both librarians and faculty as partners in the classroom and part of an integrated process of teaching and learning will produce a formal IL plan for integration into the curricula of Technical Universities in Ghana.

1.1.1 Technical University Education in Ghana

Ten (10) Polytechnics which existed in Ghana before the year 2016, were established and promulgated as tertiary institutions under the Polytechnics' Law, of 1992 (PNDCL 321). Namely, the 10 Polytechnics were: Accra, Kumasi, Takoradi, Sunyani, Tamale, Cape Coast, Ho, Koforidua, Bolgatanga, and Wa Polytechnics.

In 2016, existing Polytechnics were upgraded to the status of Technical Universities per the Technical Universities Act (ACT 992), enacted by the Parliament of the Republic of Ghana in September, 2016. The upgrade followed an assessment exercise conducted by a Technical

Assessment Committee. Accra, Takoradi, Koforidua, Ho, Kumasi and Sunyani (i. e. six Polytechnics) met the criteria initially and were upgraded to Technical Universities in September 2016. Cape Coast and Tamale Polytechnics which initially did not meet the 16 point criteria laid down for qualification for conversion were later on converted into Technical Universities by the Government based on a reassessment programme. In all, there are now eight (8) Technical Universities in Ghana (Accra, Kumasi, Ho, Koforidua, Sunyani, Takoradi, Cape Coast and Tamale Technical Universities).

The Conversion of the then existing Polytechnics into Technical Universities was in fulfillment of Government's policy of converting all such institutions into Technical Universities to help reposition them as strategic institutions for the training and development of highly-skilled human resource to drive the nation's socio-economic development. The Technical Universities' Act, (ACT 992) assigns appropriate targets and objectives to the Technical Universities to strive to achieve. They are as follows:

1. Make higher education equally accessible to all persons suitably qualified and capable of benefiting from education and training offered at the Technical Universities
2. Use competency based and practically oriented approaches in teaching and delivery of courses of study.
3. Develop a strong linkage and collaboration with relevant industries, businesses, professional bodies and technical experts in the delivery of programmes
4. Provide opportunities for skills development, applied research and publication of research findings.

It is important to note that this mandate of the Technical Universities cannot be achieved without the existence of libraries. Thus, there are academic libraries in all the Technical

Universities in Ghana to support teaching and learning. These libraries may not be able to achieve the desired results unless users are equipped with the needed information literacy skills to access and use information and its resources dutifully to meet their needs.

Information literacy programmes are vital panaceas to enhance academic performance of students/users and expose library staff to new trends in the information profession. There is the need for stakeholders such as librarians and faculty to collaborate in diverse ways to improve students' information literacy skills. Absence of collaboration between librarians and faculty however will lead to poor information literacy skills of students. It will be prudent for all academic libraries and the faculties on campuses of Technical Universities to collaborate in activities that will draw and implement programmes to teach students information literacy skills. There is the need for constant and adequate information literacy training for students to help empower them with skills needed to find, retrieve, analyze, and use information. Information literacy skills will empower the students with the needed skills which will help them become independent lifelong learners.

The present state of affairs at the Technical Universities in Ghana is that, information literacy activities are not formalized. The current situation as observed in selected Technical Universities is that lecturers in their own effort teach students some form of information literacy skills. But such informal trainings are not enough. Students have been introduced to the internet but they tend to google everything without analyzing the value of the information.

Also students are introduced to library collections during orientations but that is not adequate to equip them with the needed information literacy skills. The situation is such that skills prescribed in searching, accessing and using information are not formalized by particular rules, regulations and curriculums. Librarians therefore employ different approaches to

address information seeking questions. The librarians and faculty do not also have any collaborative activities and programmes for the teaching of information literacy.

It is for such challenges that the researcher decided to conduct a study to explore opportunities available in using faculty-librarian collaboration as a tool to design a programme to enhance students' information literacy skills in Technical Universities in Ghana.

1.2 Statement of the Problem

For the reason that faculty and librarians have a common goal of developing students into lifelong learners and critical thinkers, there is the need for both to collaborate in order to attain such mutual goal. Yousef's (2010) study identified the need for future studies to explore the role of collaboration between faculty and librarians in the success of programs related to information literacy. However, notwithstanding the projected benefits, there seems to be less synergy in collaborative activities between librarians and faculty in improving students' information literacy skills in Technical Universities in Ghana.

The ideal situation requires faculty and librarians to work together to realize their mutual goals and concerns. Both should work to develop learners to a greater height of understanding and respect for books, journals, and other intellectual assets. Both ideally should work to enhance students' information literacy skills, and help transform students into problem solvers, critical thinkers, self-directed, and lifelong learners. They should partner each other in such curricula activities that build the social life and intellectual capacity of students towards problem solving. Librarians and faculty should collaborate to incorporate IL instructions into the course content of academic curricula. (Lippincott, 2002 and Wijayasundara, 2008) all stressed the importance of collaboration between academics and librarians in IL instructions.

The current situation in Technical Universities in Ghana appears to be that of inadequate or non-existence of formal IL training programmes for students. The subject of formal information literacy does not seem to illustrate a wider acceptance and adoption within Technical Universities in Ghana. Preliminary investigations at Koforidua, Accra, Kumasi and Ho Technical Universities revealed a prevailing situation of inadequate collaborative activities between faculty and librarians especially in the area of improving students' information literacy skills. It appears these institutions have not incorporated information literacy as a subject of study into the course content of their educational curricula.

There are dire consequences in ignoring to implement formal IL instructions plan through the collaborative efforts of both faculty and librarians in Technical Universities in Ghana. Students, in the current information age are required to be independent in the retrieval of needed information, be able to analyze and evaluate information retrieved and also use the information to solve problems. This cannot be achieved when faculty and librarians do not work together to provide the necessary IL skills for students in Technical Universities in Ghana. Ignoring such collaboration will mean that the objective of academic institutions to bring information close to students, help them to be familiar with information resources and how to access information from these resources will be a failure.

1.3 The Purpose of the Study

The purpose of the study was to explore the feasibility of collaboration between faculty and librarians in developing an IL plan for incorporation into the regular educational curricula to teach students IL skills in Ghanaian Technical Universities.

1.4 Objectives of the Study

The study sought to address the following objectives:

- i. To determine faculty-librarians' understanding of IL concept at Technical Universities in Ghana.
- ii. To determine faculty perceptions and attitudes towards collaboration with librarians in IL programmes at Technical Universities
- iii. To identify factors that influence faculty-librarians' collaboration in information literacy programmes in Technical Universities.
- iv. To identify possible barriers/challenges of faculty-librarians collaboration in IL activities in Technical Universities in Ghana.
- v. To explore feasibility of integrating IL instructions in the curricula through faculty-librarian collaboration in Technical Universities in Ghana.
- vi. To propose the adoption of formal IL programme for inclusion into the normal academic curricula of Technical Universities in Ghana.

1.5 Research Questions

The researcher sought to find answers to the following questions:

- i. How do faculty and librarians' understand the concept of IL at Technical Universities in Ghana?
- ii. What is faculty's perceptions and attitudes towards collaborating with their librarians in IL programmes?
- iii. What factors will influence faculty-librarians collaboration in IL programmes at Technical Universities?

- iv. What possible challenges will impede faculty-librarian collaborative efforts to integrate IL programmes at Technical Universities?
- v. How feasible is faculty-librarian collaboration in integrating IL in the normal curricula of Technical Universities?
- vi. What form of information literacy programme do you propose for inclusion in the normal curricula of Technical Universities in Ghana?

1.6 Significance of the Study

The study will help provide an understanding of faculty and librarian collaboration especially in the area of partnering each other to enhance students' information literacy skills levels in Ghana and beyond. It will help identify attitudes of faculty and librarians in terms of collaboration towards a common goal of enhancing students' information literacy skills levels. Furthermore, the study will provide background information to help in the designing of policies that will facilitate faculty-librarian collaboration and also help to harmonize teaching, research, and information resources utilization. Additionally, the study will help to nurture a good relationship between librarians and faculty for future projects that will require collaboration among them. The study will help librarians of academic institutions to gain a better understanding of faculty's perception towards the library and the extent to which they are ready for collaborative activities. The ultimate beneficiaries of the study will be students because outcomes will be a source of reference for professionals designing information literacy programmes in their respective institutions.

1.7 Scope of the Study

The study areas were limited to only four (4) newly established Technical Universities in Ghana. They are; Koforidua, Ho, Accra and Kumasi Technical Universities. The four (4)

institutions were selected because they formed part of the first set of Polytechnics that were converted to University statuses hence, the need to include them in the study in the area of faculty-librarian collaboration in enhancing the information literacy needs of their students. Also, only four out of eight existing Technical Universities were selected because the researcher sought to conduct an in-depth study of the research problem, therefore including more study areas might not aided successful completion of the study. Expanding the study area to include other institutions might not have facilitated a timely completion of the study. The researcher also lacked adequate resources to extend the study beyond the four areas. These institutions were also chosen because they were identified to have academic libraries with the basic working environments that could facilitate the conduct of the study.

1.8 Theoretical Frame work

The study adopted Integrated Instruction Theoretical Model as the most suitable model to support it. This model is one of the four models (i.e. Coordination, Cooperation/Partnerships, Integrated Instruction, and Integrated Curriculum models) that evolved from the works of Loertscher (1982). The model was enhanced in further explanations by Montiel-Overall (2005). The Model explains how two or more units working as a team by agreement on parallel goals or endeavors could profit good results (Austin, 2000).

Some Researchers have used Integrated Instruction Theoretical Model to support their individual studies. Researchers (Leonard, 2003; Roberts, 2004 and Austin 2000) have all used this theoretical model to identify collaborative efforts. The present work seeks to identify collaborative and partnership efforts between librarians and faculty in promoting profitable students information literacy activities in technical universities in Ghana. This model was identified to be in a better position to guide the present study.

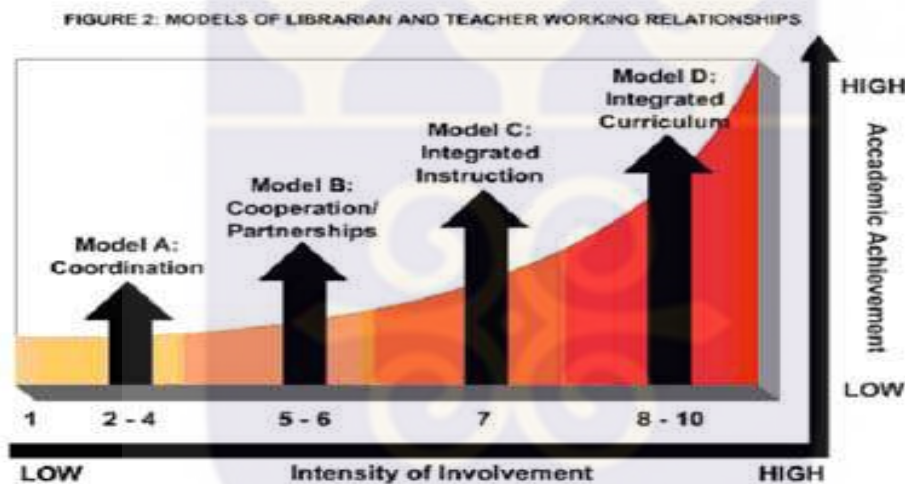
Various ideas of team work have been argued as being confused with collaboration thus, four theoretical models were proposed to distinguish between the various levels of joint efforts such as coordination, cooperation and collaboration. The models evolved from the literature as a result of Loertscher (1982) taxonomy for library media specialists and teachers working relationships. The models describe a range of joint efforts or working relationships that could lead to fully developed collaboration. Attributes of teamwork such as collegiality, respect, communication, trust, shared objectives are identified in the theoretical model to be needed for effective collaboration. These attributes contribute to collaborative actions, such as shared thinking, shared planning, and shared creation of integrated information literacy instruction.

The Integrated Instruction Model encompasses teacher-librarian shared thinking, collective planning, and evaluation. As collaborators, they team up as equals to produce a learning environment that facilitate effective teaching and learning for students. They are supposed to be aware and understand factors such as individual differences, negative work attitudes and perceptions of each other as having the tendency to derail the collaboration process. Each collaborator brings to the process their expertise in the subject content, knowledge of standards to be included in IL instruction, methodology, research process, writing process, etc. The information professional and the teacher are able to create a more powerful learning experience together than they could do individually.

Librarians and teachers are involved in shared thinking, shared planning, and shared creation of integrated instruction for students once their collaborative strength integrates content instruction and library instruction. Collaborators intellectualize together in addition to sharing obligations. They are equal partners focused on integrating their expertise in significant learning experiences intended to help students reach their potentials (Montiel-Overall, 2005). To achieve the enormous assignment of integrating IL instruction all through the curriculum, librarian and teachers ought to be inventive in their usage of time and resources through such

a novelty as integrated lessons planning and cross-age instruction. This model has the potential of improving student learning because it supports conceptual development at all levels of the curriculum, creates a synergy among collaborators that surpasses grade level and subject content, and brings multiple perspectives in designing and delivery of curriculum. Teachers and librarians work to integrated subject content and IL in all grade levels. The four models initially came out of Loertscher's (1982) taxonomy and subsequently got revised in (Loertscher, 1988, and Loertscher, 2000). The theoretical models for teacher-librarian working relationship are represented in Figure 1.1 below.

Figure 1.1: Models of Teacher-Librarian-Collaboration/ Working Relationships

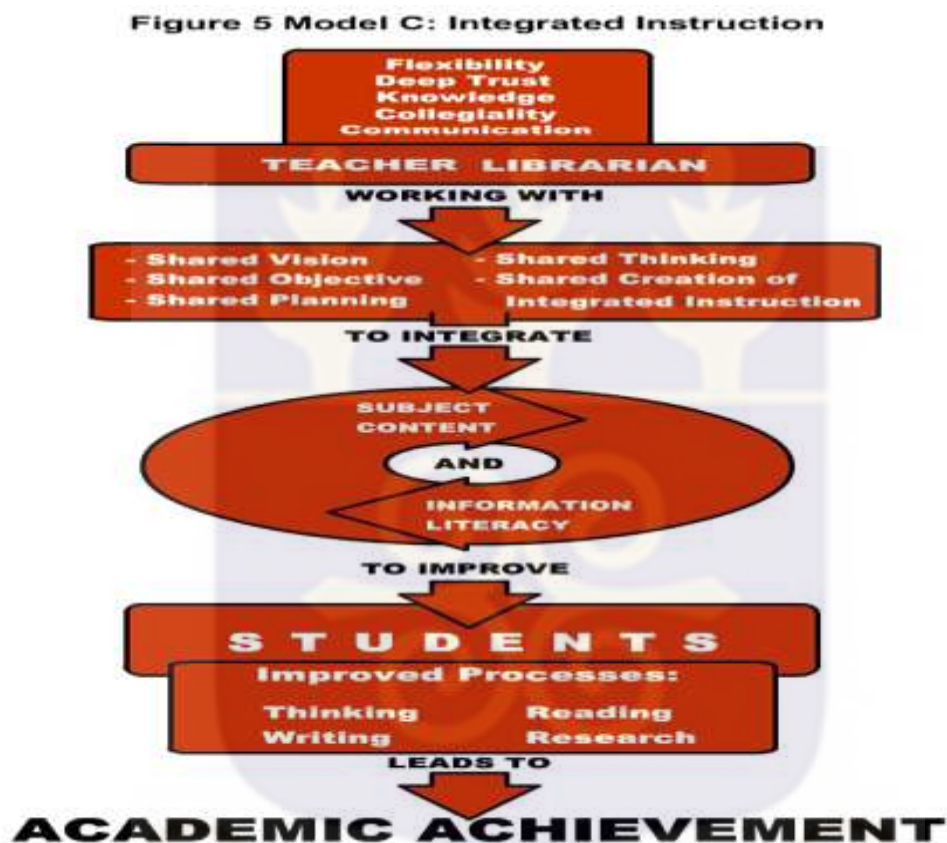


Source: Montiel-Overall (2005).

Models A, B, C, and D are different theoretical models but they constitute a network of various levels of collaborative relationships between partners with common interest. The models function in a chain of relationships on the bases of common objective, mutual interest or same goals as the driving force pulling together different partners. Starting from model A is the minimal form of team work or collaboration with D being the most intensified form of partnerships between two groups.

Montiel-Overall (2005) modernized the models including model C (Integrated Instruction Model) which was adopted for the current study out of the four models evolved from Loertscher's (1982, 1988, and 2000) taxonomy. The new model by Montiel-Overall (2005) is represented in Figure 1.2 below.

Figure 1. 2: Integrated Instruction Model.



Source: Montiel-Overall (2005)

Situating the Model in Context.

Situating the model in the context of the present study, independent variables (faculty, librarians) perform academic functions according to their respective job descriptions. While faculty concentrates on imparting subject knowledge in students in the classrooms, librarians on the other hand are interested in providing information services to meet the information needs of students and the entire academic community.

For faculty and librarians to effectively collaborate in building students into independent lifelong learners, there must be variables that will pull them together to work toward a common goal. Intervening variables (commitment, communication, trust and collegiality) will bring the two (faculty, librarians) to a common ground. The intervening roles of these variables to the cause of building faculty librarian partnership are:

1. **Commitment:** devotion, dedication, etc., to a common cause of transforming students into lifelong achievers should motivate faculty and librarians to collaborate with one another.
2. **Communication:** the exchange of information between faculty and librarians by means of speaking (symposia, seminars, conferences etc.), formal writings (memos, letters, etc.) will be particularly important in motivating the partnership.
3. **Trust:** trust is very important in people working together. For faculty and librarians in especially technical universities to collaborate, there is the need for each to repose confidence in the other, relying on their good qualities, especially with fairness, truth, honor, and ability.
4. **Collegiality:** with equal status, shared interest and shared responsibilities, faculty and librarians as colleagues in academia, could work together in same spirit and enthusiasm towards the accomplishment of a common goal.
5. **Perceptions/attitudes:** faculty perceptions of the image of librarians and their attitudes toward collaborating with academic librarians on their campuses may influence their willingness to partner with and utilize librarians as IL instructors in their classes.

Also, with the motivation to realize a common goal (shared objective), faculty and librarians will team up (teamwork) to accomplish such goal. The shared objective between faculty and librarians is to transform their students into lifelong learners. The focus should therefore be

identification and execution of relevant actions such as building students' information literacy skills to achieve the goal.

Faculty and librarians could team up by supporting one another (instrumental support) to understand information literacy needs and subject contents requirements of students. They will support one another on how to incorporate information literacy courses into the curricula. The two could also learn how to give instrumental support to students by teaching and guiding students in their acquisition and application information literacy skills. At the end of the day, the ultimate beneficiary of partnership between librarians and faculty will be the student. Students are the final recipients who will translate the information literacy skills acquired from the collaborative efforts of their faculty and librarians. The ultimate benefit of this partnership will lead to enhanced information literacy skills of technical university students in Ghana thereby, making them lifelong learners.

1.9 Limitations of the Study

Researches of all kinds have their own inherent limitations which cannot be over emphasized. The researcher encountered some problems in conducting this study. Since the study covered four campuses of Technical Universities in Ghana with a wider geographical distance separating them, the researcher had to travel to most of the study areas which was a tedious task but interesting. Besides, the interview schedules with the librarians and senior member staff in the various libraries were not easy to organize because of their busy schedules at the work places. In addition, some respondents (faculty) of the questionnaire were not willing to fill them with the excuse of busy work schedules at the work place. Furthermore, editing, sorting and coding of the retrieved questionnaire were equally a cumbersome task that the researcher had to contend with.

1.10 Organization of the Study

The study was organized into six (6) main chapters.

Chapter One: This is the overview which looked at the background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, theoretical framework, significance of the study, scope of the study, limitations of the study and ethical considerations.

Chapter Two: This dealt with the review of related literature on faculty librarian collaboration and information literacy skills activities in academic institutions.

Chapter Three: This focused on the methodology of the study by elaborating on the research design, selection of cases, selection of subjects, that is; (population, sample size, sampling technique), instrumentation, pilot study and mode of data collection.

Chapter four: This portion consisted of the analysis of data and presentation of the results obtained from the questionnaire and interview schedules.

Chapter five: This chapter discussed the major findings in relation to the objectives of the study while **Chapter six** addressed the summary of findings, conclusion and recommendations of the study.

1.11 Summary of Chapter

This chapter was the overview of the study consisting of the background, statement of problem, purpose, objectives, research questions, scope, theoretical framework, significance, limitations, ethical consideration, and organization of chapters of the study.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature review in a study is the portion that shares with the reader the results of other studies that are closely related to a current study being undertaken. Literature review offers a background for establishing the importance of the study as well as a standard for comparing the results of a study with findings of previous works (Creswell, 2007). The review relates a study to the larger, ongoing dialogue in the literature, filling in gaps and extending prior studies (Arain, et al., 2010; Marshall and Rossman, 2011).

While there is a large body of works on the subject of information literacy (IL), a review of both library and education literature revealed a rather limited number of articles addressing faculty-librarian collaboration in enhancing students' information literacy skills in Ghana and Africa at large. The literature reviewed on collaboration amongst librarians and faculty/academics to a large extent covered collaborative and partnership in the general sense of the subject area. Some research studies according to the literature covered specific topics that require collaboration between the two parties, such as teaching, research, design of courses and curriculum development, collection development etc. Some literature was also identified and reviewed on faculty-librarian collaboration in improving information literacy.

This chapter of the study reviewed related works that prominent contributors have written in the study area. In this chapter, literature was reviewed under the following themes or sub-topics:

- Definition of information literacy
- Information Literacy Skills Needs of Students.
- The Concept of Faculty-Librarian Collaboration

- Faculty-librarian collaboration in the World
- Faculty-librarian collaboration in Ghana
- Faculty-Librarian Collaboration in Information Literacy Programmes
- Faculty-librarian understandings of IL concept
- Faculty perceptions and attitudes in collaboration with librarians in IL
- Factors influencing faculty-librarian collaboration in IL
- Challenges of faculty-librarian collaboration in IL
- Feasibility of collaborative IL integration
- Adopting IL as a formal programme of study

2.1.1. Definition of Information Literacy (IL)

Rafique's (2014) study explains that the subject of IL has been variously and severally defined by different scholars over the years. Information literate persons are those who are able to demonstrate knowledge and awareness of information, know how to gather it, use, manage, synthesize and create information and data in an ethical manner and will have the information skills to do so effectively (Bent and Stubbings, 2011).

Boekhorst and Britz, (2004) quoting Paul G. Zurkowski, president of the Information Industry Association, who first used the term "information literacy" in 1974, stated that IL skills are the competencies of people to identify information sources to meet their information needs by using and applying related technology. Also, information literacy as identified by the Association of College and Research Libraries (ACRL) "is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning" (ACRL, 2016).

Also, Cassell and Hiremath (2009), citing American Library Association (ALA,1989) defined information literacy as “a set of abilities enabling individuals to recognize when information is needed and have the capability to locate, evaluate, and use effectively the needed information”. Bruce and Lampson’s (2002) study defines IL as “the ability to access, evaluate, organize, and use information in order to learn, solve problems, and make decisions – in formal and informal learning contexts, at work, at home and in educational settings.”

2.1.2 IL Skills Needs of Students.

Information literacy education is needed to create opportunities for self-directed and independent learning where students become engaged in using a wide variety of information sources to expand their knowledge, ask information questions, sharpen their critical thinking, and become lifelong learners (Bundy, 2004). Also in a similar vein, Rockman (2003) identified that the need for information literacy skills is no longer just a library issue, calling it rather the critical issue for the twenty-first century, Rockman’s (2003) study stated that students, workers and all other citizens who are lifelong learners and are information literates will succeed in the present multicultural world. Moving forward, Arp and Woodard (2003) upheld that IL skills are achieved by training students over time through multiple information-seeking practices. Information literacy is not a set of separate, declarative skills that can be taught once and internalized by the learner; rather it has to be applied in a variety of situations.

2.1.3. Characteristics of an Information Literate Person

Bopp and Smith (2009) reveal five standard IL competencies for students in higher education.

These are:

- i. Standard 1: information literate is skilled in determining the nature and extent of information required.

- ii. Standard 2: information literate student should access required information effectively and efficiently.
- iii. Standard 3: the information literate is able to evaluate information and its sources critically and incorporates selected information into his or her knowledge base and value system.
- iv. Standard 4: the information literate student, independently or as a member of a group, should use information effectively to achieve a particular purpose.
- v. Standard 5: such student understands many of the economic, legal, and general issues surrounding the use of information and access and uses of information ethically and legally.

2.1.4 The Concept of collaboration

Collaboration appears to be a composite concept that is used interchangeably with coordination, cooperation, partnership and coalition, although they may represent somewhat different layers of meaning and purpose, as well as the degree of relationship. The differences between collaboration, coordination and cooperation have been contested by various authors (Pham and Tanner, 2014).

Following the works of Lin and Beyerlein (2006) and also Camarinha-Matos and Afsarmanesh (2006), they have all identified that the notion of collaboration is normally seen by collaboration theorists as the highest level of the relationship. Pham and Tanner (2014) in a study to assess modern literature for an evaluation of the concept of collaboration in library and information science and related disciplines identified collaboration as a process of continuum, progressing from networking through coordination to cooperation and finally collaboration. In the literature, several terms (cooperation, coordination, teamwork, partnership, etc.) have been identified to be closely related or used interchangeably with collaboration.

In similar vein, networking is a term used to refer to flexible relationship that involves dialogue and informal communication to share information among members of a network in which goals, rules, structures and roles are loosely defined. Networking can be seen as a “precondition” of other higher working relationships (Montiel-Overall, 2005).

Also, coordination is a term used for short-term relationship in which the involved parties coordinate their efforts to work in a more scheduled way and with more specified roles and goals. Participants in coordination may need to adjust their activities and time to contribute to their complementary goals (Camarinha-Matos and Afsarmanesh, 2006).

Furthermore, cooperation is used to represent a higher level of commitment than coordination, involving resource-sharing and more clearly defined responsibilities. The interaction occurs among independent parties who work together to achieve mutual agreement “but their work together does not progress beyond this level (Hord, 1986).

Collaboration Could be clearly distinguished from cooperation and coordination because the process of collaboration requires a higher degree of commitment in sharing roles, resources and knowledge from involved entities who work together to achieve a common goal. The relationship structures are formal with a clear vision of leadership and long-term outcomes (Gajda, 2004).

In addition, collaboration involves a process of interaction amongst internal and external participants who work together to communicate their understanding, skills, resources and expertise in planning, designing, decision-making and problem-solving process for the attainment of a mutual goal. In the framework of collaboration, academics and librarians in the university’s setting could collaborate in an academically innovative process where librarians, faculty and other relevant parties who are working together could share knowledge

and expertise in order to support the development of teaching, learning and research experiences for the university's community (Pham, 2014).

2.1.5. Faculty Librarian Collaboration in IL in the World

Lau (2001) in a study at Juarez University in Mexico described how outstanding user education experience was assessed. Outcomes of the study revealed that IL was relatively an unfamiliar area of endeavor in Mexican Institutions of Higher learning. The findings also revealed that IL skills were identified to be on the low levels as compared to the situations in other developed economies. Interactions between librarians were also identified to be nothing more but the ordinary librarian-patron relationships. The study therefore recommended improved faculty librarian relationships especially in the area of IL instruction (Lau, 2001).

In another study, Shonrock and Crull's (2010) study examined faculty-librarian collaboration in integrating IL training lessons within the under graduate courses. The study revealed that IL training lessons led to improved information seeking behavior as well as improved IL skills, especially, evaluation of information for use and the ethical use of information.

In a similar spirit, Xiao and Traboulay's (2008) study which sought to identify faculty-librarian collaborative course model for IL instruction for liberal arts students acknowledged that IL training lessons should be integrated into the graduate thesis training programmes. With such integration, teaching faculty and library professionals will work together as a team to teach students active academic investigation skills. They posited that whereas assisting graduates to make them personally involved in their thesis works they will also acquire the skills of research for life through IL skills instructions. The study concluded that integrating IL into the curriculum and teaching students holistically was the key to successful student learning. Brown and Kingsley-Wilson (2010), Mackey and Jacobsen (2010), and Reed et al. (2007) all detailed a range of case studies concerning faculty-librarian corporations on IL assessment elsewhere in the world. Many of these important case studies detailed how faculty

and information professionals approached IL assessment and what they learned from their assessment activities. Faculty-librarian collaboration on IL assessment events can result in the design of more realistic IL programme, that requires students to truly demonstrate skills rather than answer questions about them (Brown and Kingsley-Wilson, 2010).

2.1.6. Faculty Librarian Collaborations in Ghana

Collaborative effort between faculty and library in Ghana had not really gained much attention as a review of the literature revealed very few examples. One of the few studies was Alemna and Arkorful's (2008) study which was in the area of library staff providing liaison services between the library and faculty at the Balme Library, University of Ghana. Alemna and Arkorful's (2008) study quoted Schloman's definition of liaison as "assigning librarians to work with specific departments or faculties in a systematic and structured way so as to create a channel of communication that allows the faculty's need to be understood by the library and the library to be interpreted by the faculty" The liaison officer therefore serves as a bridge the coordinates activities between faculty and librarians. This programme started at Balme library with the traditional subject librarian system but it did not succeed due to factors such as high staff turnovers, low budgets and general lack of interest in the library system. This was however re-initiated in the year 2006 (Alemna and Arkorful, 2008).

Also, Aryeetey's (2011) study identified faculty attitudes towards collaboration with librarians at Methodist University College, Ghana. Findings of the study revealed that there is a fertile ground for the promotion of faculty librarian collaboration. The study also identified that faculty members had positive attitudes toward collaboration with their librarians. Faculty librarian collaboration in enhancing information literacy skills of students in eight Technical Universities in Ghana is at a minimal level. It is also not

practiced as a study area in the formal academic curricula of the technical universities.

2.1.7 Faculty-Librarian Collaboration in IL Programmes

The obligation rests with both library professionals and teaching faculty on university campuses to work together in academic ventures that enhance teaching and learning. In effect, collaboration between these two partners should be an essential feature of positive application of IL instruction in educational institutions. Librarians and faculty should impart in students appropriate IL skills and concepts. Whereas librarians are professionals in information retrieval, use of new technology and access to electronic information resources, faculty could provide disciplinary framework to and for the IL instruction. Students will be more likely to value IL instruction when IL training skills are presented within the educational curricula (Oakleaf et al, 2011).

Currently, there is a growing discussion on the need for librarians to move out of their offices and devise appropriate plans towards the realization of their role in teaching and learning of students in information literacy in particular. There is also a growing discussion on the need for both librarians and faculty to collaborate in activities that will promote the development of students IL skills to address current information needs. It is also said that over reliance on the traditional methods of organizing library instructions during students orientations programmes have outlive its usefulness in the modern times. Librarians and faculty should therefore partner each other in IL programmes that introduce the modern student to right way acquiring needed information (Lindstrom and Shonrock, 2006).

Also, in expressing the relevance of faculty-librarian collaboration in students' IL, Yousef, (2010) revealed how urgent the modern student now needs IL skills. It is said by Yousef (2010) that students are in a dire need of IL skills to the extent that the situation requires librarians and faculty to partner each other in efforts to design IL training course for students.

Badke's (2005) study also revealed that there was an ample discussion at the time about IL and that its proper implementation within university campuses was still a struggle. Badke(2015) posited that it is often due to the issue of librarians and teaching faculty having different "cultures" that create different priorities between them. Also, Hrycaj and Rosso (2007) accepted as true that methods of IL instruction should involve both faculty and librarians. Their collaboration is essential and needs to be pursued through all avenues, from the efforts of individual librarians to campus-wide inventiveness. Their study also showed the need to use different procedures to get reliable evidence of the nature of faculty's attitudes towards collaborating with librarians in IL programmes.

It is therefore, not out of place to see library professionals and teaching faculty becoming progressively aware of the necessity to work together in various areas, such as information literacy, collection development and user services. Several writers such as Feldman and Sciammarella (2000); Rader (2001); Lippincott (2002); and Wijayasundara (2008) have all stressed on the significance of collaboration between teaching faculty and library professionals. Together, university lectures and their counterparts in the information profession should support both under graduates and graduates students to get familiar with information sources that are relevant to their courses of study. They should collectively design training sessions that will introduce students to skills needed to appropriately retrieve relevant information (Schonfeld and Guthrie, 2006).

In another study, McGuinness (2007) revised approaches in which different librarians in the past have adopted ways to garner the support of faculty in activities that promoted curriculum integrated information literacy (IL) instruction. The findings of the study revealed that a relevant area for faculty-librarian collaboration is in the design of IL courses for integration into the curricula. The results of the study suggested that librarians should seek out possible

ways and means to affect a change in the faculty's culture, where they will see and recognize IL as a core educational value which requires their collaborated inputs.

Bielema et al. (2005) reported on their personal experiences during their participation in a programme to design a new distance education course with an emphasis on student group work. The findings of the study showed that collaborative effort among the University of Missouri St. Louis Librarians and their faculty was put in place, and the process resulted in a more personalized learning and service experience for library users. Barratt, et al (2009) conducted a study to describe a collaborative experience where lecturers and library professionals came together to assess citations and referencing patterns among level 100 students at the University of Georgia, USA. The findings of the study revealed that lecturers or librarians operating individually could not bring the needed results, but required the two to partner in such programmes that would bring desirable outcomes.

Also, in Yousef's (2010) study, it was recommended that librarians and faculty should come together as partners because of the fact that IL instruction training requires a practical experience with learners which demand the presence of both faculty and librarians. Oakleaf et al. (2011) examined an IL programme that covered an entire campus under the collaborated efforts of both teachers and library professionals at Trinity University. The findings of this study revealed that library professionals and university teachers had realized the necessity of IL training and had all resolved to partner each other in IL training and IL evaluation. The researchers recommended a similar IL training process that was adopted in the study for other institutions to emulate. As cited in Filiton's (2017) study, Long et al., (2014) stated that once a definition of IL has been established, workshops could be conducted to help faculty and librarians develop information literacy assignments and assessments formula for students. Key strategies identified by the study to help faculty and librarians develop information

literacy plan include: assess needs, develop competencies, target change leaders and early adopters and provide meaningful incentives.

In a similar vein, Fonseca and Viator (2009) study identified that library professionals and teaching faculty ought to work more to grow an all-inclusive IL proficiencies programme by engaging in a working partnerships in IL instruction. This may explain why researchers like Leeder (2011) posited that the most common forms of working partnerships between library professionals and teaching faculty is the one in IL instructional activities. Also, in Mounce's (2010) literature review of past studies covering works published between the years of 2000 to 2009 revealed that librarians and faculty partnerships always see two partners working together in designing the syllabus or the curriculum and usually not include a joint teaching of students.

Furthermore, Kobzina's (2010) study describes a situation at the University of California at Berkeley where library professionals embed IL skills lessons in a prominent environmental study course. The lessons contained multiple library instruction sessions which included access to online course site, and ability to respond to course content on an ongoing basis. The only thing separating this effort from collaboration as defined in the introduction to this post is the fact that they do not contribute to the creation of the course curriculum or assignments.

2.2 Faculty Levels of Understanding IL

Kissel's et al., (2016) study in explaining the Academic, College and Research Libraries (ACRL) IL standards (2015) identified that issues relating to IL Standards may be more familiar to academic librarians and that faculty may find explaining, teaching, and assessing IL confusing or even unsuccessful. As a result the study concluded that academic librarians' levels of understanding IL related issues were seen to be higher than their teaching faculty (Kissel et al., 2016).

Although librarians may be familiar with the literature on students' development in IL concepts, many college faculty are not, since much of the IL literature comes from library-related articles and presentations (Artman et al., 2010). Also, as noted by Norgaard and Sinkinson (2016), faculty may not have heard about recent research describing students' actual research practices, librarian-led assessments based on national standards, or even debates about the place of IL in the curriculum. Faculty members are also unlikely to know that librarians sometimes see them as barriers impeding students' opportunities to learn appropriate IL practices. If collaboration between faculty and librarians is crucial, significant collaboration may well mean reading each other's literature in order to unpack assumptions and see more integral relationships between disciplines and their dependence on IL.

Also, Ivey (2003) conducted a study to explore ways librarians and faculty could collaboratively enhance students IL skills, at the University of Waikato, Hamilton in New Zealand. The findings of the study revealed that the prospects of partnership between information professionals and faculty in their determinations to improve students IL skills depended on their common understanding of IL related issues. Also, in a study to examine the language adjunct faculty used to discuss information literacy and how they understood IL, Fliton's (2017) study observed that 20% of respondents claimed not to know the term - information literacy while 80% of them did claim knowledge of information literacy. The researcher believed that even though 20% of respondents claimed not to know what the term information literacy meant they understood the basic tenets and concepts of information literacy. Fliton (2017) asserted that the 20% respondents who claimed to have no knowledge of the term IL were simply unfamiliar with the phrase.

At the campus level a common definition of the term information literacy could go a long way to garner support from faculty for information literacy programs. Once a common definition has been established, workshops could be conducted to help both faculty and

librarians develop information literacy courses and assessments procedures. Knowing how adjunct faculty come to understand (or learn) and perceive information literacy concepts and then introduce them into their classrooms may provide insight into how to build effective library programs to support adjunct faculty in developing their knowledge and use of the concepts (Fliton, 2017). Increased time, knowledge, structures, and rewards; knowing the needs of the students; identifying the needs and limitations of the faculty; and having influential faculty and administrators champion the changes are critical in garnering support in implement information literacy in the classroom and throughout the curriculum (Bombaro, 2014; Oakleaf et al., 2011).

Very little attention is said to have been given to the advancement or maintenance of IL skills among faculty which may be the reason why and how they conceptualize and apply IL differently. Familiarity and understanding of IL standards by faculty will determine whether teaching faculty will discourse issues relating to IL skills in their classes. Teachers who are familiar with standards or definitions of information literacy of any type are much more likely to incorporate information literacy concepts into their teaching, and to assess for information literacy competencies (Saunders, 2012).

However, in a study to find out what faculty members actually think librarians do in their jobs, it was very clear that most faculty were unaware of the research, scholarly, professional and University service that makes up at least 20% of librarians' duties at University of Victoria (Nelson, 2016). Librarians need to realize that evaluation of students' IL skills presents a difficult obstacle for faculty. Indeed, in Rafique's (2014) study, university lectures testified that they encountered some challenges in finding and evaluating IL skills that were shown in their students' assignments as well as understanding the relationships between assessment of learning outcomes and evaluation for grading. While adjunct faculty were comfortable in providing qualitative comments about student work, they were uncertain

about how to pull together evidence that demonstrated information literacy skill acquisition (Rafique, 2014).

In a study at Trinity University to identify effective approaches for engaging teaching faculty, administrators, and library professionals in information literacy instruction and assessment, Oakleaf et al., (2011) acknowledged that faculty and other staff required additional knowledge so that they could participate fully in collaborative information literacy assessment efforts. The study continued that they needed to know more about information literacy as a concept (especially in evaluation and performance assessment), and major assessment tools, including rubrics. Librarians can help close these knowledge gaps by engaging faculty and staff in professional development opportunities, providing readings, or orchestrating consultant visits (Oakleaf et al., 2011).

Ivey (2003) revealed that librarians and faculty may interpret IL differently and such differences in understanding may adversely affect the prospects of their partnerships in developing IL and recognizing IL as discipline on its own. Such misunderstandings may also affect their willingness to partner each other in the teaching and learning of IL instructions. Rafique (2014) suggested that some librarians may also misunderstand their role in the development and teaching of IL instruction especially when such instructions have now been integrated into the curricula. Rafique (2014) also argued that it might be the case that some information professionals may only understand their role in IL to be only the conventional responsibility of embarking on user education which is only an element of IL skills training.

2.3. Perceptions/Attitudes towards Collaboration in IL Programmes.

Yousef, (2010) examined the attitudes of academic staff toward collaboration with the university's librarians at Zarka Private University and found that majority of the teaching faculty had generally positive attitudes toward collaboration with the librarians in their

academic library with a mean total result of 3.98. The findings according to Yousef implied that faculty appreciated the works of the librarians in teaching and learning. Outcome of the study also revealed that effective involvement of faculty members in the training and learning process required an understanding of their attitudes toward collaboration with the university librarians (Yousef, 2010). Moving on, Ducas and Michaud-Oystryk's (2003) study at the University of Manitoba explored librarian-faculty collaboration. The study results disclosed that faculty highly rated their librarians' role in the university and recommended a bigger level of partnership with the librarians in various areas of endeavours particularly in IL.

In a similar study, Schulte and Sherwill- Navarro (2009) identified that had indicated that they had positive perceptions and attitudes towards interacting with their librarians. Also, Nilsen's (2012) study revealed that existing literature on faculty-librarian relations and organizational culture in academia identified faculty perceptions of and attitudes toward the status of academic librarians to have the tendency of influencing their willingness to utilize librarians as instructors in their classes. In addition, an important component of efficient joint effort in IL programmes is to understand the attitudes of both faculty and librarians. Wijayasundara (2008) indicated that there are several examples of studies which have investigated faculty's attitudes in relation to collaboration generally. Few studies were however identified to have been conducted on faculty attitudes toward collaboration with their librarians. Gaining a deeper understanding of the attitudes of faculty will help in the creation of cogent measures to address faculty-librarian partnership in supporting the librarians' functions in IL activities (Wijayasundara, 2008).

In a related development, Brasley et al. (2008) study which sought to understand faculty's attitudes in relation to their willingness to enter into collaborative ventures with their librarians, led to the conclusion that faculty had positive attitudes towards collaborating with librarians in general. Findings of the study also confirmed that faculty's attitudes toward

collaborating with their librarians in a professional seminar course for pharmacy students were also positive. Also, according to Godwin (2005) library professionals may have to focus on faculty's perceptions and their interest levels in IL issues and that faculty are a major stakeholders sustaining student's acceptance IL training programmes. Oseghale (2008) also pointed out that one of the methods to assure that information resources reflected the demands of the curriculum is to positively influence faculty's enthusiasm in promoting IL training programmes. Ducas and Michaud-Oystryk (2003) in an investigation to understand the existing relations between faculty and information professionals at the University of Manitoba also revealed that faculty highly rated their librarians' as their colleagues in the academic setting. They therefore endorsed a constant level of interactive relationship with their librarians.

In different dimension however, some studies have also proven the contrary that academic staff including lectures lack the motivation collaborate with their librarians in ventures such as IL instruction. Christiansen, et al. (2004) for example, revealed a ranging controversy over whether faculty members perceive collaboration with librarians as necessary or not. Their study however revealed that issues of partnership between librarian-faculty were of little or no interest at all to some academic staff. Other authors (Touchard and Helm 2003, and McGuinness, 2006) were also of the view that negatively entrenched perceptions of some faculty were adversely affecting the potentials of collaboration in IL.

2.4 Factors that Influence Faculty-librarian Collaboration in IL

In what were termed as attributes of successful working relationship between teachers and librarians, Montiel-Overall (2005) identified some which were seen as the panaceas which precondition teachers and library professionals working partnerships. For faculty and librarians collaboration in IL instruction to realize its full potentials, there is the need for such

attributes as effective and regular communication, trust, collegial relationship, friendliness, sense of shared and mutual objectives and the presence of a congenial working environment.

Hollander et al., (2004) also acknowledged that information professionals and teaching faculty have several mutual goals and concerns which could be harnessed by bringing them together as partners. Both parties are interested in improving students IL skills by building in them better knowledge, comprehension and interest in the use of documentary materials such as journals, text books and other documents of intellectual value. They should all be interested in programmes that will enhance student research and learning skills, particularly their IL skills, assisting them to become self-dependent and lifetime intellectuals (Hollander et al., 2004).

In Ivey's (2003) study, it was revealed that the relationships between information professionals and colleague lecturers resulted in the development of students' IL training programmes at the University of Waikato, Hamilton, New Zealand. Ivey identified that success of IL programs hinged on the teaching partners having (library professionals and faculty) realizing their shared objectives and shared understanding of the concept of IL and how its skills are acquired. In the same study, it was revealed that the success of faculty librarian collaboration in IL related issues lied in the presence of congenial working environment, availability of needed resources and infrastructure, resourced persons and management support (Ivey, 2003).

Also in Linstrom and Shonrock's (2006) study, they identified that the success of faculty librarian collaboration in IL related issues depended on regular and effective communication. The study also identified positive working relationships between the teaching partners as essential conditions for collaborative partnerships and effective learning programs. Their investigation established that communication was particularly a vital tool in times of

designing and evaluation of teaching programs. Conventional face-to-face communication was recommended for library professionals to use to build relationships with their teaching colleagues as well as other forms such emails and the institution website. Appelt (2015) also identified some characteristics of successful faculty librarian collaboration in his session called 'Collaboration Arena'. Appelt (2015) identified that factors determining successful faculty-librarian collaborations most often mentioned in the literature are: shared goals, shared language, mutual respect, overlapping competence, ongoing communication.

In similar findings, Lippincott (2002) was of the view that there are several factors that influence the successful collaboration between actors of two different sectors such factors that could pull together information professionals and faculty to collaboratively work towards the enhancement students' IL skills are their willingness to shape a common mission, their interest in sharing terminologies and definitions of technical terms, willingness to learn aspects of the other partners' expertise and ability to appreciate differences and not criticize or stereotype others' professions (Lippincott, 2002).

2.5 Challenges/ Barriers to faculty librarian collaboration in IL

It is identified that faculty believes are characterized by their culture of 'lack of time'. Therefore, several instructors could use their inadequate teaching periods to advance the teaching of IL content. Faculty perceptions of librarians pose as a challenge to effective collaborations. Some faculty perceive librarians as supporting staff with a status less than faculty and therefore lack the capacity to handle teaching roles. Undoubtedly, there is wide-ranging evidence that some faculty have negative attitudes relating to information literacy collaboration (Oakleaf et al., 2011).

Ivey (2003) in a study to investigate the working partnerships of information professionals and teaching faculty in their determinations to advance students' information literacy at the

University of Waikato, Hamilton, New Zealand, identified an important disquiet about the potentials of faculty and librarians' collaborations. The findings exposed issues of inadequate provision of relevant resources to improve collaborative partnerships and IL programs. Also in another study, McGuinness (2006) revealed that librarians at times have perceived that faculty's apathy, time constraints, or culture contribute to the difficulties of collaboration. For example, librarians may see faculty as territorial about their classes, limiting librarian access to students.

Also, in identifying likely challenges that may impede faculty-librarian collaboration in IL programmes Saunders (2012) stated that faculty may view librarians as territorials and wishing "to retain ownership of information literacy". Gullikson (2006) identified that a related challenge is the issue of status: librarians may be suspicious of faculty who encroach or miss the target when faculty seeks to "integrate our (librarians) standardized skills into their curriculum. In addition, some faculty may not want librarians to teach, thinking that librarians are not trained to instruct, while other faculty may not see themselves as having any responsibility for teaching IL (Saunders, 2013). Also, some teaching professionals as well as information professionals are still stagnant, mostly functioning disjointedly owing to the perceived differences in their operational objectives, kind of work, knowhow and position (Christiansen et al., 2004; Shen, 2012).

Some faculty members also perceive the operation of lecturers to focus mainly on generating and transmitting understanding through education and enquiry accomplishments, whereas librarians are tasked to focus mostly on providing support services. This seemingly operational division poses a greater challenge to successful collaborative ventures (Given and Julien, 2005).

The evolving responsibility of library professionals to partner their teaching faculty in IL planning and training of undergraduates in IL and academic research skills is not universally recognized. Pham and Tanner (2014) posited that negative faculty's perceptions against the status of librarians, stereotypes against them and very little recognition for their worth are still serving as barriers against effective faculty-librarian collaboration in IL instructional activities. In another view, Badke's (2005) study asserted that much conversation out there in recent times has to do with students' information literacy skills, and that appropriate execution of IL activities inside the campuses of institutions of higher learning were still a tussle. Badke (2005) went further to reveal that the continued disregard for IL training programmes was mostly because of the fact that library professionals and university teachers still had differences in cultures, which created different interest.

Even though a lot of information professionals recognized the significance of faculty-librarian partnerships in promoting IL programmes, they were aware of the daunting challenges ahead. For instance, numerous undergraduates felt that they needed no further training in IL especially in this modern age of the internet and google search engine. Not leaving them out, some faculty members also believed that IL skills were something students already know. Such thinking all present challenges to the proper implantation of IL training programmes on universities' campuses (Julien and Given, 2013). Indeed, faculty culture is characterized by "lack of time; emphasis on content, professional autonomy, and academic freedom"; consequently, many faculty may utilize their limited instructional time toward the teaching of disciplinary content (McGuinness, 2006).

Also, faculty's opinions of librarians can also prevent effective partnerships. Some faculty members recognize librarians as support staff with a status "less than faculty" who are not meant to have a teaching role. Other faculty, however, know both the worth of IL instruction and the responsibilities of librarians in teaching such skills. Obviously, there is an extensive

range of faculty attitudes relating to IL collaboration (Oakleaf et al., 2011). Also, in a paper presented by Chadha (2009), it was observed that the gap between faculty and librarians is partly because faculty has more powers when it comes to decision making than librarians. This situation leads to a super ordinate and subordinate relationships between the two.

2.6. Feasibility of Collaborative Integration of IL Programme

Smith (2016) concluded that information literacy can be successfully integrated into all levels of the undergraduate curriculum through the collaborative efforts academic librarians and teaching faculty. Smith (2016) continued that multiple assessment measures can be used to establish baseline IL proficiency, track progress over time, and inform where changes may need to be made. Accreditation-related efforts can be useful opportunities for IL-related curriculum enhancements. Faculty, librarians, and administrators all have key roles in the integration process, which must be thoroughly planned and organized before implementation and remain flexible during implementation to accommodate unforeseen changes and developments (Smith, 2016).

McGuinness (2007) made a similar point, noting that while working with individuals within an institution can be effective, it does little to embed IL as a core value when individuals leave and programs shift. McGuinness (2007) argued that the best way to systematically integrate IL into the overall undergraduate curriculum is to take a top down approach and align IL with institutional goals and strategic plans.

In a dissertation on IL and curricular integration, Wang (2010) noted that both the American Library Association (ALA) and the Australian and New Zealand Institute of Information Literacy (ANZIIL) recommend just such a comprehensive integrated approach for IL in institutions of higher learning. Integration must be a collaborative effort of faculty and

librarians; there needs to be a clear definition of IL with concrete learning outcomes; and there must be a plan for curriculum integration at multiple levels (Smith, 2016).

Wang (2010) identified that while the literature is full of practical examples of integrating IL into individual academic courses, there is little on systematic integration of IL at broader levels. Wang (2010) proposed a model for integrating IL in terms of ‘what, who, and how’. What involves an operational definition of IL, which of the ACRL standards or the ACRL frameworks should IL contain, as well as rationale for the reasons IL is important and who is involved in the participation and collaboration? How is the actual plan for integrating: the curriculum design and assessment methods, as well as the presence of IL in institutional planning and accreditation documents? When it comes to teaching, collaboration between the librarian and faculty will often involves the librarian and faculty member partnering on curriculum design and development, and often extends into co-teaching (Leeder, 2011). The literature of instructional collaboration is extensive, but Mounce’s (2010) literature review covering articles published in 2000-2009 is helpful in gaining a big picture perspective.

Also, Gaspar and Wetzel (2009) described a case study in which they participated in an Institutionalized partnership for specific programs in which librarians and writing professors collaborated on curriculum and assignment development. The beautiful thing about this example is that The George Washington University created a program requiring this collaboration and recognizing its benefits. The study revealed that the collaborative program had a central administrative support that made it sustainable for the parties involved.

There are also models of embedded librarianship that meet the same criteria without the co-teaching element. In addition to presenting the useful model of integrated instruction as described by Leeder (2011), Pritchard (2010) describes an a personal involvement in a Science course at the University of Guelph in Ontario, Canada where students in the course

were asked to write an article for a locally published academic journal for which the librarian served as editor-in-chief, and partnered with the faculty members and students to ensure that their research and articles were up to standard. This unique example of a personal involvement and experience by the librarians brought to light the possibility of extensive collaboration with several individuals on campus. Leeder (2011) in drawing from the findings of Pritchard (2010), concluded with an advice at the end of her article for collaborative-minded librarians, that the time has come for library professionals to rise up and reach out to teaching faculty with collaborative proposals especially with those that have to do with students' information literacy enhancement.

Bringing faculty and librarians to work together as partners is not an easy task (Pitcher, and Mackey, 2013). The authors went further to explain that presenting ones' argument to academic faculty and revealing ones reasons for incorporating IL into the courses to convince faculty was a mounting task. Such an exercise required building collegial and friendly relationships with faculty members and knowledge of the subject areas as well. All expertise are supposed to be brought to bear during curriculum development process, and a sustained commitment to staying visible, available and involved. The disclosure makes it clear that collaboration between librarians and faculty should be based on the principles of collegiality, consistent communication and sustained commitment.

Faculty perceptions of librarians can also thwart the process of meaningful collaborations. Some faculty members perceive librarians as support staff with status "less than that of faculty" who are not meant to have a teaching role. Other faculty members will, however, recognize both the value of information literacy instruction and the role of librarians in teaching such skills. Obviously, there is a wide spectrum of faculty's attitudes in relation to

collaboration in information literacy. Some of such perceptions will impede collaboration; others facilitate partnerships (Oakleaf et al., 2011).

Librarians at times have perceived that faculty apathy, time constraints, or culture contribute to difficulties of collaboration. For example, librarians may see faculty as territorial about their classes, limiting librarian access to students (McGuinness, 2006). On the other hand, faculty may view librarians themselves as territorial, wishing “to retain ownership of information literacy” (Saunders, 2012). Librarians may also be suspicious of faculty who encroach or miss the target when faculty seeks to “integrate our [librarian] standardized skills into their curriculum (Pitcher, and Mackey, 2013). In addition, some faculty may not want librarians to teach, thinking that librarians are not trained to instruct, while other faculty may not see themselves as having any responsibility for teaching IL (Saunders, 2013).

2.6.1 Credit Bearing and Course Integrated IL Models

Li (2007) has made it known that numerous educational institutions in the United States are presently making different efforts to incorporate students IL skills training lessons as part of the school curricula and as part undergraduates learning life as a whole. Li revealed that there are currently various debates as to which IL training model is more appropriate for implementation. Different models have been tested; they include a one-time bibliographic instruction, credit-bearing IL courses, and course-integrated instruction. The latter has been confirmed to be the best in terms of its effectiveness and its effect on students’ learning, experience (Pitcher, and Mackey, 2013).

Also, in an article detailing different methods of introducing IL training programmes for Utah State University, Holliday and Fagerheim (2006) similarly identified that there are ranging debates over what constitutes the ideal methods of delivering IL lessons by information professionals and faculty. More of the ongoing discourse had favoured either credit bearing

IL courses or IL training programme that is integrated into the normal course materials being offered by students.

Furthermore, in expressing similar view about the choice of appropriate IL model, Owusa-Ansah (2004) put up a sterling effort to summarize the on-going arguments in a simple way. Proponents of distinct IL courses are of the view that IL is a discipline in its own right which is going to be taken seriously by learners in credit bearing classes. Benefit of IL as an independent credit course is that it will make the learning experience a comprehensive one. All students will obtain comparable training in content, range, and gravity. Evaluation of student learning will also be easier. A credit awarding course in IL training also have the propensity to motivate students to take their IL training course serious (Owusa-Ansah, 2004). On the other side of the argument, Holiday and Fagerheim (2006) indicated that others will support a course-integrated IL instruction as a more appropriate model. They argued that, while IL is a general skill, students will retain IL skills and transfer learning if IL training is embedded to subject-based discipline. At the Utah State University (USU) therefore, Holiday and Fagerheim favored the course-integrated approach of IL for both practical and pedagogical reasons (Holiday and Fagerheim, 2006).

Also, the debate may tilt in favour for standalone IL courses because they are considered to be easier to be incorporated with other courses. Stand-alone courses can meet the needs of the student who recognizes the importance of being information-literate. It is also practical-oriented and less costly (Parker 2005). But stand-alone courses may not motivate students as they have no relevance in their assignments or research skills. Course-integrated and curricula-integrated information literacy programmes are the most effective approach to providing quality information literacy education (Parker, 2003).

On the other hand, Dadzie's (2009) study examined information literacy (IL) initiatives in two universities in Ghana, namely: The University of Ghana and the University of Cape Coast. Dadzie (2009) stated that several intellectuals writing on IL were of the view that the best way to attract students' interest in IL was to design their IL skills lessons and inserting or assimilating them into the normal course materials of the students. The study identified that, course-related IL programmes require the active participation of the faculty librarian. This means that where there is no effective partnership between the faculty and the librarian, the integration of IL into the curriculum may not be feasible. This partnership is necessary to consolidate the contents of IL programmes offered to students. In this connection, there has been much debate about the competence of the librarian as a teacher, developer of the curriculum and assessor of students.

Also, in identifying the most suitable IL model for institutions of higher learning, Li (2017) posited that there are several practices when it comes to a choice of IL model. A preferred IL model according to Li is the integrated instruction model which guides both faculty and librarians in designing an IL instruction for incorporation into the curricular of universities.

2.7 Content of IL Training Programme

Head and Eisenberg, (2010) identified aspects of information literacy, such as understanding plagiarism issues, giving context to the research required for the assignment, and use of resources beyond the obligatory number of references. Head and Eisenberg (2010) stated that the issues of plagiarism are rare or not expanded upon for students and should be included in students IL courses. Also, Dadzie's (2009) study revealed that information literacy skills training include the use of the Internet, an introduction to Electronic resources, how to effectively search the databases and how to cite references.

In addition, Li (2007) identified that IL training is supposed to be acknowledged as a separate area of study from the aspects of computer literacy training which has to do with literacy in the use of computers and how computers function. Whereas IL is said to be the acquisition of such skills that enables information seekers to locate, evaluate, retrieve, communicate and use information to solve pertinent problems, computer literacy has to do with the acquisition of knowledge in the use of information communication technology (ICT) and gadgets.

In a study to explore ways of building a complete and all year around IL programme at the University of Rhode Island, MacDonald et al., (2000) suggested that IL instructional programmes' content ought to concentrate on the conceptions that lead to understanding of what information is, how to gather, evaluate, and use information. It should focus on the real goal of realization of IL goals through the development of credit-bearing courses in information literacy and the creation of information literacy modules for specific disciplines.

2.8. Summary of Chapter

The literature identified several points of debate about the issue of collaboration between faculty members and information professionals in Information literacy. Whereas some studies demonstrated a lack of consensus between the two groups (faculty and librarians), others underscored the need for both parties to realize mutual objectives and interests, hence, go forward to collaborate with one another to realize such goals. The chapter also reviewed literature that identified how faculty generally had positive attitudes toward collaboration in IL programmes. Nonetheless, the review also identified some negative perceptions and poor attitudes of some faculty towards collaborating with their librarians. The literature also indicated that issues concerning collaboration in IL by faculty and librarians have been investigated in certain parts of the world.

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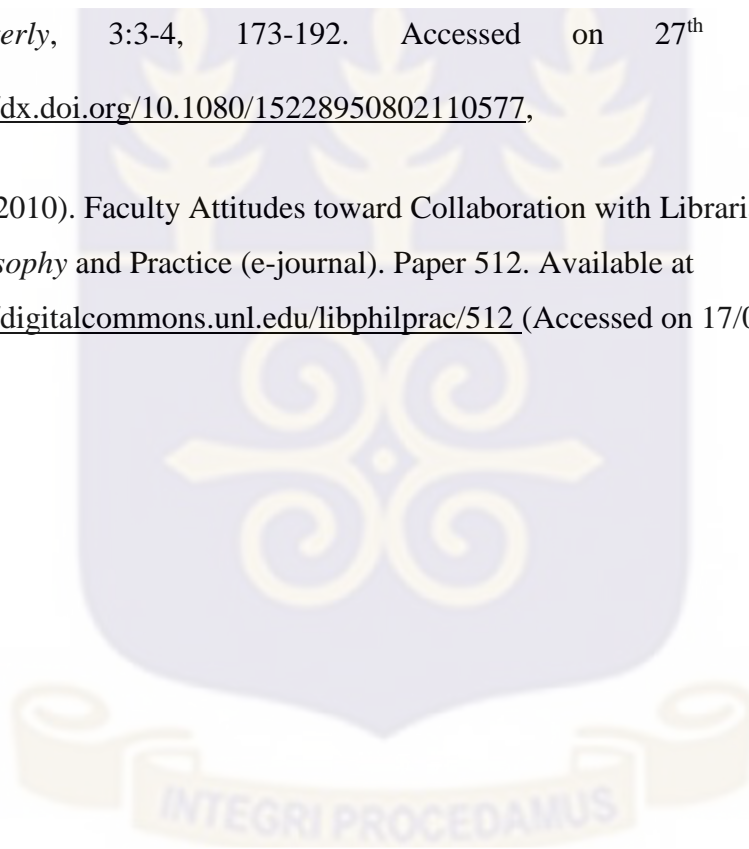
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CHAPTER THREE

METHODOLOGY

3.1 Introduction

Methodology in the view of Saunders et al. (2007) refers to the philosophy of how research should be conducted. This includes theoretic and philosophical assumptions upon which research is based and the implications of these for the method(s) adopted. This study will be conducted on the bases of systematic theoretical and philosophical assumption. This aspect of the study will highlight the methodology adopted for the research. It will cover research design, population of the study, sampling techniques and sampling size, instrumentation, mode of data collection and data analysis and discussions of major findings.

3.2 Research Design/Strategy

The study was conducted using mixed method approach to gather information and data. Creswell (2014) posits that a mixed method involves combining or the integration of qualitative and quantitative research and data in a research study. Johnson et al., (2007) identified mixed method of research to be a process that comprises the collection of both qualitative (open-ended) and quantitative (closed-ended) data in response to research questions or hypotheses. In view of this, the qualitative data solicited was mainly from open-ended interviews without prearranged responses while quantitative data included closed-ended responses such as those found in questionnaires or psychological data instruments. Johnson et al., (2007) continued that a mixed method research design includes the procedures of both qualitative and quantitative data collection and analysis.

As a research approach, mixed method consists of the practice of collecting data, analyzing, and mixing both quantitative and qualitative data in a single study. The central foundation of this research design was that the use of quantitative and qualitative approaches in

combination provided a better understanding of the research problem. As indicated by Creswell (2006) the strengths of quantitative and qualitative can be combined to develop a stronger understanding of the research problem or questions and, as well, overcome the limitations of each. The mixed method design provided strengths that offset the weaknesses of both quantitative and qualitative research to the present study. It also provided a more comprehensive evidence for studying the research problem than either quantitative or qualitative research alone. Researchers are given permission to use all of the tools of data collection available rather than being restricted to the types of data collection typically associated with qualitative research or quantitative research alone (Creswell, 2006).

3.3. Selection of Subjects

3.3.1 Population

Population in research study constitutes the entire individuals of interest to a researcher (Gravetter and Forzano, 2006; Fraenkel and Wallen, 2003). Although the entire population usually does not participate in a research study, the results from the study are generalized to the entire population. In the same vein, Neuman (2007) is of the view that, population is the specific pool of cases that the researcher is interested in studying.

The total population for the current study was ninety-two (92). The population of the study consisted of teaching faculty members from the Liberal/Multi-disciplinary Studies departments of the selected Technical Universities. Also as part of the population, were library professionals (Head Librarians and other senior library staff who were found to have fallen within the status of senior academic members only).

Liberal/multidisciplinary studies departments in the four Technical Universities were identified to be those departments that handle the teaching of university required courses that are compulsory and are sometimes taken in common by all students. The courses among

others includes: Research Methodology, African Studies, Communication Skills, Computer Literacy Skills, entrepreneurship etc. Liberal/multidisciplinary studies departments were selected because of the fact that they were the departments that handled University required courses for all students irrespective of their programmes of study. Also, the choice for Liberal/multidisciplinary studies departments became necessary because lecturers from these departments teach university required courses such as research methodology, communication skills, computer literacy skills etc. hence faculty members in these departments were considered to be in a better position to appreciate the growing need for the implementation of students' information literacy skills training programmes in their campuses. The faculty members from these departments were seen to be professionals who through their interaction with students across disciplines over the years had experienced different students' information seeking behaviours which would help them be in a better position to understand the challenges students face in seeking for appropriate information to support their academic works and thus share such experiences in support of the current study. Choice of faculty members as part of the population was because they handle students as teachers and are responsible for transforming them into independent lifelong learners. They as faculty (lecturers) were in a better position to explain the nature of students' information literacy requirements. They were in a position to better explain and provide information on how the library could collaborate with faculty to promote the teaching of students' information literacy in the Technical Universities.

The choice of the library professionals as part of the population was because, library professionals of senior member status within the settings of technical universities are considered to have the required knowledge and professional skills to design and teach information literacy skills courses at the Universities. Librarians of senior member status also have equivalent academic status as faculty members hence; they can intellectually collaborate

with faculty at same level. For the purpose of this study, the Senior Members in the various libraries consisted of the professionals who hold Post-Graduate Degrees in Library Studies or Information Studies. In all, the head librarians and their senior library staff were 16 comprising 4 head librarians, and 12 other senior members. The total number of the faculty members from the Liberal/Multidisciplinary Studies Departments of the four technical universities was seventy-six (76). In all, the total population of the study (i.e. faculty and librarians together) was ninety-two (92). Summary of the total population for the study is presented in the Table: 3.1 below.

Table 3.1: Population of the Study

<i>Tech. University</i>	<i>Librarians</i>	<i>Faculty</i>	<i>Sub-Total</i>	<i>Valid%</i>
<i>Accra</i>	4	16	20	21.7
<i>Koforidua</i>	5	22	27	29.4
<i>Kumasi</i>	5	23	28	30.4
<i>Ho</i>	2	15	17	18.5
<i>TOTAL</i>	16	76	92	100

Source : (Human Resource Departments of Technical Universities, 2016

The population of the research was ninety-two (92). The researcher considered all the population as the sample of the study because the researcher felt that the entire population of ninety-two (92) was manageable within the timeframe to achieve the objectives of the study. The researcher in the current study however did not use any sampling technique to select the respondents of the study. This is because the researcher used the entire population as the sample size. The researcher used census approach in the selection of the population for the study.

3.4 Data Collection Instruments

Instrumentation usually refers to the whole process of data collection. It involves not only the selection or design of the instrument but also the procedures and conditions under which the instruments will be administered. Here, several questions arise such as where, when, how and who will be collecting the data (Fraenkel and Wallen, 2003). In terms of instrumentation of the study, questionnaire and interview schedules were used to collect the data. The relevance of the combination of these two main instruments was to apply the concept and principles underlying mixed method research design that is the use of both qualitative (interview schedule) and questionnaire (quantitative). Researchers are given permission to use all of the tools of data collection available rather than being restricted to the types of data collection typically associated with qualitative research or quantitative research alone (Creswell, 2006).

3.4.1 Questionnaire

A questionnaire is basically a document containing a number of questions on a particular problem or issue (Kumekpor, 2002). As a method for data collection, the use of questionnaire is an efficient way to collect statistically quantifiable information. It is an efficient method in the sense that many respondents can be reached within a short space of time. It was used because of its low cost and the possibility of reaching respondents is much greater than with the other methods.

3.4.1.1 Design of Questionnaire

The questionnaire consisted of seven sections, designed in line with the variables or objectives of the research such as the. Section A was designed to collect biographical data about the respondents. Section B of the questionnaire contained questions that related to objective one, which was to assess respondents' understanding levels of information literacy. Section C of the questionnaire addressed objective two which sought to identify faculty's

perceptions of librarians and their attitudes towards partnering with librarians in IL related activities. Section D of the questionnaire also addressed the third objective which sought to identify factors that aid positive faculty-librarian collaboration, while Section E contained questions that addressed objective four which sought to identify possible barriers that could impede a successful IL implementation. In addition, Section F of the questionnaire addressed objective four which sought to explore the feasibility of faculty librarian collaboration. The last section (section G) of the questionnaire was designed in relation to objective six which sought to propose a formal IL plan for adoption by technical universities in Ghana.

3.4.2 Interview

Osuala (2005) indicates that an interview is a conversation carried out with the aim of obtaining certain specific information. Babbie (2005) also posits that an interview is a data collection encounter in which one person (an interviewer) asks questions of another (respondents) on specific issues under study. Interviews may be conducted face-to-face or by telephone. It is designed to gather valid and reliable information through the responses of the interviewee to a planned sequence of questions. The researcher used face-to-face and telephone process of interview for the head librarians and senior members working in the libraries in the various campuses. The face to-face process was prudent because, the presence of the interviewer generally decreased the habit of “Don’t know and No answers”. It also gave the opportunity to clarify certain questions in the questionnaire. The telephone interview was used as a convenient method for scattered respondents. Besides, the use of telephone interview was to ensure personal safety of the researcher in times of travelling to destinations of the respondents. Nonetheless there might have been some disadvantages such as bias and emotions from both interviewer and interviewee. Such possibility is advanced by Babbie, (2005) who posits that even though, there might be disadvantages such as bias and emotions from both interviewer and interviewee the advantages outweighs the disadvantages.

3.4.2.1 Design of Interview Schedules

Interviews may be conducted face-to-face or by telephone. Osuala (2005) argues that an interview is a conversation carried out with the aim of obtaining certain specific information. It is designed to gather valid and reliable information through the responses of the interviewee to a planned sequence of questions. The interview was conducted with only the Heads of the various libraries and their senior members working in such libraries of the various campuses under discussion. With reference to the above, structured interview schedule was used purposively to solicit information from the Librarians. This was conducted to verify specific information that the questionnaire might not have dealt with satisfactorily.

The interviews covered a brief introduction with respect to qualification, number of years in service and present status. The interview also sought to elicit the views of respondents on their understanding of information literacy and how it can be actualized with collaborative efforts of librarians and faculty.

3.5 Data Collection Procedure

Method of data collection was through both primary and secondary sources. Data was collected using questionnaire and interview schedules. The questionnaire and interview schedules were to collect primary data while consultation and reference to textbooks, journal articles, reports, bulletins and related works on information literacy and faculty librarian collaboration produced the secondary data. The questionnaires were distributed to respondents by the researcher himself, and in some cases distributed through the help of some library assistants from the various campuses of technical universities. Interview schedules were personally conducted by the researcher in all cases at the various campuses of the technical universities during working hours. Some respondents had their questionnaire sent to them and received by mails while some interview schedules were conducted through telephone calls. In some cases, the researcher booked appointments with lecturers to

administer questionnaire to them individually. However, some of the lectures were not immediately available. The questionnaires were therefore left with the head librarians, who detailed some staff to administer the questionnaire on my behalf. The questionnaires were later collected by the detailed staff, and given to the head librarians who then forwarded them to the researcher by courier services. All the interviews were summarized, and relevant responses were incorporated into the analysis where applicable. This was meant to either confirm or contrast, responses gathered through the questionnaire.

3.6 Data Analysis and Presentation of Results

The data collected through the administration of the questionnaire was analyzed with the use of Statistical Package for Social Sciences (SPSS). The study used the 20 version of the SPSS. Tables, charts and histogram of the result of the study were used to display and interpret the results of the study. The SPSS was used because it is easier to use to define variables, input data and generate outputs or reports. Variables were coded in the variable view and answered questionnaires entered in the data view to generate the required reports. Also, qualitative content analysis was used to analyze the information obtained from interviews conducted for the various library professionals of the technical universities. Results were organized according to the objectives of the research. Quantitative and qualitative analysis were used to present the results.

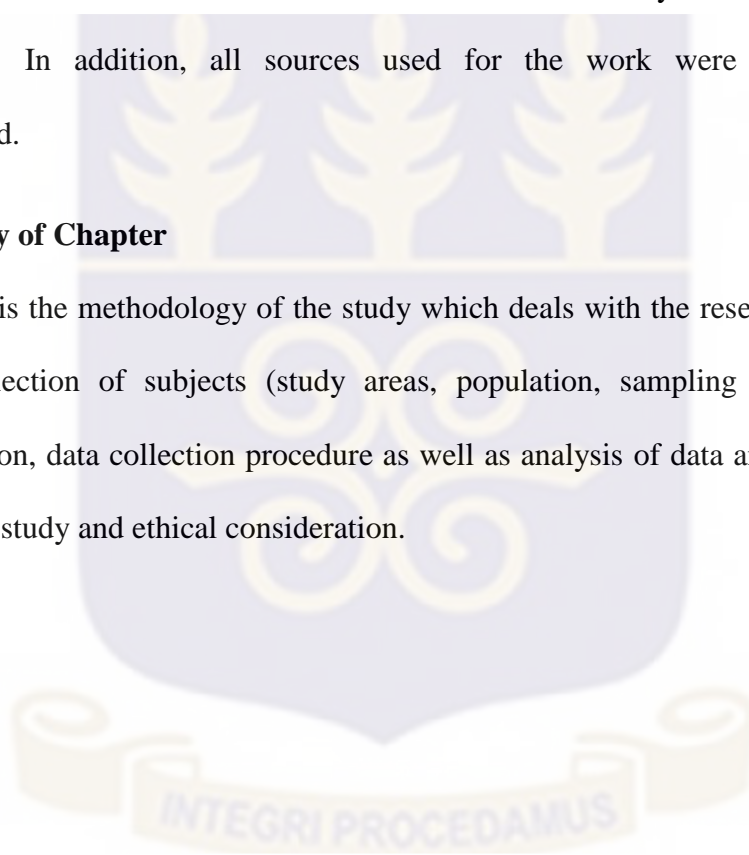
3.7 Ethical Considerations

In the view of Fraenkel and Wallen (2003), ethical issues in research are considered as behaviour that conforms to standards of conducting a research. They indicate that, research should protect the subjects of the research study from any risk, be it emotional, psychological or physical. According to Babbie (2005), ethical issues in research are defined as “behaviour that conforms to standards of conducting a research”. It means that, research should protect the subjects of the research study from any risk, be it emotional, psychological or physical.

With this principle in mind, the researcher sought for introductory letters from the Head of Department of Information Studies, Legon and sent them to the Heads of the selected Technical Universities and their libraries to formally introduce him to the institutions. The researcher took efforts to explain that the intention of the study was for academic work and under no circumstance would the information given be used otherwise. All respondents were assured of safety and confidentiality. Apart from that, the researcher sought their consent and made them aware that they were at liberty to provide information and not under duress. The researcher also conducted the research in line with the University of Ghana Code of Conduct for research. In addition, all sources used for the work were duly identified and acknowledged.

3.8 Summary of Chapter

This chapter is the methodology of the study which deals with the research design, selection of cases, selection of subjects (study areas, population, sampling size and technique), instrumentation, data collection procedure as well as analysis of data and presentation of the results of the study and ethical consideration.



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CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESULTS

4.1 Introduction

This chapter presents the results of analysis of data. Statistical Package for Social Sciences (SPSS) software version 20 was used to analyze quantitative data. MS Excel computer application was also used to draw figures to represent the data after the SPSS was used to analyze quantitative data. On the other hand, qualitative content analysis was used to analyze and present data collected from the interviews conducted. The results from the quantitative data analysis have been presented in tables and figures showing the frequencies and corresponding percentages. The main focus of the study was to assess the feasibility of designing an IL plan for integration into the normal academic curricular of Technical Universities in Ghana through the collaborative efforts of both librarians and faculty.

The chapter is presented in two (2) main parts: part one deals with the analysis of results from the questionnaire distributed to respondents of the study while the part two deals with the analysis of results from the interviews conducted. The questionnaire consisted of seven (7) sections, designed in line with variables such as background information of respondents, faculty understanding levels of the concept IL, perceptions and attitudes of faculty in partnering librarians, factors influencing faculty-librarian collaboration in IL, barriers/challenges, feasibility of faculty librarian collaboration, design and incorporation of an information literacy plan into the regular education curricula of technical universities in Ghana.

4.2 Analysis of Data from Distributed Questionnaire

The questionnaire distributed in the selected Technical Universities were completed and returned with the help of some library staff from the respective campuses. Some respondents

who received questionnaire failed to complete and returned them. The statistics of the distributed and received questionnaire are illustrated in Table 4.1 below.

Table 4.1: Summary of distributed Questionnaire

Total No.	Number	Number	Percentage
Distributed	Received	Missing	Received
76	66	10	87%

Source: field data, 2017.

Out of 76 copies of questionnaire distributed, 66 copies were retrieved, completely answered, representing a response rate of 87%. With response rate, Babbie (2005) points out that a response rate of at least fifty percent (50%) is adequate, a rate of sixty percent (60%) is good whilst that of seventy percent (70%) is very good for analysis and reporting. With the summary above, the response rate of 87% falls within accepted domain as proposed by Babbie (2005).

4.2.1 Biographical Information of Respondents

As part of the data collection, information about the biographical details of respondents was gathered. The outcomes were however analyzed and summarized in Table 4.2 below.

Table 4.2: Biographical Information of Faculty and Library Professionals

Respondents (n=66)	SELECTED TECHNICAL UNIVERSITIES									
	KTU		ATU		KSTU		HTU		Total fx	Valid%
	fx	%	fx	%	fx	%	fx	%		
Gender of Respondents										
Male	17	72%	12	80%	16	89%	9	81%	54	81%
Female	5	22%	3	20%	2	11%	2	19%	12	19%
Total	22	100%	15	100%	18	100%	11	100%	66	100%
Age Distribution										
20-30										
31-40	7	35%	5	25%	5	25%	3	15%	20	30%
41-50	13	42%	3	10.7%	7	25%	5	18%	28	42%
51-60	4	36%	3	27.2%	5	45%	1	9.0%	11	17%
	3	43%	1	14%	1	14%	2	29%	7	11%
Academic Status/Rank										
Senior Lecturer	4	57%	2	28%	1	14%	0	0.0%	7	11%
Lecturer	9	50%	4	22%	4	22%	1	5.0%	18	27%
Snr.Ast. Lecturer	4	18%	3	13%	8	36%	7	32%	22	33%
Asst.Lecturer	2	13.0%	5	33%	5	33.0%	3	20%	15	22%
Instructors	3	75%	0	0.0%	0	0.0%	1	25%	4	6%
Total	22		15		18		11	100%	66	100%
Academic Qualification										
PhD	3	60%	0	0.0%	2	40%	0	0.0%	5	7.6%
MPhil	13	39.0%	5	15.1%	10	30.0%	5	15%	33	50.0%
MA/MSc/MBA	4	16.6%	9	36%	6	24%	5	21%	24	36.4%
Degree	2	50%	1	25%	0	0.0%	1	25%	4	6.0%
Total	22		15		18		11	100%	66	100%

Source: Field data, 2017

4.2.1.1 Gender of Respondents

Information on gender of faculty was considered vital in relation to the professional development and career advancement of the teaching personnel, because of the imminent information the researcher wished to find out, with reference to gender parity of the human resource of the Technical Universities. Respondents were asked to indicate their gender in order to determine their gender distribution. From Table 4.2, out of the 66 respondents, 54 (81%) were males and 12(19%) were females. In a simple comparative analysis the results showed that majority of the faculty members in the selected Technical Universities in Ghana were males.

4.2.1.2 Age Distribution of Respondents.

Respondents were asked to indicate their ages in ranges that were provided. The main aim of the study was not to determine the age distribution of the respondents. However evidence of age distribution among respondents was an important element for analysis. Information on age distribution is presented in Table 4.2. It was seen from the findings that out of the total respondents of 66, 20, representing 30% were between the ages of 20-30, 28, representing 43% were between the ages 30-40, 11, representing 17% were between the ages 40-50, 7 representing 11% were also aged between 50 -60. This portrays that, majority of the respondents aged between 30- 40, representing 43%.

4.2.1.3 Current Positions of Respondents

The researcher sought to find out the current academic status of respondents (faculty) in their various institutions. As represented in table 4.2, out of the total respondents of 66, 7 (11%) were senior lecturers, 18 (27%) were lecturers, 22 (33%) were senior Assistant lecturers, 15 (23%) were Assistant Lecturers, while 4 (6%) were instructors. This shows that, majority of the respondents (i.e. 22 representing 33%) were Senior Assistant lectures.

4.2.1.4 Educational Qualifications of Respondents

Educational qualification became necessary because the researcher wanted to know the academic levels of the staff in the selected technical universities in Ghana. From the results as seen in table 4.2, out of the total respondents of 66, only 4 (6%) were first degree holders, 5(7.6%) were Doctor of Philosophy (PhD) holders, 24 (36.4%) were MA/MSc holders, while 33(50%) were MPhil holders. Though all faculty members had some higher level of educational qualification, majority of the respondents fell within the Master of Philosophy (MPhil) group. This suggests that faculty of the newly converted Technical Universities in Ghana are well grounded in academic research works. Also, judging from the higher, educational levels of faculty, it could be deduced that they were aware of the functions of

librarians on their campuses and the importance of transforming students into independent information seekers and users.

4.2.2 Faculty's Level of Understanding IL Concept

The first objective of the study sought to assess participants' understandings of information literacy concept. It was relevant for the study to identify faculty's understanding levels of IL of which they are major stakeholders and would be expected to contribute towards its introduction in technical universities in Ghana.

4.2.2.1 Faculty's Awareness levels of IL

To be able to determine faculty levels of understanding of information literacy, it was imperative to identify faculty's awareness levels about the term IL. Respondents were therefore asked to identify how well or less aware they were of the term information literacy. The results were gathered and analyzed, and represented in table 4.3

Table 4.3: Faculty's levels of Awareness of Information Literacy

Level of Awareness	Frequency	Valid %
Well Aware	36	54.5%
Moderately Aware	19	28.8%
Less Aware	11	16.7%
Not Aware	0	0.0%
Total	66	100

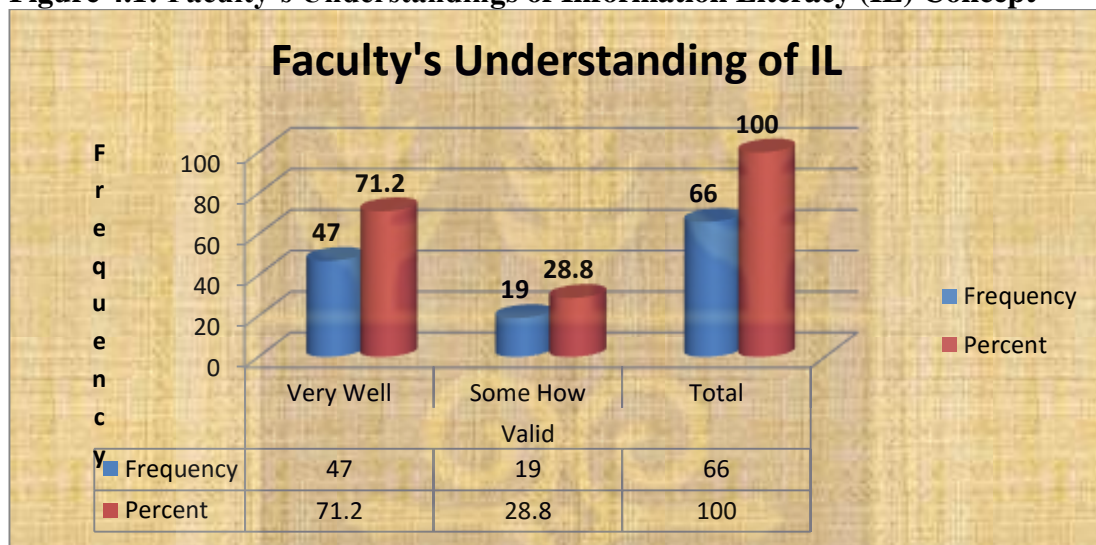
Source: field data, 2017

The results showed that 36 of the respondents, representing 54.5% indicated that they were well aware of the term information literacy, 19(28.8%) indicated that they were moderately aware, 11(16.7%) were less Aware. The findings implied that majority of the respondents' awareness levels of the concept information literacy were high.

4.2.2.2 Faculty’s Understanding of IL

Respondents were asked to indicate the degree to which they understood the concept “information literacy (IL)”. The results were collated from among 66 the respondents. Among the responses were those who felt they understood IL very well, those who felt they understood it moderately and those who felt they did not. The results were analyzed and presented in figure 4.1 below.

Figure 4.1: Faculty’s Understandings of Information Literacy (IL) Concept

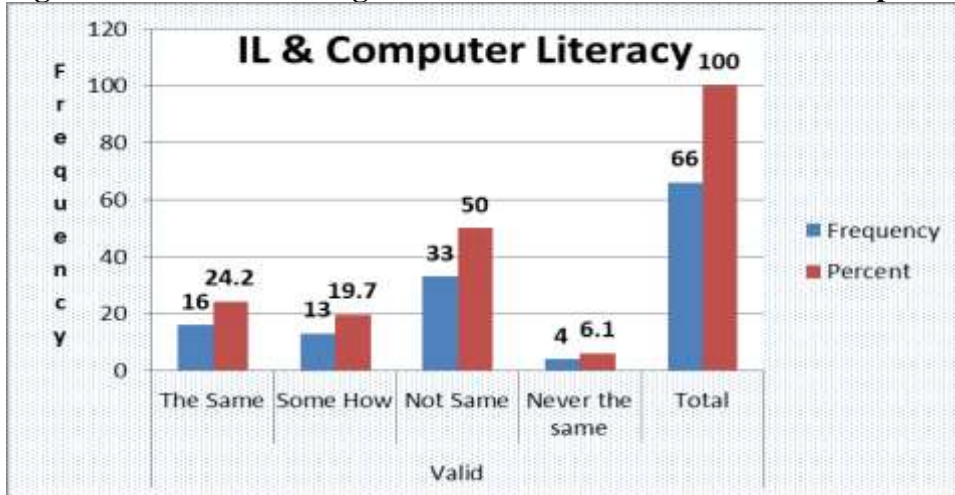


Source: field data, 2017.

From figure 4.1, 47(71.2%) of the respondents indicated that they understood IL very well, while 19(28.8%) respondents identified that they somehow understood the concept IL. The results indicated that the larger proportion of faculty members in technical universities in Ghana have basic understanding of the concept of IL.

4.2.2.3 Understanding the Differences between IL and Computer Literacy

In a similar effort to assess faculty understanding of IL, the study also sought to find out whether faculty understood students’ IL skills differently from their computer literacy skills. Respondents were therefore asked to indicate how related the two terms were. The results are presented in figure 4.2 below

Figure 4.2: Understanding the Differences between IL and Computer Literacy

Source: field data, 2017.

From the results in figure 4.2, it was realized that 16(24.2%) participants of the study saw IL to be the same as Computer literacy, 13(19.7%) saw them to be somehow the same. However, a majority response rate of 33(50%) identified them to be different while 4(6.1%) of the respondents saw the two concepts as never the same. The results implied that majority of the faculty members understood IL to be a different concept from Computer literacy.

4.2.2.4 Definition of Information Literacy

In an effort to assess faculty's level of understanding IL, it was prudent to establish faculty's ability to explain the term IL. Respondents were therefore provided with some selected statements by the researcher and asked to indicate how well or not each of the provided statements in their view explained the meaning of IL. After the results were gathered, it was realized that three statements stood out as the most recognized statements that in faculty's views explained the meaning of IL. The various explanations that represented the meaning of IL according to the views of the respondents were analyzed and represented in table 4.4 below.

Table 4.4: Faculty's Definition of IL

Definition of IL	n(66)	Frequency	Valid%
1. Ability to gather and used needed information ethically	66	46	70%
2. Competencies in applying relevant technology to meet one's information needs	66	35	53.0%
3. Understanding information value and using information to create new knowledge	66	48	72%

Source: field data, 2017.

As the results showed in table 4.4, three different but related definitions were identified to represent the meaning of the term IL by the respondents. The results showed that 46(70%) of the 66 respondents identified that IL meant “the ability to gather and used needed information ethically”. Also, 35(53%) out of the total respondents explained IL to mean “one’s competencies in applying relevant technology to meet one’s information needs. In addition, 48(72%) of the same respondents also agreed that IL stood for the understanding of information value and the use of information to create new knowledge. As implied, the results meant that there was an overwhelming endorsement of the various explanations of the meaning of IL provided by the researcher. The results also implied that majority of faculty had appreciable understandings of the meaning of IL.

4.2.3 Faculty's Perceptions/Attitudes in Partnering Librarians in IL Programmes

The researcher also sought to identify faculty's perceptions of librarians since such perceptions have the tendency to influence faculty's attitudes towards collaboration with librarians. The researcher likewise, sought to identify the attitudes of faculty. This was necessary because the researcher wanted to establish whether such attitudes would have bearing on faculty's willingness to partner their librarians in IL activities. The respondents' views were assessed based on the following headings.

4.2.3.1 Faculty's Perceived Views of Librarians' Academic Status

The researcher also sought to find out faculty's perceived views of librarians' academic status because the researcher wanted to establish whether faculty considered librarians working in their institutions as academics or otherwise. In line with that, faculty were asked to identify whether they considered librarians as academics, administrators, professionals, or both professionals and academics. The results on this subject were presented in Table: 4.5

Table 4.5: Faculty's views of librarians as Academics or Otherwise

Status	Frequency	Valid %
Academics	34	51.5%
Administrators	17	25.8%
Professionals	4	6.1%
Academics & Professionals	11	16.6%
Total	66	100

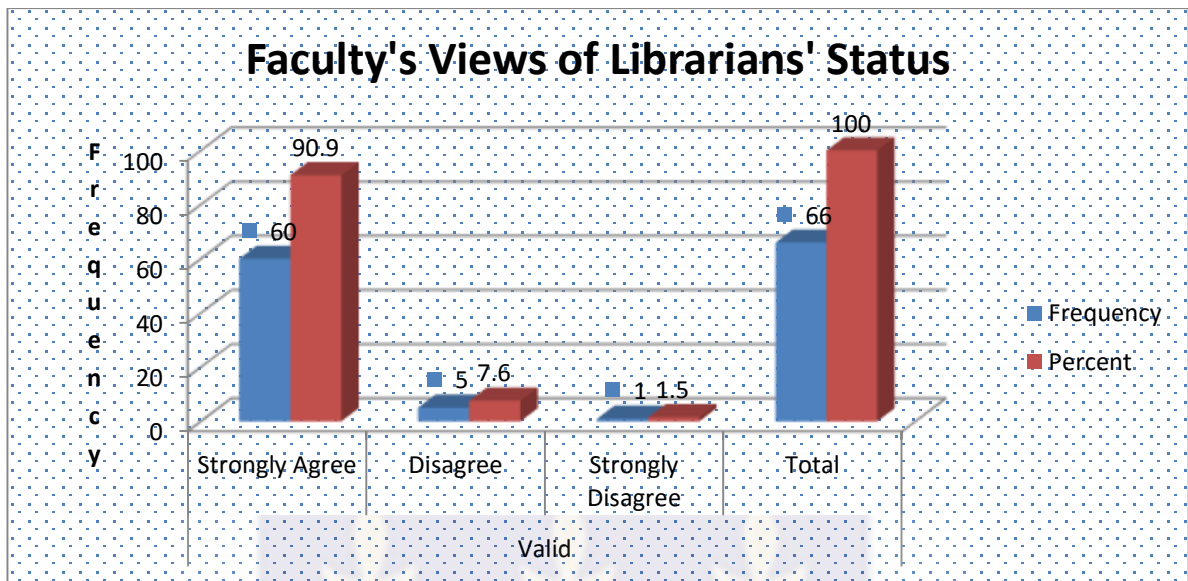
Source: field date, 2017

From the results shown in Table 4.5, 34(51.5%) of the respondents considered librarians as academics, 17(25.8%) saw librarians as administrators, 4(6.1%) considered their librarians as professionals while 11(16.6%) of the respondents saw their librarians as both academics as well as professionals. The findings implied that the general view was that librarians are seen as academics in the selected technical universities.

4.2.3.2 Faculty's Perceived Views of Librarians' as their Academic Equals

The views of faculty were sought on whether faculty considered librarians working in their institutions as their academic equals. They were asked to indicate their levels of agreements or disagreement on whether librarians on their various campuses were their academic equals or not. The views were collated and presented in figure 4.3

Figure 4.3: Faculty’s Views of Librarians as Academic Equals

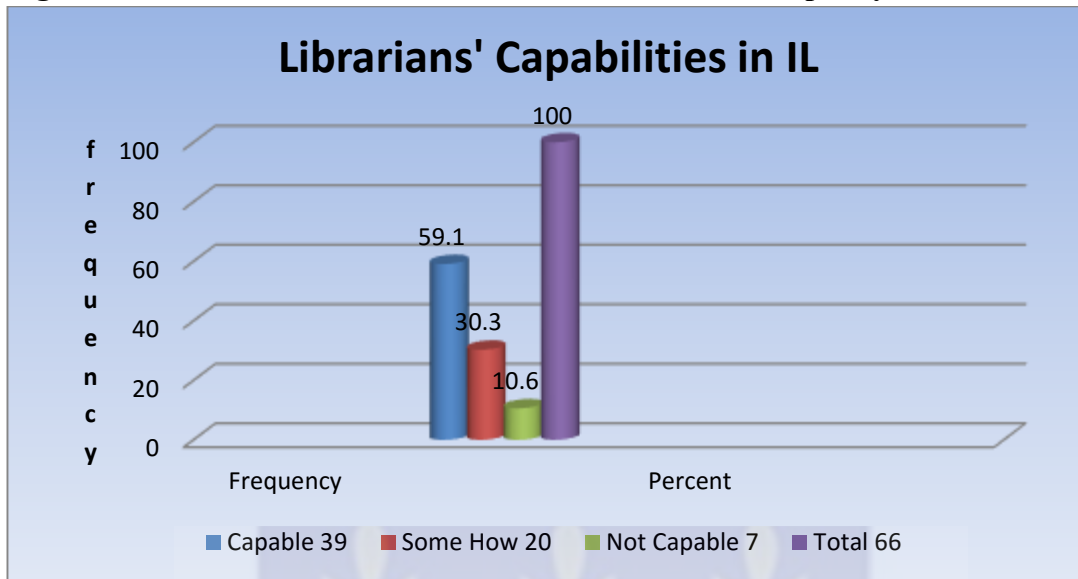


Source: field data, 2017

The findings presented in figure 4.3 revealed that 60(90.9%) of respondents Strongly Agreed, 5(7.6%) disagreed and 1(1.5%) strongly disagreed. The findings implied that faculty of the selected technical universities considered their librarians as their academic equals.

4.2.3.3 Perceived Views of Faculty on Librarians’ Intellectual Capacity in IL

The researcher sought to identify faculty’s perceived views about the intellectual capacity of librarians to handle IL course as instructors. Faculty were asked to indicate whether library professionals were capable, somehow capable, or not capable to act as facilitators and instructors of IL instructions in the selected institutions. The results were analyzed and presented in figure

Figure 4.4: Perceived Views on Librarians' Intellectual Capacity in IL

Source: field data, 2017.

The results from figure 4.4 indicated that 39(59.1%) of respondents indicated that library professionals were capable of handling information literacy course as instructors. 20 (30.3%) saw librarians to be somehow capable, while 7(10.6%) indicated that librarians were not capable of handling IL courses as course instructors. The results in general terms implied that faculty recognized librarians as worthy academics to teach information literacy courses.

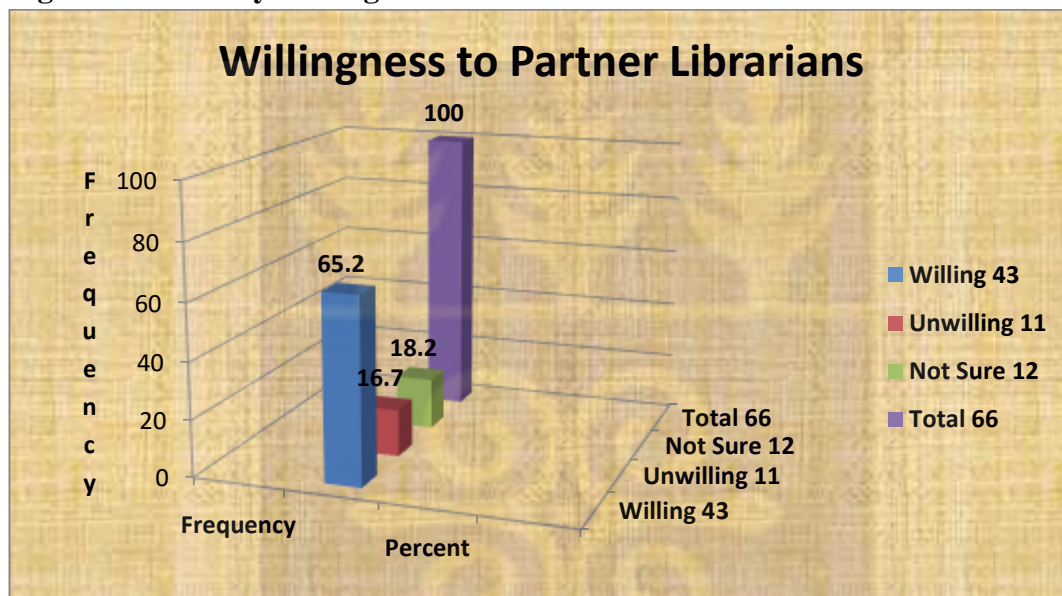
4.2.3.4 Attitudes of Faculty in Partnering Librarians in IL Programmes

Attitudes of faculty may affect their willingness to interact with librarians in implementing IL programmes. Positive faculty attitudes towards engaging their librarians may influence their interest towards collaborating with librarians in IL instructions programmes. The researcher therefore sought to identify whether faculty in the selected technical universities have positive or negative attitudes towards collaboration with their librarians in IL programmes by identifying their willingness or unwillingness levels.

4.2.3.4.1 Faculty Willingness to Partner Librarians in IL

Views were also sought to determine faculty’s willingness towards collaborating with librarians in rolling out IL programmes in their institutions. This became necessary because the willingness of faculty towards collaborating with librarians will have a repercussion on a successful IL programme. The views on levels of willingness or unwillingness of faculty to engage in a partnership with librarians are presented in figure 4.5 below

Figure 4.5: Faculty Willingness to Partner Librarians in IL



Source: field data, 2017

The results from Figure 4.5 indicated the following results. Willingness to partner librarians was 43(65.2%), unwilling 11(16.7%), not sure12 (18.2%). The results demonstrated that a greater number of faculty were willing to collaborate with their librarians. It is therefore, implied that faculty had positive attitude toward collaborating or partnering librarians in IL programmes.

4.2.4 Factors that Influence Effective Faculty-Librarian Collaboration in IL

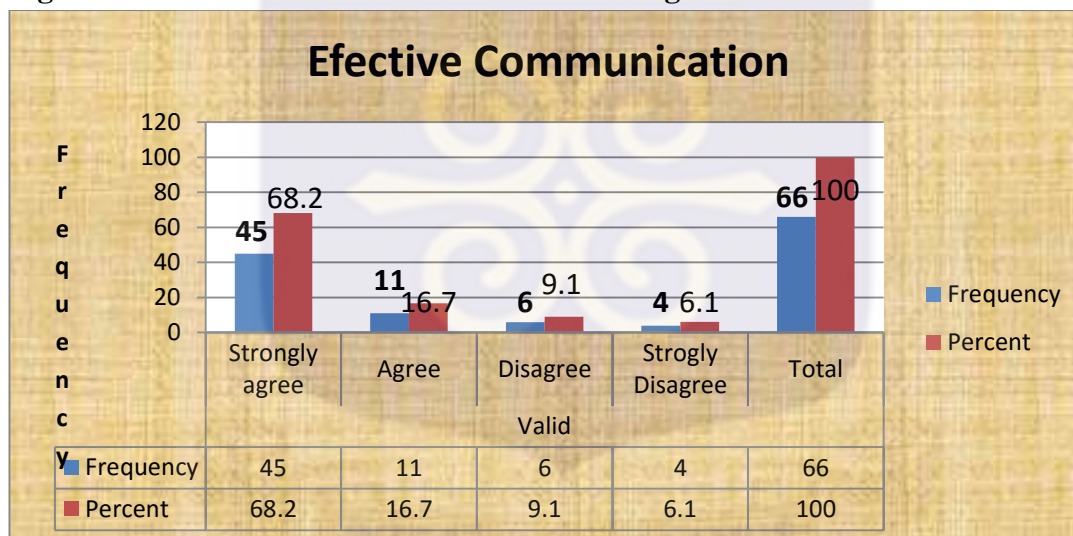
Faculty members were asked to indicate factors that in their view would determine effective faculty-librarians collaboration in planning and designing formal IL programmes for their

students. Faculty members were given a list of options presented by the researcher. The options given were: regular communication, shared objective/mutual interest, positive perceptions/attitudes, motivation/commitment, trust and collegiality (i.e. sense of equality in status between librarians and faculty). On each option, respondents were asked to indicate their level agreement or disagreement. The various degrees of agreement or disagreement ranged from “Strongly agree, Agree, Disagree, and strongly disagreed”.

4.2.4.1 Effective Communication

The study sought to determine whether the effective engagement in terms of communication between faculty and librarians have the potential to positively influence partnership in IL activities. The findings were indicated in figure 4.6

Figure 4.6: Effective Communication Influencing Collaboration in IL



Source: field data, 2017.

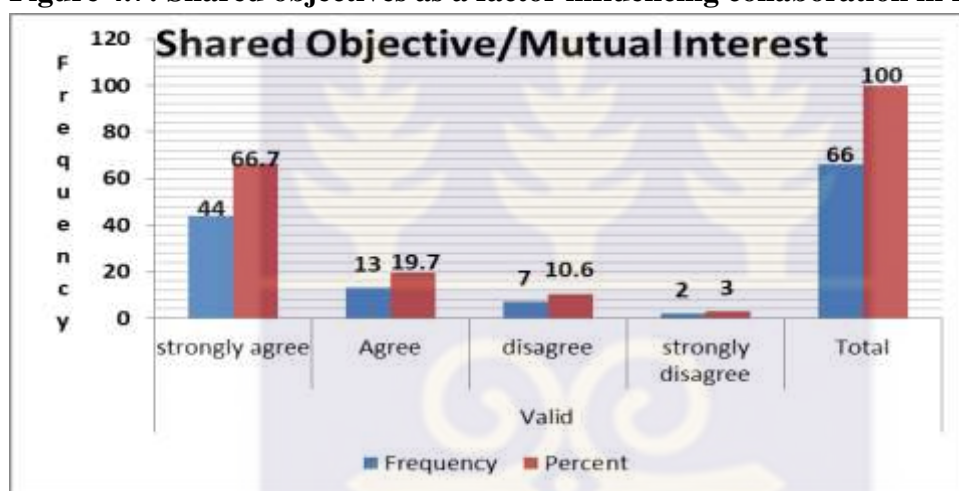
The results from Figure 4.6 indicated that, 45 (68.2%) respondents strongly agreed, 11 (16.7%) agreed, 6(9.1%) disagreed, while 4 (6.1%) respondents strongly disagreed that effective communication was a factor that influence faculty-librarian collaboration in IL activities. Generally, the findings indicated that majority of the respondents strongly agreed.

The findings revealed that communication is an essential tool in any successful faculty librarian interactions in relations to IL.

4.2.4.2 Shared Objectives/Mutual Goals

The study sought to determine whether knowledge of shared interest or mutual goals in enhancing students' IL skills will positively influence faculty-librarian partnership in IL activities. The findings are presented in figure 4.7

Figure 4.7: Shared objectives as a factor influencing collaboration in IL



Source: field data, 2017.

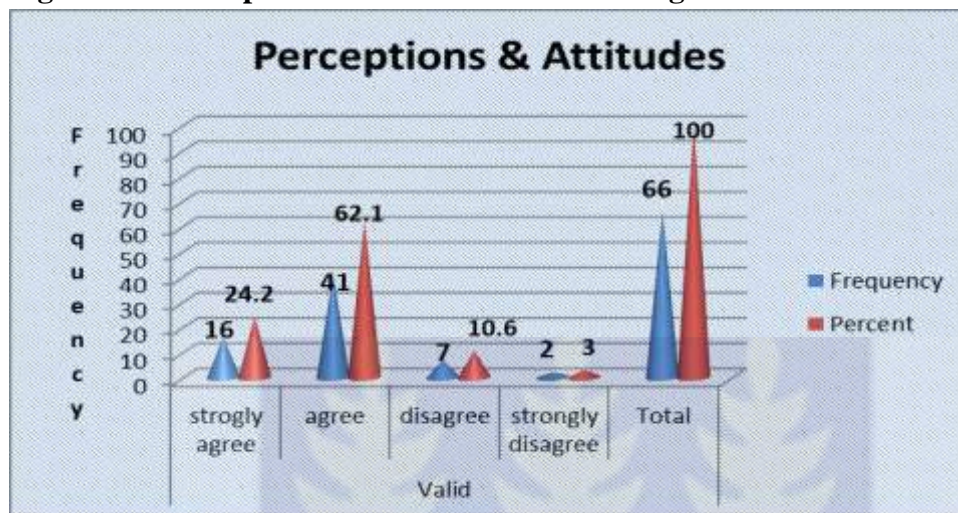
As shown in Figure 4.7, the findings revealed that 44(66.7%) of the respondents strongly agreed that librarians and faculty will collaborate in IL programmes based on their sense of shared interest in promoting it, 13 (19.7%) agreed, 7(10.6%) disagreed, and 2(3.0%) strongly disagreed. The results implied that respondents strongly agreed that knowledge of shared objectives and commonness of purpose in enhancing students' IL skills will influence librarians and faculty to team up in rolling out IL projects on their campuses.

4.2.4.3 Perceptions and Attitudes

Perceptions of faculty may affect their interaction with librarians. Faculty perceptions of librarians' status and intellectual capabilities may affect their attitudes towards engaging librarians in executing IL instructions in their institutions. The study therefore sought to

identify whether faculty perceptions and attitudes affects collaboration in IL programmes with librarians. The views were analyzed and presented in figure 4.8.

Figure 4.8: Perceptions and Attitudes Influencing Collaboration in IL

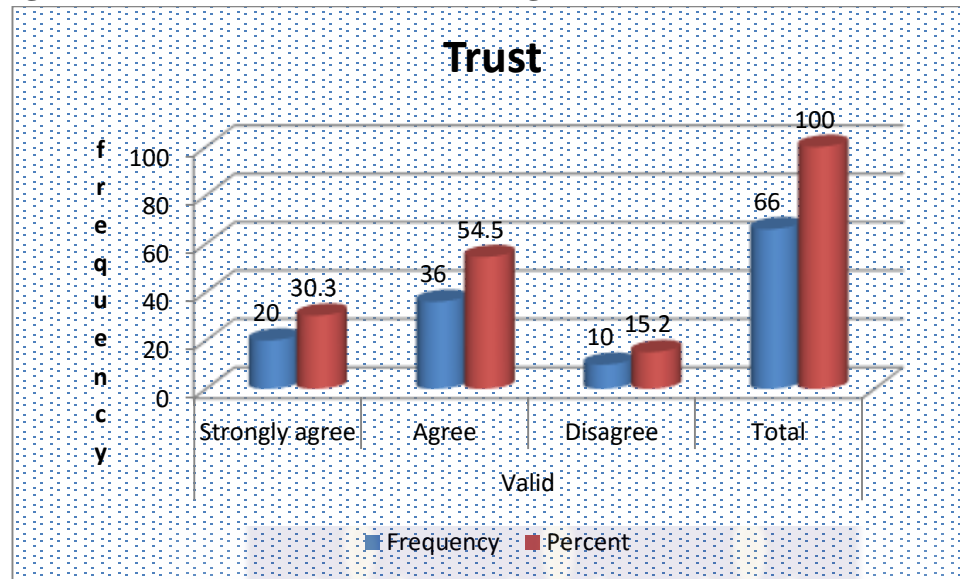


Source: field data, 2017.

From the results in Figure 4.8, 16 (24.2%) respondents strongly agreed, 41 (62.1%) agreed, 7(10.6%) disagreed, while 2(3%) respondents strongly disagreed that faculty perceptions of librarians and faculty attitudes towards collaborating with librarians will influence faculty-librarian collaboration in IL activities. Generally, the findings indicated that majority of the respondents strongly agreed that perceptions and attitudes of faculty will influence faculty-librarian collaboration in IL activities.

4.2.4.4 Trust as a Factor Influencing Faculty Librarian Collaboration in IL Programmes

Views were solicited as to whether faculty’s Trust of librarians’ to perform positively or deliver professionally will influence their (faculty) decision to engage librarians in IL related activities in the selected institutions. Faculty members were therefore asked to indicated their degree of acceptance or not. The views of faculty were analyzed and presented in figure 4.9.

Figure 4.9: Trust as a factor influencing collaboration in IL

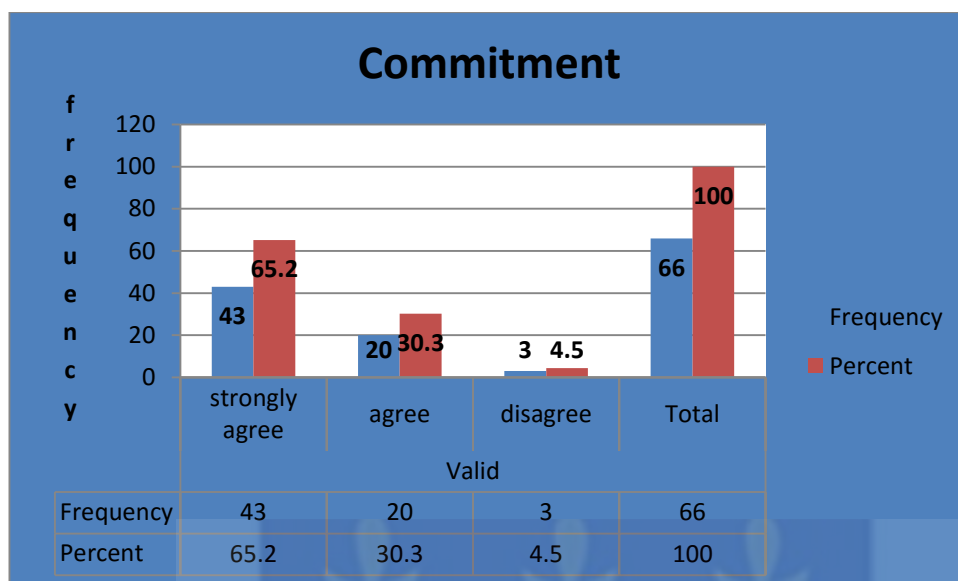
Source: field data, 2017.

As revealed in the results from Figure 4.9, 20(30.3%) of the respondents strongly agreed, 36(54.5%) agreed, while 10(15.2%) of the respondents disagreed that trust is a factor capable of influencing faculty librarian collaboration. The results implied that respondents saw trust as an influencing factor faculty librarian partnership in IL.

4.2.4.5 Commitment as a factor influencing faculty-librarian Collaboration in IL

Views were also solicited on whether commitment of faculty towards collaboration with librarians and towards the course of enhancing students' IL skills will influence faculty to engage their librarians in IL activities in the selected institutions. Faculty were therefore asked to indicate their degree to which they accepted commitment or not as a factor. The views were analyzed and presented in figure 4.10 below.

Figure 4.10 Commitment as a factor influencing faculty-librarian Collaboration in IL



Source: field data, 2017.

From the results shown in Figure 4.10, it was revealed that 43 (65.2%) respondents strongly agreed, 20 (30.3%) agreed, while 3(4.5%) disagreed that faculty librarian commitment will influence their level willingness to collaborate in IL activities. Generally, the findings indicated that majority of the respondents saw commitment as a tool for successful faculty librarian interactions in IL.

4.2.5 Barriers/Challenges to Collaborative Activities between Faculty and Librarians

The study also sought to point out possible barriers/challenges that may impede successful faculty librarian collaboration in students' IL projects. Such barriers and challenges could have negative repercussion on the development and introduction of an IL plan through the collaborated efforts of both faculty and librarians.

4.2.5.1 Anticipated Challenges in Faculty Librarian Collaboration in IL

Respondents were asked to indicate whether they expected any challenges or barriers that are likely to impede the success of faculty-librarian collaboration in integrating IL programme in the selected technical universities as part of the normal curricula of teaching and learning. The views from the respondents were collated and presented in Table 4.6 below.

Table 4.6: Views on Possible Challenges in Faculty Librarian Collaboration in Students' IL

Views on Challenges	Frequency	Valid %
Yes	53	80.3
No	3	4.5
No Idea	10	15.2
Total	66	100

Source: field data, 2017

As the results indicated in Table 4.6, 53(80.3%) of the respondents said Yes, meaning they anticipated challenges, 3(4.5%) said No, meaning, they did not anticipate any challenges while 10(15.2%) said they did not have any Idea of whether there will be challenges or not. The results implied that majority of the respondents expect likely challenges during the collaboration in IL activities between librarians and faculty.

4.2.5.2 Specific Challenges/Barriers of Faculty-Librarian Collaboration in Students' IL

The participants were also asked to identify specific challenges/barriers to faculty-librarian collaboration in IL activities according to their own understandings. The results were analyzed and presented in Table 4.7 below.

Table 4.7: Specific Challenges/Barriers of Faculty-Librarian Collaboration in Students' IL

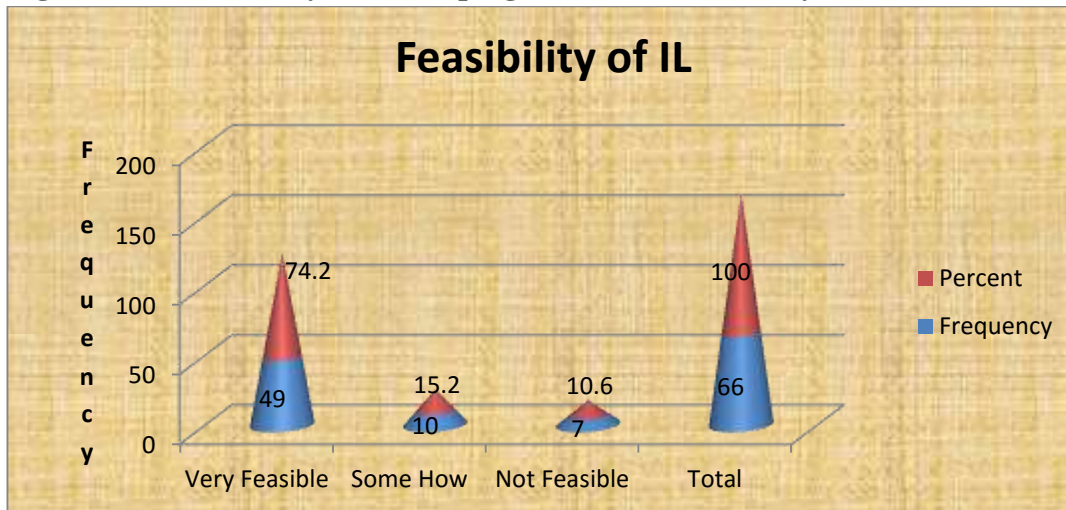
Barriers and Challenges	(n= 66)	Frequency	Valid Percent
Inadequate Resources	66	63	95.5%
Feeling of Lack of Time	66	59	89.4%
Negative Attitudes/perceptions	66	58	87.9%
Ineffective Communication	66	21	31.8%
Lack of Commitment	66	15	22.7%
Lack of a coordinating body	66	11	16.7%

Source: field data, 2017 (multiple responses were allowed)

It can be seen from the results in Table 4.7 that out of 66 respondents, 63 of them representing (95.5%) indicated that the provision of inadequate resources was a challenge or a barrier. Also, 59 of the same respondents representing 89.4% indicated that feeling of lack of time to collaborate with librarians in IL related programmes was a barrier. In addition to that, 58 respondents, representing 87.9% chose negative attitudes/perceptions. Furthermore, 21 (31.8%) of respondents also indicated that ineffective communication between librarians and faculty was a barrier. Also, 15 respondents representing 22.7% indicated that “feeling of lack of commitment” by faculty to engage librarians was a barrier, and lack of a central body to coordinate faculty librarians’ collaboration in IL related projects was identified by 11(16.7%) respondents.

4.2.6 Feasibility of Collaborating to Integrate Information Literacy in the Curricula

Another study objective was to explore the feasibility of designing and implementing an IL plan through the collaborative efforts of both faculty and librarians. In line with that participants of the study were asked to indicate their degree of acceptance in the feasibility of faculty-librarian collaborating to develop and implement IL course of study in Technical Universities. The results were presented in Figure 4.11.

Figure 4.11: Feasibility of Developing Information Literacy Plan

Source: field data, 2017.

The results in Figure 4.11 showed that 49 respondents representing 74.2% agreed that IL programme was Very feasible to be developed and implemented through the collaborative effort of faculty and librarians. Also, 10 (15.2%) saw it to be somehow feasible, while 7 (10.6%) saw the IL plan by faculty and librarians as not feasible. The result therefore meant that the respondents generally saw it to be a feasible programme to synergize efforts of both faculty and librarians in designing and implementing an IL plan in Technical Universities.

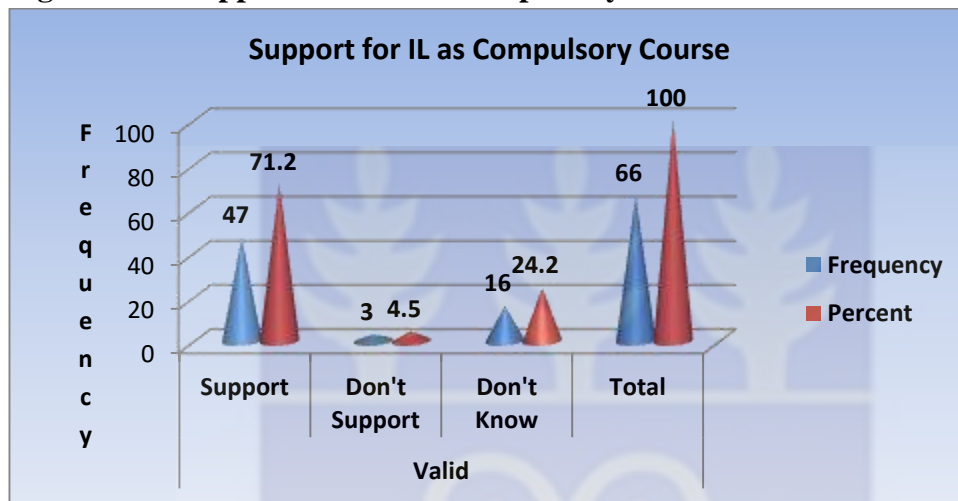
4.2.7 Proposing Formal IL Course for Inclusion in the Curriculum

A major objective by the researcher was to propose the adoption of a formal IL programme of study in Technical Universities. This programme should be adopted and incorporated into the normal academic curricula of the institutions. In line with such objective the researcher sought to identify the level of faculty support, reasons faculty will support or not support the programme. The objective was also to identify the programme content, targeted students and levels of such students, and based on the outcomes; propose the adoption of such programme by technical universities in Ghana.

4.2.7.1 Faculty Support for Information Literacy as a Compulsory Course

It was seen as imperative to identify whether faculty will support an initiative to introduce IL programme into normal curricula as a compulsory course (University Required Course) of study for all students. Participants were therefore asked to indicate their level of support for IL as a compulsory course. The results are presented in Figure 4.12.

Figure 4.12: Support for IL as a Compulsory Course



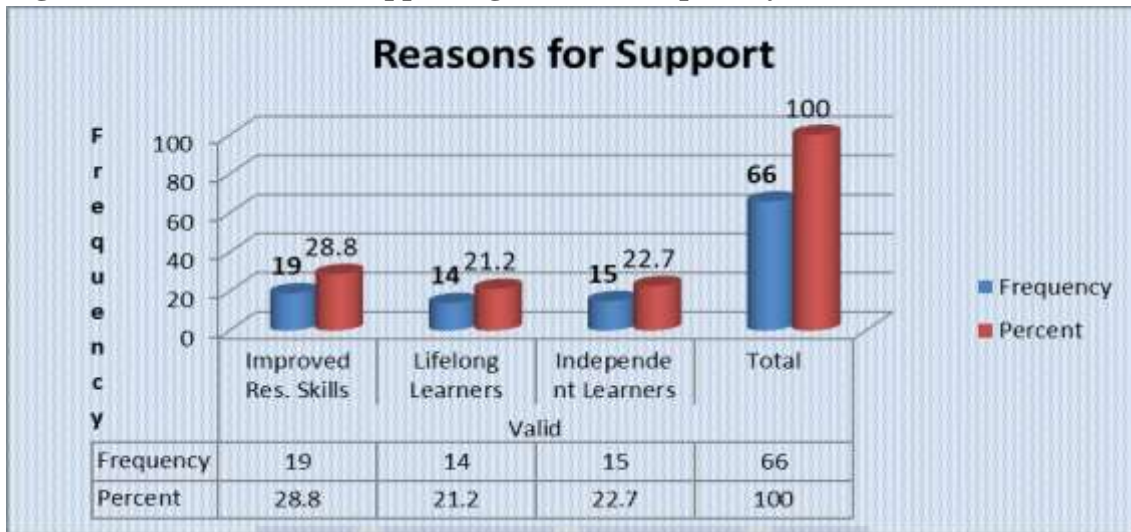
Source: field data, 2017

As revealed by the results presented in figure 4.12, 47(71.2%) of the respondents said they supported the proposal to introduce IL as a compulsory course of study. Also, 3(4.5%) respondents indicated that they did not support the idea, and 16(24.2%) rather stated that they did not know. It could be concluded that per the results, there was strong support on the ground for IL programmes as a compulsory programme for all students.

4.2.7.2 Reasons for Supporting Introduction of IL Course

Views were also solicited on the reasons why respondents will support the introduction of IL training courses in Technical Universities. The respondents were asked to indicate any particular reasons. The views from the respondents were gathered and represented in Figure 4.13 below.

Figure 4.13: Reasons for Supporting IL as a Compulsory Course



Source: field data, 2017.

As presented in Figure 4.13, 19(28.8%) of the respondents supported the introduction of IL because they believed it would improve research skills of students. Also, 14(21.2%) supported IL introduction because it could help transform students into lifelong learners, while 15(22.7%) believed IL course would transform students and make them independent information seekers.

4.2.7.3 Views not Supporting Introduction of Formal IL Course

In as much as a bigger proportion of respondents supported the proposal to introduce IL as a compulsory course of study for all students, some respondents did not support it. The results from the views of those who did not support the idea are presented in Table 4.8

Table 4.8: Views not Supporting Introduction of Formal IL Course

Reasons	Frequency	Valid percent %
Availability of Computer Literacy course	9	50
Not all students need IL	4	22
Availability of Internet/Google	5	28
Total	18	100

Source: field data, 2017

From the results shown in Table 4.8, 18(50%) of this group of respondents said they did not support IL introduction because they believed the already existing computer literacy course was enough to provide the information needs of students. Also, 4(22%) believed IL was not needed by all students especially computer science and IT students. From the results also, 5(28%) of respondents said IL for students was not needed because of the influence of World Wide Web (www) and Google search engine.

4.2.7.4 Credit Bearing and Course Integrated IL Models

Views were also sought on the model appropriate for adoption to introduce an IL course at the technical universities. Respondents were asked to indicate whether a credit bearing IL model course or a course integrated IL model was appropriate and preferred. The views of respondents are presented in Table 4.9 below

Table 4.9: Credit Bearing and Course Integrated IL Model

IL Implementation Model	Frequency	Valid %
Course Integrated Model	17	25.8%
Credit Bearing Model	49	74.2%
Total	66	100

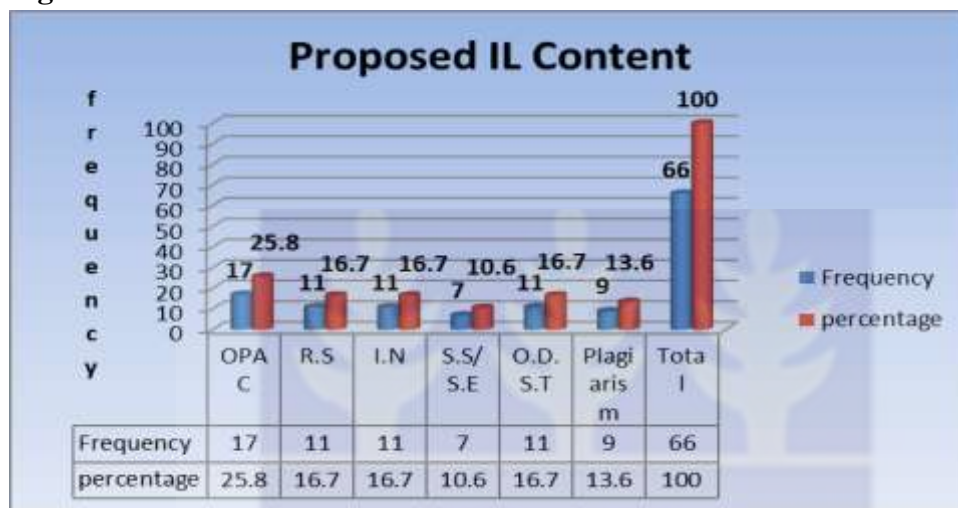
Source: field data, 2017.

From the results, Table 4.9 shows that, 17(25.8%) of the respondents supported a course integrated model of delivering IL course at the technical universities in Ghana while 49(74.2%) supported a Credit bearing Model. The findings implied that majority of the respondents were in support of a credit bearing IL course

4.2.7.5 Proposed IL Programme Content

Based on the huge support IL programme had from faculty, it was appropriate to solicit faculty’s views on the content (subject areas) appropriate for inclusion in the proposed IL course. The results were collated and analyzed in the Figure 4.14.

Figure 4.14: IL Course Content

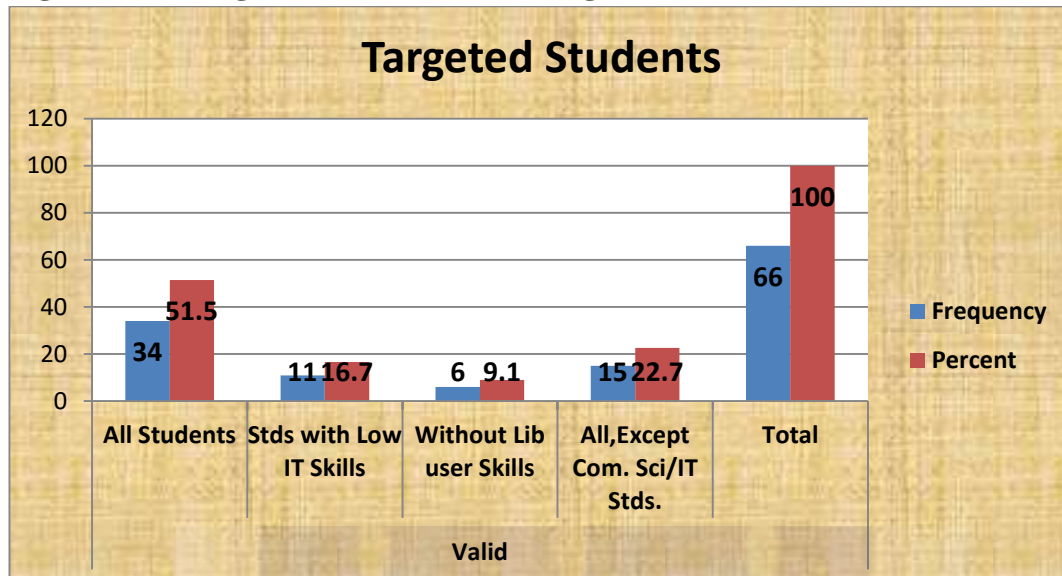


Source: field data, 2017.

Figure 4.14 observes that, 17(25.8%) respondents selected online public access catalogue (OPAC), 11(16.7%) chose Reference services (R.S.), another 11(16.7%) respondents selected Internet navigation (IN). Also, 7(10.6%) respondents indicated that Search strategies/search engines (S.S/S.S) should be part of the course content of the IL programme. Also from the results, 11(16.7%) respondents chose online data bases searching techniques (O.D.S.T) while 9 identified Plagiarism- proper citations and referencing as part of the course content of the IL programme.

4.2.7.6 Targeted Students for IL Programmes

The researcher sought to identify which category of students an IL programme should target in technical universities. The results of the findings are shown in the figure 4.15 below.

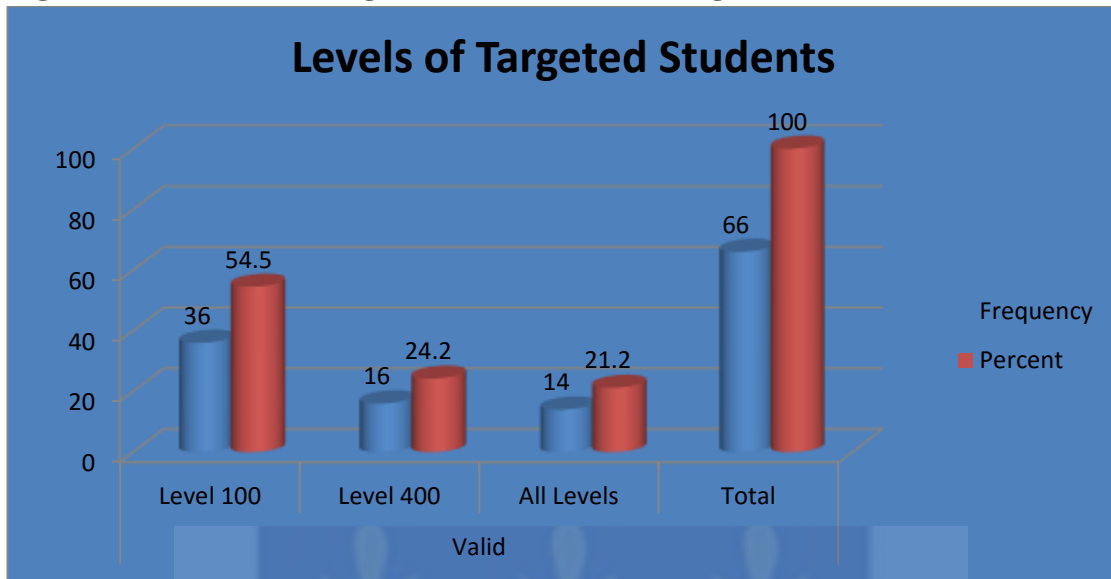
Figure 4.15: Targeted Students for IL Programmes

Source: field data, 2017

The findings presented in Figure 4.15 showed that 34(51.5%) of respondents were of the view that an IL course should target all students in the institutions. Also, 11(16.7%) felt the course should target students who were disadvantaged in IT skills, while 6(9.1%) respondents indicated that students without library user skills should be targeted. In addition, 15 (22.7%) respondents felt that an IL programme of study should target all students, but exempt computer science and Information Technology (IT) students. The results indicated that respondents generally preferred that the programme should target all students.

4.2.7.7 Targeted Levels of IL Programme

There was also the need to identify the levels appropriate for implementation of an IL course of study. Participants were asked to identify which levels of students were appropriate for the implementation of an IL course of study. Findings were analyzed and represented in figure 4.16 below.

Figure 4.16: Levels of Targeted Students for IL Programme

Source: field data, 2017.

As shown from the findings presented in Figure 4.16, 36 (54.5%) respondents wanted the IL course to be introduced at level 100, 16 (24.2%) identified level 400, while 14(21.2%) preferred all levels. The findings implied that the majority of the respondents preferred that an IL course should be introduced at level 100.

4.3 Analysis of Data from Interview with Librarians

In order to get a holistic understanding of faculty librarian-collaboration in students' information literacy, it was imperative to also seek the views of practicing librarians. To understand the main issues concerning faculty-librarian collaboration in students' IL from the librarian perspective, the researcher organized interviews for 16 library professionals (head librarians as well as senior members in the libraries) from the selected Technical Universities. The interview schedules covered brief introductions of respondents in respect of their academic qualifications, present academic status/rank, years of practice. The interview also covered variables such as availability of formal information literacy programmes in Technical Universities, understanding of IL, perceptions and attitudes of respondents towards collaboration, factors that facilitate collaboration in IL programmes, feasibility of integrating

information literacy plan, barriers and challenges to collaborative activities and finally on the views on the course content of IL course. The results from the interviews were analyzed using content qualitative data analyses method. For purposes of confidentiality, the 16 respondents for the interview, were identified as ‘librarian1’, ‘librarian2’, ‘librarian3’ etc.

4.3.1 Background Information of Library Professionals

The interviews were conducted for library professionals to elicit their views on issues addressing the study objectives. The respondents included 16 senior library professionals who have attained the status of substantive librarians, deputy librarians, and assistant librarians. Breakdown of the respondents in relations to the selected technical universities was as follows: Koforidua Technical University 5, Kumasi Technical University 5, Accra Technical University 4 and Ho Technical University 2. In terms of academic qualifications, none of the respondents had PhD Degree, 3 respondents had MPhil degrees in Library Science or Information Studies, 11 respondents held MA in Library Science or Information Studies Degrees while 2 respondents held MSc Degrees. The results indicated that majority of the respondents held MA Degrees in Information Studies or Library Studies. Also, on the issue of number of years in service, most of the respondents had been in active service for more than 5 years. Majority of the respondents were also identified to fall in between the ages of 30-40. This suggested that the libraries of the various technical universities were staffed with very youthful professionals indicating that the human resource will bring their youthful exuberance to bear during the implementations of campus-wide IL training programmes. For purposes of confidentiality, the researcher identified and referred to the 16 respondents (library professionals) as ‘librarian1’, ‘librarian2’ up to ‘librarian 16’.

4.3.2 Understanding of IL Concept by Information Professionals

In order to assess respondents’ understandings of IL, library professionals were asked to define information literacy according to their own understanding. The answers given during

the interview schedules indicated IL skills to mean the ability of a person to recognize when information is needed and have the ability to locate, evaluate, and use information effectively for the needed purpose and the ability to gather and used needed information ethically. Some verbatim definitions from respondents identified IL in the following words: *“IL skills involve the competencies in applying relevant technology to meet one’s information needs, and also the understanding of information value and using information to create new Knowledge”* (librarian 1).

“IL competency is ability of someone to realize when information is needed by him/her and have the ability to locate, evaluate, and use information effectively for the needed purpose” (librarian 2). The various definitions of IL given by the library professionals meant that they understood what IL means.

Respondents were also asked to indicate whether there were differences between IL skills and computer literacy skills. The results indicated that information literacy was a different concept from computer literacy. The respondents identified that the two terms were closely related to each other but not exactly the same. For example, one of the respondents (librarian 5), indicated that information literacy was *“a generic term that includes knowledge of computers, computer operations and applications”*. The respondent identified that an information literate person in the current IT age *“must acquire computer literacy skills to be able to bring his/her IL skills to bear”*. Information literacy was identified as an umbrella term for information seeking competencies while ICT skills consist of the operational knowledge of using computers, various software and databases to excel the personal and academic objectives. The results meant that an information literate person must develop information technology skills to meet information needs using related technologies. Findings from the interviews also indicated that information literacy is more than mere basic competencies of computer and related technology as information literacy encompasses an

intellectual program of finding, organizing, presenting, communicating and evaluating information and extends lifelong learning.

4.3.2.1 Existence of Formal IL Course of Study in Technical Universities

On the issue of formal IL programmes, Head and assistant librarians interviewed confirmed that they currently did not have formal IL programmes running in their institutions. Some of the respondents however revealed that plans were being put in place to consider the possibility of introducing formal IL courses of study in their respective institutions. For example, a respondent stated her position in the following:

We do not currently have any formal IL course of study for our students but works have been conducted in the past on the possibility of implementing it in our institution. There is even a course content that was developed by the committee set up to develop the modalities that would guide the implementation of the IL programme in our institution. We are only waiting for management direction to enroll the programme (Librarian 1).

It could therefore be concluded that all the selected Technical Universities (KTU, KSTU, ATU, and HTU) did not at the moment have formal information literacy programmes for their students albeit, they have some forms of informal library instructions sessions for users.

4.3.3 Perceptions and Attitudes towards Collaborations in IL Activities.

Views of library professionals were also solicited during the interviews to identify their perceptions faculty as partners in collaboration and attitudes towards collaboration with faculty in implementing students IL plan. Most of the library professionals revealed that perceptions about faculty and attitudes of faculty were indeed factors that influence their edge to want to engage faculty in IL activities. For instant, a librarian indicated,

I see faculty members on campus as worthy partners when it comes to teaching students IL skills. Also, I believe faculty will be willing to support and partner in the

implementation of formal IL training programme if only they are convinced that we librarians have the capacity to do so (librarian 5).

The views indicated that if faculty demonstrates positive attitudes in wanting to partner librarians, then collaborative endeavors were going to succeed. Also, majority of the library professionals revealed that they considered teaching faculty as their academic colleagues and were willing to collaborate with them to design and integrate IL programme of study in the normal academic curricula. Generally, it was seen that the librarians were positive about their willingness to engage faculty in a partnership.

4.3.4 Factors Influencing Faculty-Librarian Collaboration in IL Activities

Information professionals were asked during the interviews to identify factors that majority of respondents considered would influence positive faculty-librarians' relationships in putting together formal IL instructional courses for students. Librarian 4 indicated,

The factors that will influence librarians and faculty members to work together on IL related issues are constant communication, availability of modern IT infrastructure, increased number of professional librarians as there are only two of us in this institution.

Also, faculty members and librarians will collaborate effectively provided there is mutual respect, trust, effective communication and good sense of commitment by all to work toward a common objective of developing or transforming students into lifelong learners (librarian 11)

The findings meant that majority of the respondents felt that effective communication, provision of adequate infrastructural and human resources, positive faculty perceptions of librarians and positive faculty's attitudes toward collaborating with their librarians, trust between the two parties, strong sense of commitment in transforming students into lifelong learners, sense of shared objective/interest by both faculty and librarians in transforming students into independent researchers and shared understanding of the IL concept by both

parties were the factors that could influence successful faculty-librarian collaboration in IL related activities.

4.3.5 Barriers/Challenges of Implementing an IL Plan

Respondents were asked to identify anticipated challenges/barriers that could limit prospects of the collaborative work between librarians and faculty. Participants reiterated that there are possible barriers and challenges in implementing an IL course. In addition to the outcomes presented in Table 4.6, the views from the scheduled interviews revealed to a large extent similar and interesting findings concerning the challenges of implementing a formal IL plan in technical universities especially in this part of the world. The results were collated and presented in the following headings:

4.3.5.1 Lack of Resources

Respondents identified that their libraries at the moment lacking some vital resources that needed to be addressed before a formal IL course is introduced. Librarian 13 indicated “ *Here in Accra Technical University, we currently do not have the required resources such as ICT laboratory where the many students we deal with will have access to computers for their IL lessons*”.

In a related revelation, a respondent (librarian 3) also indicated

Currently Koforidua Technical university does have adequate needed infrastructure needed for the teaching and learning of IL skills lessons especially when one considers the huge number of students we have to deal with. There is an on-going e-library project being financed by MTN (a communication network), but unless that project is completed will be constraint in the implementation of such a laudable programme”.

4.3.5.2 Time Table Allocation

Allocation of course credit hours on the timetable for IL instructional courses was also identified as a challenge in implementing the programme. According to librarian 2 “it was a

challenging task to convince people especially lecturers and the departmental heads to accept an IL course to be allocated a portion on the normal teaching and learning time table in the institutions”. In a similar vein, a respondent indicated

Even the number of credit hours to be allocated an IL course is a problem. Most lectures would not accept a three credit hour space for IL course on the teaching and learning time table in this institution (librarian 12).

Also from the interview results it was revealed some faculty members always argued saying there was lack of time and space on the time table it was always going to be difficult to convince them to accept that a formal IL training course be implemented. Per the revelations from the interviews, it implied allocation a space on the timetable for IL course is also a challenge.

4.3.5.3 Inadequate Staff

On the question of whether the technical universities had the needed library professionals to teach IL skills courses, the respondents revealed that their departments were already understaffed with professionals who were in the right position to teach the students. For example, librarian 4 revealed *“to be able to teach at the tertiary level, information professionals require a minimum of Masters of Philosophy (MPhil) Degrees in the profession”*. These categories of staff he noted were not enough for the task of teaching IL courses for the entire students’ population in our institution. A respondent also indicated *“We currently have only two library professionals who hold the required degrees that qualify them to teach at the tertiary level”* (librarian 3). The interview results were reflected in the number of library professionals employed by the selected technical universities. The data of the study revealed that only sixteen (16) library professionals from the four selected technical universities have attained the rank as senior members, and out of this number, only three of them had MPhil Degrees. Breakdown of the numbers in relation to each technical university

were identified as follows: KTU together with KsTU had the highest number of information professionals (5) with senior member statuses; ATU had four (4), while HTU had (2). This outcome implied that the various technical universities were indeed under staffed in terms of qualified information professionals with required academic qualifications equivalent to that of their faculty colleagues.

4.3.5.4 Accreditation Challenges

The data from the interviews also revealed that a successful formal IL course of study required a process of assessment and validation by the Accreditation Board of Ghana. For instant, librarian 1 revealed,

The course structure, course content (syllabus), learning environment, required infrastructure and facilities as well as relevant human resource capacities have to be assessed and passed by the Accreditation board before the course could be rolled out.

The above revelation was considered a challenge because the institutions were said to have found it difficult to meet such requirements. The interviews results implied that it was a big hurdle/challenge for the selected technical universities to meet the requirements of the accreditation board since it was revealed that institutions were lagging in some of or most of the needed resources (ICT infrastructure and skilled information professionals) required for assessments by the accreditation board team.

4.3.5.5 Inadequate Management Support

It was also revealed that it is difficult for such IL programme to attract the full support of management of the technical universities. Some of the universities' managements are difficult to be convinced on why they need to spend further resources on such a programme as IL. The views continued that, management always placed much priority on other areas such as the provision of computer literacy skills instead of information literacy skills when it comes to

the provision of resources in support of such programmes. This was clear in the assertions of most respondent. For example, both librarian 1 and 2 all asserted that,

School authorities always gave much priority to the provision of resources for the teaching and learning of ICT skills while less attention was being given to the provision of similar resources to libraries for the training of students in the acquisition of IL skills. They opined that some faculty and management members mostly argued that limited resources were supposed to be channeled toward provision of resources for teaching and learning of ICT skills instead of IL training.

The above revelation implied that managements of the selected technical universities support for the introduction of formal IL training programmes is not encouraging.

4.3.5.6 Image Problems

The interview schedules also revealed that in the eyes of some faculty members, librarians' core mandate is restricted to the four corners of the library buildings. To some of the librarians interviewed, some faculty members considered them to only be professionals mandated to keep and manage books with no required knowledge of teaching in any discipline. For example, a librarian 8 revealed "*some members of this academic community look down on us as people with less academic qualifications. They do not regard us as academics. I have been told severally by some faculty members before that I am a common librarian*". Such revelations indicated that librarians face image challenges in the performances of their work. The results meant that the librarians felt that some faculty members did not see them as academic equals contrary to revelations during analysis of results from the questionnaire. The results meant that such problem of low image for librarians made it difficult for some sections of faculty to whole heartedly support any initiatives by librarians to teach IL course at a formal level.

4.3.5.7 Existence of Computer Literacy Course

The librarians interviewed also identified the already existing computer literacy course being run in the technical universities as another barrier to a successful implementation of a formal IL programme. Majority of the respondents revealed that some stake holders had a misconception of IL and thus, misinterpret it to mean computer literacy skills training. The results indicated that the misconception, some people held made them fought against the efforts to introduce IL programme. For example, librarian 9 during the interview asserted

The misinterpretation of IL skills to mean computer literacy skills made some faculty members advocated that an IL programme should be designed and run by the Computer Science Department and not by librarians.

Similarly, such position was corroborated by majority of the respondents during the interviews.

4.3.6 Feasibility of Designing and Implementing IL Plan

In order to achieve one of the study objectives which was to explore the feasibility of designing and implementing an IL plan, the views of participants were sought by the researcher to determine whether an IL plan for incorporation into the normal curricula was feasible. A respondent from KTU during the interview revealed

Designing and implementing IL skills programme is very feasible in our institution. What we need is the support of management and all other stake holders. But we first of all need to identify and design an appropriate course outline that will guide the programme implementation (Librarian 10).

Most librarians interviewed held similar views. Majority of respondents indicated that they believed that with the availability of needed resources (ICT Infrastructure and Devices), resource persons (qualified librarians), required funds, management support, faculty support, certification by accreditation board, the design and implementation of a formal IL course of

study in technical universities could be very feasible as was also revealed by results from faculty which were presented in figure 4.11 above.

4.3.7 Proposing IL Course Content for Inclusion in the Curriculum

The final objective of the study was to propose the adoption of a formal IL programme in technical universities in Ghana. In line with this objective, the researcher sought the views of librarians. Views of respondents were sought on specific subject areas they felt were appropriate for inclusion in the IL course content. Librarian 16 indicated, *“Subject areas students need to be trained on among others should include information retrieval skills, relevant information sources, lessons on copy right laws, online data bases and proper citations and referencing”* The results revealed the majority of the respondents held the view that the following areas which to a large extent were corroborated by views collated and presented in the figure 4.14. The areas the librarians largely identified were, library usage instructions, copyright laws on the use of intellectual property, lessons on plagiarism, lessons on citations and proper referencing, information retrieval skills (use of index to documents, online and manual searching skills), sources of information, the use of online public access catalogue (OPAC) and use of electronic information resources.

The findings also showed that library professionals were of the view that a formal IL course should target all students in the selected institutions. For example, a librarian during the interview said *“IL skills training programme should be made to target all students in the institution”* (librarian7). She however identified that, the first year university students should be the ideal target for IL training skills because of she felt they were comparatively inexperienced in academic life, and would need basic IL skills to tackle their assignments and conduct their research activities responsibly.

There was also the need to identify the views of the information professionals on the levels appropriate for implementation of an IL course of study. Participants were asked to identify which levels of students were appropriate for the implementation of an IL course of study. Findings revealed that respondents wanted the IL course to target all levels of the undergraduate student, however the respondents preferred level 100 as the most ideal level to be targeted for the introduction of IL course of study. The findings implied that the majority of the respondents felt that an IL course of study will yield the needed results if it is introduced at the early stages of the undergraduate academic life journey.

4.3.8 Summary of Chapter

This was the chapter that analyzed collected data from the respondents of the study. Issues discussed in this chapter covered the views of faculty in 66 answered questionnaire and views of 16 library professionals from interviews conducted from four selected technical universities in Ghana. To sum up, the data analyzed covered understandings of information literacy concept by faculty and librarians, factors that influence faculty-librarian partnership, perceptions and attitudes of faculty towards collaborating with librarians in IL activities, challenges and barriers likely to impede faculty-librarian collaboration, feasibility of integrating formal IL plan within curricula and proposing a formal IL course for inclusion in curricula of study. The data and information analyzed gave many revelations which need in depth discussion, especially those concerning the main objectives of the study.

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CHAPTER FIVE

DISCUSSIONS OF MAJOR FINDINGS

5.1 Introduction

This chapter dealt with discussion of the major findings of the research in relations to the objectives of the study. The discussions were associated to the literature review of the research. The aim was to identify whether the findings confirmed or contradicted the trend of issues in literature concerning faculty-librarian collaboration in enhancing IL skills of students. The discussions were presented under the listed themes:

- ✓ Background Information of Respondents
- ✓ Levels of Understanding Information Literacy (IL) Concept
- ✓ Faculty-Librarians' Perceptions and Attitudes in IL collaboration
- ✓ Factors that facilitate faculty-librarian collaboration in IL
- ✓ Challenges/barriers to faculty-librarians collaboration in IL Activities
- ✓ Feasibility of integrating information literacy in the curricula
- ✓ Adopting a formal information literacy programme of study

5.2 Background Information of Respondents

Even though biographical information about respondents was not a major objective of the study, such information helped informed the researcher about the nature of teaching faculty and library professionals working in Technical Universities in Ghana. The background information gave a hint on the future of Technical Universities in terms of the human resourced base (lecturers and library professionals) of the institutions. Faculty (lecturers) and library professionals' background information covered their gender, age range, academic status, and academic qualifications.

Gender distribution of respondents revealed that majority, representing 81.8% of faculty members were males, while an insignificant number 18.2% were females. On the part of library professionals, 68.8% were males while 31.2% were females. The total male respondents of the study comprising both librarians and faculty constituted 79.3% respondents while the total female respondents represented 20.7%. Whichever way one looks at it the results, it gave an indication that the selected Technical Universities have employed more males than females as lecturers and library professionals. In this era of gender parity, the composition of respondents' population from the selected technical universities felt foul of gender parity advocacy.

The age distribution of respondents in the selected Technical Universities indicated that majority of the respondents representing 63.4% were between the active ages of 30-40. This meant that the selected Technical Universities have young and active faculty and library professionals who are, capable of contributing to the progress of partnering one another to implement and teach an IL course of study. It also meant that the youthful nature of the personnel will help sustain the IL programme when introduced.

On staff qualification, majority of the faculty members (50%) were MPhil Degree holders. This is an indication that, faculty members in the selected Technical Universities are well grounded in academia to appreciate issues that relate to students' information literacy skills. On the other hand results from interviews indicated that majority of library professionals (68.7%) had academic qualifications that fell within MA/MSc Degrees category. Unlike their teaching counterparts who have a majority qualification of MPhil degrees, the library professionals were lagging behind with 31.3% of the respondents as MPhil degree holders. This is an indication that the libraries are really challenged in terms of required information professionals. The interviews conducted among the information professionals also confirmed a similar position of inadequate required library professionals. This implies that the technical

universities' libraries should endeavor to assist more of their Staff to enroll for higher Post-Graduate qualifications, preferably MPhil and PhD degrees in Library Studies or Information Studies to position them as academics equal to the teaching faculty. It will also help the library professionals to position themselves as the future back bones of the libraries in Technical Universities in Ghana.

Again, the findings also revealed that only a small percentage of the faculty in the technical universities held PhD Degrees. Only a small number of faculty members representing 7.1% of the respondents were PhD holders. For the librarians, none of the respondents held a PhD Degree. This indicates that the management of the Technical Universities in Ghana should endeavor to encourage more of their staff to pursue higher academic degrees at the PhD level.

5.3 Levels of Understanding Information Literacy (IL) Concept

This section of the chapter dealt with the first objective of the study which sought to determine respondents' levels of understanding information literacy (IL) as in the selected Technical Universities. This objective sought to assess participants' understandings of the information literacy concept and based on the results, determine whether faculty were better placed to partner librarians in IL. This objective is identified with the Integrated Instruction Model which guides the study. For successful collaboration in IL, shared understanding of the subject is required of both faculty and librarians.

5.3.1 Awareness levels of Information Literacy

As part of objective one, faculty's awareness levels of information literacy were assessed. From the results gathered, faculty members from the selected technical universities in Ghana were generally aware of information literacy as a concept. The results showed a majority response rate of 54.5% indicating that they were well aware of the term IL.

The results from the interviews indicated that library professionals were even much more aware and familiar with the term IL as compared to faculty members. All librarians interviewed were unanimous in agreeing that they were well aware and very familiar with the term 'information literacy'. The results confirm findings of Probert's (2009) study which investigated perceptions of teachers about IL and concluded that teachers as well as librarians were aware of the concept of IL. However, outcomes of the present study are in contrast with the findings of Williams and Wavell's (2006) study, where the concept of IL was seen to be new to most teachers. Also, the findings are in contrast with Fliton's (2017) assertion in a study to examine the language adjunct faculty used to discuss information literacy and how they understood IL concept that some faculty were simply unfamiliar with the phrase IL. Ojedukon's (2014) study also established that teachers in South Africa had a very low level of awareness about IL.

5.3.2 Understandings IL Concept

As part of the study objectives, respondents' understanding of IL as a concept was also looked at. Common understanding of IL is linked with the theoretical model guiding the current study. The Integrated instruction model which guides the study requires faculty and librarians to acquire a common understanding of their common objectives. The results show that an overwhelming majority of faculty representing 71.2% had basic understandings of IL concept. Likewise, it was even more interesting to see an overwhelming majority of library professionals demonstrate their levels of understanding of the IL concept by quoting portions of ACRL's information literacy competency standards for higher education to support their explanations of the meaning of IL. Results gathered from the interviews also revealed that library professionals had very good understanding of IL as a concept. The findings therefore mean that both faculty and librarians have appreciable levels of understanding of IL issues as indicated by Jorosi and Isaac (2008). The results also confirm the findings of Fliton (2017)

whose study concluded that 80% of respondents claimed to understand the term information literacy. The results however contrasted the findings of Artman, Frisicaro-Pawlowski and Monge (2010) who revealed that librarians may understand the literature on students' development in IL related issues, while many college faculties may not, because much of the IL literature comes from library-related articles and presentations.

5.3.3 Understanding the Differences between IL and Computer Literacy

In a similar effort to achieve the first objective of the study, understanding of the difference between IL and computer literacy were identified. The results gathered showed that 50% of faculty respondents identified IL as representing a different but related concept from computer literacy. The results were also corroborated by the library professionals during the interview schedules. The results gathered showed that overwhelming majority of library professionals indicated that the terms IL and computer literacy were closely related to each other but different in the sense that information literacy is an umbrella term under which information technology (IT) or computer literacy falls. ICT skills they explained consisted of the operational knowledge of using computers, various software and databases to achieve one's personal and academic objectives.

The Association of College and Research Libraries (1997) expressed that the fluency of IT and information literacy was more than mere basic competencies of computer and related technology as information literacy encompasses an intellectual framework of finding, organizing, presenting, communicating and evaluating information and extends lifelong learning. The valuable and combined use of information and information technology is considered to be a key component in the expansion of life-long learning. Confirming that IL and computer literacy were not the same, Rafique (2014) identified that computer literacy highlights the keen understanding of IT and its use while IL emphasizes skills in the searching, managing, communicating and evaluating information.

5.3.4. Definition of Information Literacy (LI)

In line with the first objective the researcher sought the views of respondents on their understanding of IL concept. In their attempts to define the term IL, respondents variously explained the term according to their own understandings. Most faculty respondents explained the meaning of IL to represent location, access, evaluation and ethical applications of information. In a similar vein, majority of library professionals during the interviews also defined IL, backing such definitions with portions of the ACRL information literacy competency standards for higher education definition of IL to support their explanations of the meaning of IL

The findings are consistent with Saunders' (2012) study which explored faculty perspectives on IL, including how they defined or understood the concept, and how important they believed it was for their students. The study revealed that faculty definitions of IL were found to vary, with most, identifying location, access, evaluation and application of information. The results showed that majority of the respondents (70%) identified IL as the ability to gather and use needed information ethically. This definition of IL is consistent with the definition by Bent and Stubbings (2011) who quoted the definition of the SCONUL Working Group on Information Literacy as 'information literate people will demonstrate an awareness of how they gather, use, manage, synthesize and create information and data in an ethical manner and will have the information skills to do so effectively'. The results also identified alternative definitions of IL. More than three quarters of the respondents (79%) also defined IL as ones' competencies in applying relevant technology to meet one's information needs. This definition of IL is in agreement with Boekhorst and Britz's, (2004) study, which quoted Paul G. Zurkowski, president of the Information Industry Association who first used of the term 'information literacy' in 1974 to refer to "the competencies of people to identify information sources to meet the information needs by using and applying related technology"

In addition, majority of the respondents (72%) also identified IL to mean “the understanding of information value and using information to create new Knowledge”. This third definition of IL is consistent with the definition of IL by the Association of College and Research Libraries (2016) which identified IL to mean the integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning.

However, comparing faculty’s ability to explain the IL to that of librarians, one can conclude that faculty narrowly defined IL while librarians in their definitions referred to definitions by ACRL Standards (Framework for Information Literacy for Higher Education). According to ACRL’s Information Literacy Competency Standards for Higher Education (Chicago, 2000), IL is “the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning”. The findings confirm Bury’s (2016) study which revealed that unlike librarians, faculty defined IL more narrowly than most standardized definitions and frameworks and that, faculty overwhelmingly placed emphasis on two main elements when defining IL: the ability to access information, and the ability to evaluate information and its sources critically.

5.4 Perceptions and Attitudes towards Collaboration in IL

The second objective of the study sought to identify faculty’s perceptions of librarians and their attitudes towards collaboration with librarians in IL activities. This objective is expressed in the Integrated Instruction theoretical model which guides the study. It explains that faculty willingness to engage librarians in IL activities is influenced by faculty’s perceptions of and attitudes toward the academic status of librarians. Questions asked on this

objective included faculty's perceived views of librarians' academic status, faculty's perceived views of librarians' intellectual capacity to engage them in IL programs, and faculty's willingness to engage librarians in collaborated IL activities.

5.4.1 Faculty's Perceived Views of Librarians' Status

Interestingly, the results gathered, showed that more than half of the respondents (51.5%) revealed that librarians in the selected technical universities were academics. The results indicated that a small percentage of faculty members (25.8%) did consider librarians as administrators, 6.1% considered them professionals and 16.6% of faculty saw librarians as both professionals and academics. The results suggest that most faculty members see librarians as their colleagues in academia. Also, from the interviews, it was realized that majority of the library professionals considered themselves and faculty as academic staff in technical universities. The finding is consistent with Ducas and Michaud-Oystryk's (2003) study which showed faculty rating their librarians as academics in their university and endorsed a greater level of interaction with the librarians in diverse areas. The findings of the present study however contradict Filson's (2017) findings which revealed that high percentage of respondents (67.9%) considered academic librarians as professionals as opposed to academics, clerks, administrators, or semi-professionals.

5.4.2 Faculty's Perceived Views of Librarians as their Academic Equals

Outcomes of faculty's perceived views of librarians' academic status revealed librarians as academic equals to their colleagues in faculty. Results of analysis on faculty's perceived views of the status of librarians working in the selected technical universities indicate an overwhelming majority of 90.9% of faculty rating their librarians as their academic equals.

Also, interview results indicate that majority of the library professionals considered faculty as their academic equals. It can therefore be deduced that both librarians and faculty held

positive perceptions of each other. The results are consistent with the findings of Schulte and Sherwill- Navarro's (2009) study which indicated that faculty had positive perceptions and attitudes towards the academic status of librarians and saw librarians as their colleagues in academia. The results are also confirmed by Filson's (2017) study which identified that 61% of faculty respondents identified their librarians as academic equals to other non-librarian faculty members. The results however are in contrast with the findings of McGuinness's (2006) study which raised issues of faculty's perceptions claiming that teaching faculty did not regard librarians as their academic equals because librarians according to them 'do not publish enough and also lack enough training experience. Filson's (2017) study continued that faculty regarded themselves as creators of information and perceived librarians as disseminators of the created information only hence, could not be their academic equals.

5.4.3 Attitudes of Faculty in Partnering Librarians in IL Programmes

Views of faculty were also assessed on their willingness to collaborate with their librarians in IL activities. The results indicated that more than half the respondents (65.2% from the selected technical universities were willing to partner librarians in IL instructional programmes. The results meant that majority of faculty members had positive attitudes towards collaborating with their librarians in IL related activities. The findings of the current study confirmed positions of several authors whose studies also identified faculty to have had positive attitudes towards collaborating with their librarians in the area of IL instructions. All these studies (Yousef, 2010; Schulte and Sherwill- Navarro, 2009; Bradley et al., 2008; Ducas and Michaud-Oystryk, 2003) all found that most faculty members had overall positive attitudes toward collaborating with the librarians in their campus libraries.

5.5 Factors that Influence Effective Faculty-Librarian Collaboration in IL

The third objective of the study sought to identify factors that determine effective faculty-librarian collaboration in the planning and designing of information literacy course. This

objective is linked to the intervening variables between the two independent variables (faculty and librarians) within the Integrated Instruction Theoretical Model guiding the current study.

From the analysis, it was identified that effective communication between librarians and faculty, motivation/commitment of the partners gaining trust among the team and collegiality (sense of equality in status between librarians and faculty) were the factors intimated by the respondents. The results showed that overwhelming majority (68.2%) of faculty respondents identified effective communication as a factor that influences faculty-librarian collaboration in IL activities. Results from the interview also point to most librarians identifying communication as a factor that influences collaboration with faculty. These findings were consistent with the findings of Montiel-Overall's (2005) study which identified communication as one of the attributes of teachers and librarians' collaboration. This is also consistent with one of the intervening variables in the Integrated Instruction Theoretical Model guiding the present study. In the theoretical model, effective communication is acting as an intervening variable that bring together both faculty and librarians to collaborate on a common interest of transforming students using IL.

The findings also revealed sense of shared interest and mutual goals as factors that facilitate faculty-librarian collaboration in IL. Knowledge of mutual goals and objectives in transforming students shared by both faculty and librarians will trigger their willingness to partner each other in IL activities. The findings revealed that a majority (66.7%) of faculty considered that shared objectives and commonness of purpose between librarians and faculty in enhancing students' IL skills would influence their collaboration. Results from the interview also saw majority of the librarians confirming the views of faculty. The results were in line with a variable within the theoretical model that guides the study. Integrated Instruction Model outlined shared objective and common interests as a force that will pull

two different entities together on a common purpose. The results also confirmed the position of Ivey's (2003) study which identified sense of shared objective and common goal as factors that facilitate faculty-librarians collaboration in IL instructional activities. Also the findings of the current study confirm findings of Hollander et al., (2004) who stated that librarians and teaching faculty have many mutual goals and concerns which can bring them together as partners. Their study identified that both want to enhance student literacy, particularly information literacy, with the hope of making students good writers, problem solvers, critical thinkers, and self-directed, lifelong learners.

Perceptions of faculty and their attitudes were identified as factors that influenced faculty-librarian partnerships. The results gathered revealed that 62.1% of faculty respondents identified perceptions and attitudes as factors affecting faculty librarian collaborations in working on IL projects. Most librarians interviewed also agreed that positive perceptions and attitudes of faculty about librarians would facilitate successful collaboration in relation to IL skills activities. The revelations are consistent with the interpretation of the theoretical model supporting the current study. The model explains that faculty's perceptions of librarians' status and intellectual capabilities may affect their attitudes towards engaging librarians in executing IL instructions in their institutions. This position was confirmed in Nilsen's (2012) study which stated that faculty-librarian relationships in academia is influenced by faculty perceptions of and attitudes toward the status of academic librarians. The study identified that faculty's perceptions will influence their willingness to utilize librarians as IL instructors in their classes.

The results of the present study also revealed that 54.5% of the respondents intimated that trust is a variable that affects successful faculty librarian collaborations. The findings support the position of the theoretical model (i.e. integrated instruction model) which is guiding the present study. In the theoretical model, trust is seen as an intervening variable that will pull

two independent variables (faculty and librarians) together based on the existence of a common interest between them.

Majority of the views from faculty (65.2%) also identified 'sense of commitment' on the part of both faculty and librarians as a factor that will contribute positively towards faculty-librarian collaboration in integrating IL into the curricula of technical universities. This finding of the study is consistent with Pritcher's (2010) study which identified that a successful working relationship between librarians and faculty in IL instructions must be guided by a principle of sustained commitment of both parties. The finding is also in line with one of the intervening variables between faculty and librarians.

On the whole, summarizing the findings of the third objective which was to identify possible factors that could positively influence faculty and librarian collaborative relationships in IL programmes, effective communication, commitment of the partners, gaining trust among the two, positive perceptions and attitudes were revealed as the factors. The findings were generally corroborated by several past studies. For example, Appelt (2015) identified some characteristics of successful faculty librarian collaboration as shared goals, shared language, mutual respect, overlapping competence, and ongoing communication. Also, Linstrom and Shonrock (2006) in their study revealed that positive work attitudes, ongoing communication, and commitments between teaching staff and library professionals as partners were essential conditions for collaborative partnerships in effective learning programs between the two teams.

Also, in confirming the results of the third objective of the present study, Ivey (2003) in a study to investigate working partnerships of librarians and academics at the University of Waikato, Hamilton, New Zealand, found that the effectiveness of information literacy programs depends on the teaching partners realizing their shared and mutual goals, engaging

in continued communication, positive attitudes, commitments and trust as necessary conditions.

5.6 Barriers/Challenges to Collaborative Activities between Faculty and Librarians

This section of the chapter deals with the fourth objective of the study which sought to identify possible barriers or challenges that may impede successful faculty-librarian collaboration in students' IL projects. Eventhough objective four of the study was not identified to be linked or expressed in the Integrated Instruction Model, it was considered an important outcome of the current study such that the findings may be adopted and incorporated as part of the variables of a refined model for teacher-librarian IL collaboration for the future. Such barriers and challenges could have negative repercussion on the collaboration process in the development and introduction of an IL plan by faculty and librarians. The questions asked included whether respondents believed there were possible challenges or barriers that may impede faculty librarian collaboration in IL programmes at the selected technical universities in Ghana.

Results gathered revealed that there were challenges or barriers which could prevent librarians and their faculty in the selected technical universities from collaboration in activities to implement information literacy programmes. The results indicated that majority of the respondents (80.3%) believed there were existing challenges likely to stall faculty-librarian collaboration in IL programmes. Also, all librarians interviewed indicated that there were existing challenges/barriers which made implementation of IL programme very difficult. Library professionals interviewed identified the challenges/barriers to effective faculty-librarian collaboration in IL activities to be allocations on the time timetable, inadequate library professionals, challenges with accreditation process, lack of management support, image problems and existence of computer literacy course. The findings from the

faculty also indicated specific challenges/barriers to effective faculty-librarian collaboration in IL activities. For example, an overwhelming majority of the faculty respondents (95.5%) identified inadequate resources as a barrier that could work against the plan to introduce formal IL in technical universities. This revelation is consistent with findings of Ivey's (2003) study which investigated the working partnerships of librarians and academics in their efforts to develop students' information literacy at the University of Waikato, Hamilton, New Zealand. Ivey (2003) identified that an over-riding concern revealed by the study was the problem of insufficient resources to develop collaborative partnerships in information literacy programs. The results also revealed sense of "lack of time" by some faculty with (89.4%) majority endorsement as a challenging factor affecting fruitful collaboration in IL skills training programmes by librarians and teaching faculty. This result is confirmed by past investigations. For example, McGuinness' (2006) study revealed that librarians at times have perceived that faculty apathy in IL programmes is based on time constraints, or culture of lack of time. Oakleaf et al., (2011) identified that indeed, faculty culture is characterized by "lack of time". Also confirming the results, Touchard and Helms (2003) study revealed that faculty members expressed lack of interest in library instructions projects simply because they said it took time away from their classes.

Negative faculty perceptions of librarians and negative faculty attitudes towards collaborating with librarians were also identified by the study as challenges or barriers militating against successful faculty librarian collaborations in IL programmes at the selected technical universities in Ghana. A clear majority of the results (89.1%) identified negative faculty's perceptions and attitudes as a barrier against successful faculty librarian collaboration in IL programmes. The findings confirm Oakleaf et al's., (2011) study which revealed that there was a wide spectrum of faculty attitudes pertaining to information literacy that impeded collaboration with their librarians. Oakleaf et al.,(2011) concluded that faculty perceptions of

librarians could prevent effective collaborations, and that, some faculty members perceived librarians as support staff with librarians' status "less than that of faculty" and therefore were not meant to have teaching roles. Outcomes of the results also identified inadequate staffing as part of the challenges. Majority of the results (80.6%) indicated that the libraries of the selected technical universities lacked adequate information professionals who could handle IL training courses as instructors. This portion of the findings was confirmed during the analysis of background information of the respondents. The results from the background information of respondents identified only 16 library professionals who were eligible for teaching IL courses. The results also identified that to be able to teach at their level, information professionals needed to have a minimum of Masters of Philosophy (MPhil) Degree in the profession. These categories of staff were found not to be enough for the task of teaching IL courses in the entire students' population. The outcome confirmed findings of Dadzie's (2009) study which examined information literacy (IL) initiatives in two universities in Ghana (University of Ghana and University of Cape Coast). Dadzie's (2009) study identified inadequate number of professional staff as a challenge at the University of Cape Coast, to engaged in IL instruction as a result of large student numbers.

5.7 Feasibility of Designing and Implementing IL Plan

This section of the chapter deals with the fifth objective of the study. This objective sought to explore the feasibility of collaboration in developing formal IL plan for integration into the normal academic curricula of technical universities in Ghana. This objective is linked with collaboration and team work variables of the theoretical framework. Within the theoretical framework, enhanced students' IL skills are achieved when there is collaboration or partnership between faculty and librarians. The findings of the study showed that more than two-thirds of the faculty, representing 74.2% found that it was feasible for librarians and their faculty members within the selected technical universities to team up to develop and integrate

a formal IL programme for inclusion into the normal academic curricula of the technical universities. Likewise, the interview results saw majority of the library professionals corroborating the position held by the faculty. Majority of library professionals indicated that faculty-librarian collaboration in the development of IL plan for technical universities in Ghana was very feasible. The results of this part of the study is confirmed by Brasley's (2008) study which identified that it was possible for faculty and librarians to work together to map out a curriculum and degree requirements within a discipline to identify spaces where information literacy could be integrated into the educational program. Also, Smith (2016) concluded that information literacy could be successfully integrated into all levels of the undergraduate curriculum through the collaborative efforts of academic librarians and teaching faculty. In a similar revelation, Leckie and Fullerton's (1999) study, which was conducted to identify the roles of academic librarians in fostering pedagogy for information literacy programme for science and engineering undergraduate studies, found that incorporating IL instructions across the curricula in postsecondary education would be feasible when there is collaboration between faculty and librarians. Leckie and Fullerton (1999) revealed that it is possible to gradually integrate information literacy instructions into the education curricular. Also confirming the feasibility of implementing a collaborated IL training course, Owusu-Ansah's (2004) investigation revealed that a gradual, but ultimately complete integration of information literacy instruction into the general education curricular was a reality and should be given the needed priorities at all institutions of higher learning.

5.8 Proposing a Formal IL Programme for Incorporation into the Curricula

The sixth objective of the study sought to propose a formal IL programme for inclusion into the normal academic curricula of technical universities in Ghana. In line with this objective the researcher sought answers on IL model appropriate for adoption, targeted Students for IL Programmes, proposed content of IL training Programme, targeted academic levels of

students for IL course, proposed content of IL training programme, the appropriate IL programme content, targeted students and levels of targeted students. Based on the outcomes of this objective, the study sought to propose for the adoption of a formal IL programme for inclusion into the curricula of technical universities in Ghana.

5.8.1 Credit Bearing or Course Integrated IL Model

From the responses gathered, both faculty and librarians were generally in favour of a Credit bearing IL course. Majority of the views (74.2%) of the faculty supported a credit bearing IL course. Views from the librarians were also not different. The outcomes of the study are corroborated by Owusa-Ansah's (2004) study which identified that supporters of separate credit awarding IL courses had argued that IL is a discipline in itself and that it would only be taken seriously in higher education if disciplinary faculty teaches it as a credit-bearing class. The findings continued that all students receiving similar instruction in content, scope, and depth, and assessment of student learning is also easier in a credit course taught by librarians. It said students might also be more motivated to take up a course for which they receive graduation credit. Owusa-Ansah's (2004) study asserted that the library should offer an independent credit course in information literacy, one that offers in depth engagements with issues inherent in skills needed in information literacy. Ideally this course should become part of the general educational curriculum and a prerequisite for graduation. The findings however contradict findings of Holiday and Fagerheim's (2006) study at Utah State University (USU) which favored course-integrated approach of IL. They argued that, while information literacy is a general skill, students will retain IL skills and transfer learning if IL instruction is attached to a subject-based discipline.

5.8.2 Targeted Students for IL Programmes

In line with objective six which sought to identify and propose a formal IL course of study, the study identified students who would be targeted by the IL instruction programme in the

selected technical universities. The findings revealed that more than half the results (51.5%) showed that all students be targeted by the proposed IL programme. The finding of the present study is consistent with Owusu-Ansah's (2004) study which identified that at the heart of information literacy is a desire to reach as large a student population as possible at the early stages of collage life. Owusu-Ansah (2004) continued that ensuring that every student become information literate should be an expressed goal of every academic library and every faculty member.

5.8.3 Targeted Academic Levels of Students for IL Course.

Views of respondents were sought on the appropriate levels where IL course should be taught. Findings of the study identified level 100 as the appropriate academic level for implementation of an IL course of study. More than half of the outcomes from the questionnaire (54.5%) identified level 100 or the first year of the undergraduate level for the introduction of IL course. An overwhelming majority of respondents from the results from interview also indicated level 100 as the ideal level of introducing IL training programme. The result is in conformity with the findings of Owusu-Ansah's (2004) study which stated that ideally, IL course would provide the most appropriate method of developing students when it becomes a required credit course at the first year or at the early stages of undergraduate education. Also, in an article that sought to identify a comprehensive approach to information literacy instructions, Owusu-Ansah (2004) suggested a pragmatic solution that ensures that every under graduate student is provided formal IL instructions before graduation. Ideally, a required credit course at the early stages of undergraduate education would provide the most appropriate method of developing information literacy. At the heart of information literacy is a desire to reach as large a student population as possible at the early stages of college life. Ensuring that every student becomes information literate should be an expressed goal of every academic library and every faculty member (Ivey, 2003).

5.8.4 Proposed Content of IL Training Programme

Respondents views on the content (subject areas) appropriate for inclusion in the proposed IL course were also looked into. The findings revealed: online public access catalogue (OPAC), Reference services, Internet navigation, search strategies using selected search engines, online data bases searching techniques. The findings confirmed Dadzie's (2009) investigations of information literacy (IL) initiatives in two universities in Ghana, namely: The University of Ghana and the University of Cape Coast. The study revealed that information literacy skills training included the use of the internet, an introduction to electronic resources, how to effectively search databases and how to cite references. The outcomes of the study also showed that librarians hugely supported inclusion of plagiarism issues, proper citations and referencing as part of the course content of the IL programme. Outcomes of this aspect of the study are consistent with Head and Eisenberg's (2010) investigations which identified aspects of information literacy instruction content, including understanding of plagiarism issues, giving context to the research required for the assignment, and use of resources beyond the obligatory number of references. Head and Eisenberg (2010) stated that the issues of plagiarism are rare or not expanded upon for students.



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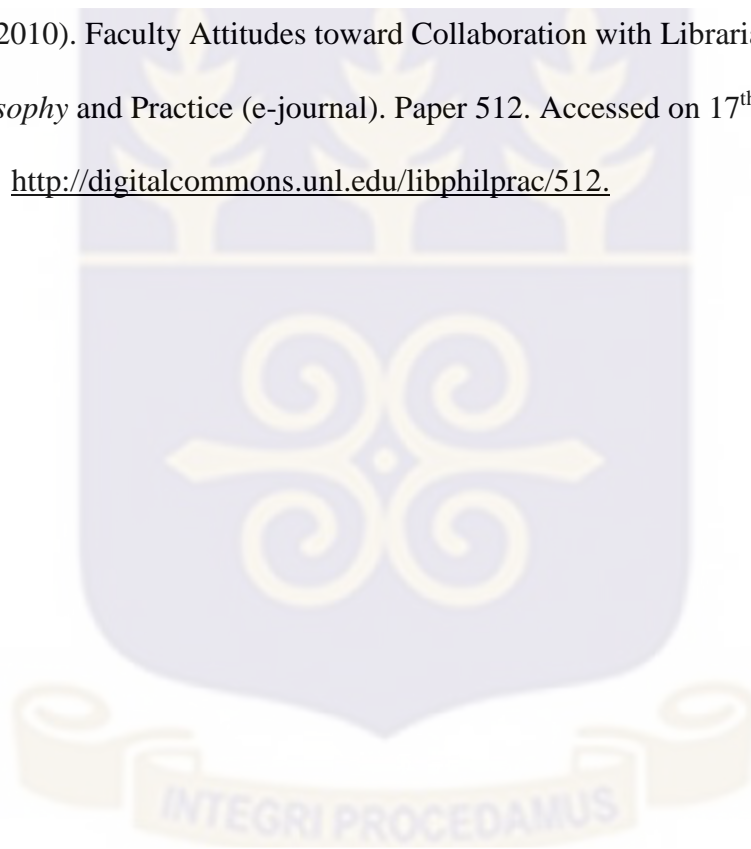
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CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The preceding chapter was the discussion of the major findings from the answered questionnaires from faculty and the interviews conducted with the library professionals in four (4) selected Technical Universities in Ghana. This current chapter presents a summary of the major findings, conclusion and recommendations based on the findings.

6.2 Summary of major findings

The study set out to explore the feasibility of collaboration between faculty and librarians in enhancing students IL skills in Technical Universities in Ghana. The major findings in relation to the major objectives are summarized according to the themes listed below:

- i. Background Information
- ii. Faculty Levels of Understanding Information Literacy (IL) Concept
- iii. Faculty-Librarians' Perceptions and Attitudes in IL collaboration
- iv. Factors that facilitate faculty-librarian collaboration in IL
- v. Challenges/barriers to faculty-librarian's collaboration in IL Activities
- vi. Feasibility of integrating information literacy in the curricula
- vii. Adopting a formal information literacy programme of study

6.2.1 Background Information

The investigation revealed that, most of the respondents (i.e., faculty and library professionals) in the selected technical universities were males. Respondents were also youthful and energetic between the active service ages of 31-40. On academic status and ranks of respondents, majority of the teaching faculty were senior assistant lecturers while majority of the library professionals were within the rank of assistant librarian. For Academic

qualifications, most of the faculty respondents were MPhil Degree holders while a few held PhD Degrees. Also, majority of the respondents among the library professionals were MA/MSc/MBA Degree holders. Implication of the findings was that most of the faculty respondents were youthful with requisite qualifications to engage in faculty–librarian collaboration in IL related issues. The library professionals were also youthful, but need to upgrade themselves in further professional development courses to match faculty as academic equals.

6.2.2 Levels of Understanding Information Literacy (IL) Concept

Findings of the study revealed that majority of the respondents from the selected technical universities in Ghana were generally aware of information literacy as a concept. The findings showed that the term IL was particularly very popular among library professionals. Concerning respondents' levels of understanding IL concept, the study revealed that majority of faculty and librarians had basic understanding of IL concept albeit the library professionals had a much better understanding of the concept as compared to faculty members. The study also identified some definitions of the term IL which were basically found to be consistent with some definitions in literature. The study also revealed that IL skills and Computer literacy skills, are closely related but do not exactly mean the same thing. IL was found to be a more generic term encompassing other things including computer and IT skills.

6.2.3 Perceptions and Attitudes towards Collaboration in IL

The study also revealed that majority of faculty members in technical universities in Ghana have positive perceptions of librarians and positive attitudes towards collaborating with librarians in IL related activities. The study showed that faculty members perceive librarians as academics and their academic equals in academia hence are willing to collaborate with them on academic projects of common interest such as IL.

6.2.4 Factors that Influence Effective Faculty-Librarian Collaboration in IL

The study revealed that effective communication, sense of commitment, trust, shared interest/objective, positive perceptions towards one another and positive attitudes towards collaboration in IL projects are factors capable of influencing successful collaborations between faculty and librarians in IL programmes.

6.2.5 Barriers/Challenges to Collaborative Activities between Faculty and Librarians

The findings also revealed challenges or barriers which could prevent librarians and faculty in technical universities from collaboration in activities that will lead to the designing and implementation information literacy programmes. The findings identified inadequate resources, culture of lack of time, negative faculty perception towards librarians, negative attitudes of faculty towards collaborating with librarians, lack of adequate information professionals, misrepresentation of IL skills as computer literacy skills and lack of management support as the barriers/challenges impeding successful implementation of IL training skills for students.

The barriers/challenges revealed were considered to be useful variables for incorporation into the revised theoretical model. The outcomes were therefore adapted and incorporated into the proposed integrated instruction theoretical model for faculty-librarian termed as “Noise” impeding faculty-librarian collaboration process within the theoretical model.

6.2.6 Feasibility of Designing and Implementing IL Plan

The study revealed that it is feasible for librarians and their faculty members within the selected technical universities to develop a formal IL programme for inclusion in the normal academic curricula. The findings also revealed that, a formal IL programme of study is feasible if only there is the commitment by school authorities to provide the needed resources (ICT Infrastructure and Devices), needed resourced persons (qualified librarians), required

funds, management support, faculty support, and certification by the body responsible for accrediting the implementation of new courses.

6.2.7 Proposing a Formal IL Programme of Study.

Respondents' views on the content (subject areas) appropriate for inclusion in the proposed IL programme revealed: online public access catalogue (OPAC), reference services, internet navigation skills, search strategies using selected search engines, online data bases searching techniques, copyright issues, plagiarism related issues, information sources and information retrieval skills as components of the formal IL training programme. The study also revealed that majority of the respondents supported that an IL programme should be made a university required course for all students. The ideal level of implementing an IL programme was identified to be level 100 using the credit bearing model technique. Base on the findings of the study, a formal IL programme of study was proposed for adoption by technical universities in Ghana. This programme should be adopted and incorporated into the normal academic curricula of the institutions.

6.3 Conclusion

University librarians play vital roles in supporting their parent institutions to achieve their objectives effectively. Librarians and faculty members are both involved in teaching students how to make use of the information resources available in their campus library. Collaboration between faculty and librarians is essential to enhance students learning and research skills, and help them develop their information competencies.

Key elements of effective collaboration in information literacy (IL) related programmes are: knowledge (understanding) of the concept, attitudes/perceptions of both faculty and librarians, knowledge of other factors that influence positive collaboration and efforts to identify how feasible it will be to introduce a formal IL training programme. Having more

information about these issues would help us create better understanding of faculty-librarian partnership in supporting the development of students IL skills.

Librarians and teaching faculty have many mutual goals which include the desire for both to enhance student literacy, particularly information literacy, and help students become writers, problem solvers, critical thinkers, and self-directed, lifelong learners.

However, without the needed support from stake holders such as university authorities, the provision of required materials (funding, ICT infrastructure etc.) and human resource, the successful introduction of IL training programmes at technical universities in Ghana may not succeed.

6.4 Recommendations

Base on the findings of the study, the following recommendations are provided to enable the implementation of a formal information literacy training programme in technical universities in Ghana.

6.4.1 Levels of Understanding Information Literacy Concept

Since the study revealed that both faculty and information professionals were aware of IL and understood the concept, it is recommended that librarians in particular should take advantage of it to devise strategies that will aim at convincing school authorities and faculty members on the need for IL skills training for students. In this case, library professionals should give reasons why there is the urgent need for IL programme implementation, citing especially the results of the current study which revealed that all the selected technical universities did not have formal IL training programmes for their students.

6.4.2. Perceptions and Attitudes towards Faculty and Librarian Collaboration in IL

Since the results revealed that faculty had positive image of librarians and also had positive attitudes towards collaborating with librarians, it is recommended that librarians should put up attitudes that will further enhance their image in the eyes of faculty. Librarians, especially those in technical universities should take a bold initiative by designing IL skills training programmes that will attract the enthusiasm of faculty members to participate in such programmes.

6.4.3 Factors that Influence Successful Faculty-Librarian's Collaboration in IL

On factors that influence successful faculty-librarian's collaboration in IL projects, it is recommended that university authorities should provide the needed resources and qualified personnel to facilitate the implementation of IL skills programmes. Library professionals are recommended to use effective communication as a tool to develop strategies that aim at positively influencing the perceptions and attitudes of faculty and other stake holders winning their trust in librarians' capabilities in taking leading roles in activities that concern the teaching and learning of IL skills. Seminars, workshops and conferences should be organized on IL skills training to win the support and commitments of managements of the technical universities.

6.4.4 Barriers/Challenges to Collaborative Activities between Faculty and Librarians

It is recommended that library professionals, faculty, management of technical universities and all other stakeholders should pay particular attention to the identified barriers and challenges taking the necessary steps to provide adequate resources, build positive perceptions and attitudes in faculty, use effective communication tools to build trust and improve commitment of all stakeholders in students IL skills at technical universities in

Ghana. Unless the challenges and barriers identified are addressed, the collaboration process between faculty and librarians in IL activities will be a failure.

6.4.5 Feasibility of Designing and Implementing IL Plan

Since the findings of the study revealed that it was feasible to develop and implement IL programme of study through the collective efforts of librarians and faculty, it is recommended that the findings of the current study be adopted by managements of technical universities in Ghana to guide them design and incorporate formal IL study course in the curricula. The content of the IL programme is being recommended to include among other things, knowledge of OPAC, reference and user services, techniques in information retrieval (both online and manual information), online databases, and use of electronic information resources, issues of copyright and fair use of information, plagiarism, citations, and proper referencing. For the IL programme implementation to be feasible in the technical universities, it is also recommended that managements should develop policies to guide the implementation process of IL training programmes.

6.4.6 Proposing a Formal IL Programme of Study.

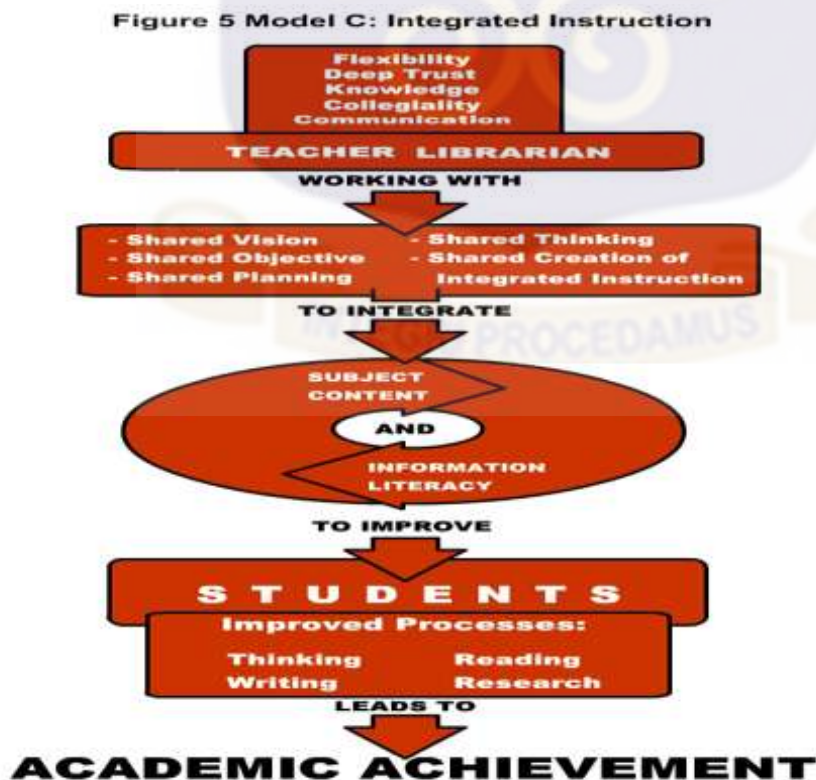
Base on the findings of the study, it is recommended that stake holders collaborate to design a formal IL programme of study for adoption by technical universities in Ghana. This programme should be adopted and incorporated in the normal academic curricula of the technical universities in Ghana. The content (subject areas) recommended for inclusion in the proposed IL programme should among others, include, training in online public access catalogue (OPAC), reference services, internet navigation skills, search strategies using selected search engines, online data bases searching techniques, copyright issues, plagiarism related issues, information sources and information retrieval skills. It is also recommended that the IL programme should be made a university required course compulsory for all

students using Credit Bearing Model technique and implemented in the first year of study for all undergraduate level students.

6.4.6.1 Revised Theoretical Model

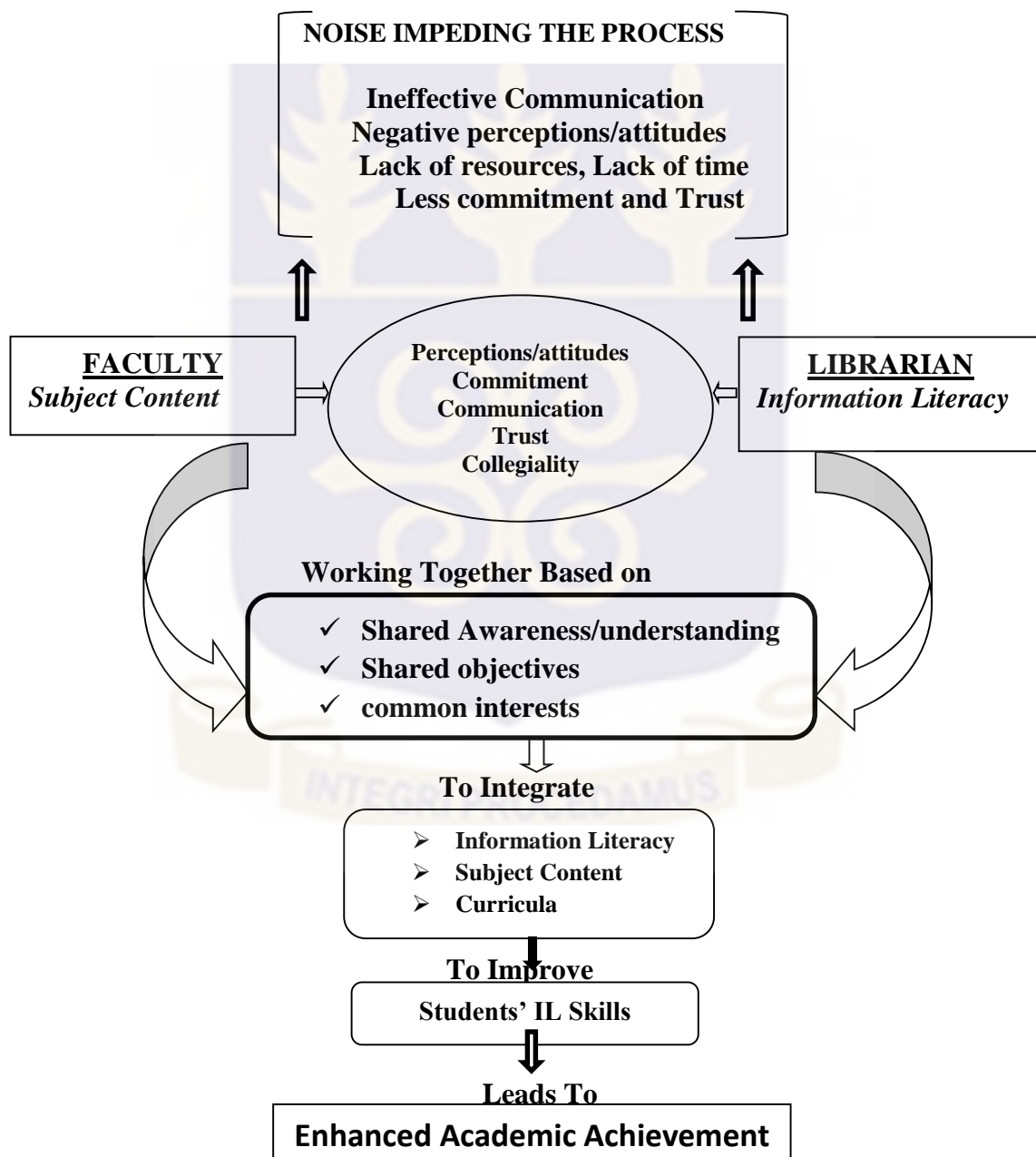
Based on the findings of the study, the existing Theoretical Model (Integrated Theoretical Model) which guided the study has been revised by the researcher. The revised Theoretical Model is being proposed by the researcher for adoption by future studies in the area of faculty-librarian collaboration in IL skills training programmes in institutions of higher learning. The Model is being proposed to be a revised version of the Integrated Instructions Model which originally evolved from the works of Leorchester (1982), revised and given prominence by Montiel-Overall (2005). The original model revised by Montiel-Overall (2005) has been illustrated in figure 6.1 below while the current revised Model is being illustrated in figure 6.2 below.

Figure 6.1: Montiel-Overall (2005) Integrated Instruction Model



Based on the existing Model (Integrated Instruction Model) which was originally proposed to guide teacher-librarians' relationships by Loertscher (1982), but revised and given prominence by Montiel-Overall (2005), the current researcher is also proposing a Revised Theoretical Model for faculty-librarian collaboration in IL related programmes in tertiary institutions. The revised Theoretical Model for faculty and librarian collaboration in IL activities is outlined in Figure 6.2 below.

Figure 6.2: A Revised Model for Faculty-Librarian Collaboration in IL



Revised Integrated Instruction Theoretical Model (2017).

The Revised Model for Faculty-Librarian Collaboration in IL requires that:

Faculty and librarians who under the existing state of things operate individually, need to collaborate or partner each other in activities that lead to the development of programmes that enhance students' IL skills. Faculty and librarians can successfully collaborate if the needed efforts are taken to make sure that the variables within the revised Integrated Instruction Model are realised.

1. Faculty and librarians will collaborate or partner one another based on the presence of such intervening variables as positive perceptions of one another and attitudes towards teamwork, effective communication, commitment to a common goal, trust for each other, and feeling of mutual respect for one another as colleagues (sense of collegiality).
2. Faculty-librarians' collaboration in IL requires a shared understanding of the common objective, mutual goal or common interest that exist between the two parties. All have a common objective in imparting knowledge and transforming students into independent lifelong learners. That should be the driving force bringing the two together.
3. It will be difficult for the effort of one party to independently realize the shared objectives and mutual goals that exist between librarians and faculty. The answer therefore would be for all to engage in collaboration, partnership or team work
4. Students are the ultimate beneficiaries of the collaboration between and faculty. The outcomes of such collaboration will mean that IL activities in tertiary institutions will improve.
5. The final implication of faculty librarian collaboration in students' information literacy programmes is that, effective collaboration between faculty and librarians will

lead to implementation effective IL training that will bring about enhanced students' IL skills. This will mean a realization of a common objective of turning students into independent and lifelong learners.

However, care need to be taken concerning identified barriers and challenges (noise), which could impede the collaboration process. If the necessary steps are not taken to address such barriers (noise) as inadequate resources, negative perceptions, poor attitudes, ineffective communication, lack of trust, culture of lack of time, and poor commitment of the partners, the collaboration process between faculty and librarians will be a failure. The study identified barriers to faculty-librarian collaboration in IL programmes. Such barriers were identified to have dire consequences on the collaboration process between faculty and librarians in IL programmes. They need to be identified and addressed head on, or else, such barriers/challenges will impede the collaboration process. Such barriers/challenges were identified and adopted as additional variables of the revised theoretical model. The identified barriers were termed as “Noise” (challenges) within the collaboration process of the integrated instruction theoretical model thus; they were incorporated as part of the variables proposed theoretical model.

Faculty-librarian collaboration in the area of formal IL skills training activities for students was identified to be non-existing at the selected technical universities in Ghana. What existed were various forms of informal IL activities. The study revealed that the subject of formal IL skills training programme was a grey area as far as technical university education in Ghana is concern. The findings of the current study will add to literature of the subject area.

The study added to knowledge by developing and proposing a revised theoretical model for adoption. The revised Integrated Instruction Model for faculty-librarian collaboration/partnership has been proposed for adoption by future studies investigating

faculty and librarian collaboration or relationships in advancing IL programmes to reflect the Ghanaian situation.

6.5 Areas for Further Studies

1. Further study is recommended in the area of students' opinions on their IL skills training in technical universities to ascertain the views of students on their IL skills needs.
2. There is also the need for future study to explore the development of information literacy policies at the technical universities in Ghana. Since the current study revealed that there are no formal IL skills training programmes, it is deduced that there are not available policies to guide the implementations of IL training programmes at technical universities.



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APPENDICES

Appendix A: Questionnaire for Faculty in Technical Universities

SCHOOL OF INFORMATION AND COMMUNICATION STUDIES

DEPARTMENT OF INFORMATION STUDIES

UNIVERSITY OF GHANA, LEGON.

QUESTIONNAIRE FOR FACULTY IN TECHNICAL UNIVERSITIES

Dear Sir/Madam,

This questionnaire seeks to solicit your views on the topic: “**Faculty Librarian Collaboration in Enhancing Students’ Information Literacy Skills**”. Your views will aid in a design of a plan to facilitate students' learning on how to locate, retrieve and purposefully use electronic and printed information resources.

It will be cherished if you could spend some time to complete this questionnaire. Be assured that all information given is for academic work and will be treated as such.

- Please tick (√) or select out (×) where appropriate and provide your views where space is provided.

QUESTIONNAIRE

SECTION A- Background Information

1. Gender: Male [] Female []
2. Name of institution of work? Koforidua [], Kumasi [], Accra [], Ho []
3. Age: 20-30 [] 31-40 [] 41-50 [] 51- 60 []
4. Indicate your rank in the institution. Assistant lecturer []; lecturer []; senior lecturer []; professor []
5. Indicate your current academic qualification. PhD [], MPhil [], MA/MSc [], Degree [] others []

SECTION B- Faculty Understanding of Information Literacy Concept

6. How well are you aware of the term ‘Information literacy’ (IL)? (a). Very Much Aware[], (b). Aware [], (c) Not well aware [] (d) Never head it []
7. How well do you understand the concept “information literacy”? (a). Very Well [] (b.) Not very well [], (c) Don’t understand []
8. Information literacy skills are the same as computer literacy skills. Indicate your level of agreement or disagreement to the statement. (a.) Strongly Agreed, [] b) agreed [] (c) Disagreed and [] (d) strongly disagreed []
9. Which of the following statements in your view best defines the term “information literacy”? Select many as applied:
- a) [] Ability to gather and use needed information ethically
- (b) [] Competencies in applying relevant technology to meet ones information needs
- (c) [] Understanding the value and use of information to create new knowledge
10. I understand the use of search engines advance search techniques such as Boolean operators to retrieve needed information from academic databases. (a) Yes, I understand [] (b) No, I don’t understand []

SECTION C- Perceptions and Attitudes towards Faculty-Librarian Collaboration

11. In my view, I see librarians in my institution as academic equals to faculty. (a.) Strongly Agreed [], b) Agreed [], c) Disagreed [], (d) strongly disagreed []
12. Librarians in my institution have the capacity to teach information literacy courses. Indicate your level of agreement or disagreement of the statement. (a.) Strongly Agreed [], b) Agreed [], c) Disagreed [], (d) strongly disagreed []

13. I believe faculty collaboration with librarians to implement information literacy activities is very relevant on my campus. (a.) Strongly Agreed, b) Agreed, c) Disagreed and d) strongly disagreed

14. Are you willing to partner librarians in rolling out information literacy training programs?
(a) Willing [], (b) Somehow willing [], (c) not willing [], (d) don't know [],

SECTION D- Factors that Influence Faculty-Librarian Collaboration

Indicate your level of agreement or disagreement with each of the following factors that influence successful faculty-librarian collaboration in information literacy planning programmes.

15. Communication between librarians and faculty. (a.) Strongly Agreed [], b) Agreed [], c) Disagreed [], (d) strongly disagreed []

16. Librarians gaining faculty trust. (a.) Strongly Agreed [], b) Agreed [], c) Disagreed [], (d) Strongly disagreed []

17. Faculty viewing librarians as their academic equals (i. e. feeling of collegiality). (a.) Strongly Agreed [], b) Agreed [], c) Disagreed [], (d) strongly disagreed []

18. Faculty perceptions of librarians and their attitudes towards collaborating with librarians in information literacy project. (a.) Strongly Agreed [], b) Agreed [], c) Disagreed [], (d) Strongly disagreed []

19. Sense of shared objectives and common interest between faculty and librarians. (a.) Strongly Agreed [], b) Agreed [], c) Disagreed [], (d) strongly disagreed []

20. Identify other factors in your opinion that could positively influence fruitful faculty-librarians collaboration in IL activities not mentioned above.

.....
.....

SECTION E- Challenges/Barriers against faculty- librarians in IL Programmes

21. Do you agree there are Barriers that may hinder collaboration between faculty and librarians at Technical Universities in Ghana? Agree [], don't agree [] Somehow [] Don't know []

23. Which of the reasons below do you consider as challenges/barriers militating against fruitful faculty-librarians collaboration in your institutions? Select many as apply:

(a) Lack of regular communication [], (b) Feeling of lack of time [], (c) Lack of central point of coordination [], (d) Failure to see librarians as academic equals [], (e) Lack of commitment [], (f) Lack of sense of shared objective and common interest [],

24. In your opinion, identify other challenges/barriers against fruitful faculty-librarians collaboration in IL activities not mentioned above.

.....

SECTION E- Feasibility of Collaborating with Librarians to develop an information literacy plan

25. How feasible is it for librarians and faculty in your institution to work together on issues of common interest? Very feasible [], somehow feasible [] less feasible [], not feasible []

26. It is possible for Librarians and faculty to partner each other to develop an information literacy plan for incorporation into the educational curricula of my institution. Possible [], Not possible [], Don't have an Idea []

27. I am willing to work with librarians to develop an Information Literacy Programme of Study for my institution? Willing [], not willing [], not decided []

Section F- Proposing Content for Information Literacy (IL) Inclusion in the Curriculum

28. Which learning areas should be part of information literacy Course content of your institution? Select all that apply. Select as many as apply:

- ✓ [] online public access catalogue (OPAC)
- ✓ [], Reference services

- ✓ [], Internet navigation
- ✓ [], Search strategies/search engines
- ✓ [], How to search online data bases
- ✓ [], lessons on Plagiarism including proper citations and referencing
- ✓ [], lessons on copyright issues

29. Which of the following statement do you support in respect of the scope of coverage of information literacy course? (a) The course should be compulsory for all students [] (b) Target students who lack IT skills [] (c) Students without library instruction knowledge [] (d) exclude computer science and IT students[]

30. At what level should a formal information literacy course be taught at technical universities?

- (a) Level 100 [] (b), Level 200 [], (c.) level 300[], (d) level 400[], (e) At all levels []

Thank You

For any verification please call - (0207851327) or email- (patrick.baayel@gmail.com)



Appendix B: Interview Schedule for Head Librarians and Senior Member Staff in Technical Universities' Libraries.

SCHOOL OF INFORMATION AND COMMUNICATION STUDIES

DEPARTMENT OF INFORMATION STUDIES

UNIVERSITY OF GHANA, LEGON.

INTERVIEW SCHEDULE FOR HEAD LIBRARIANS AND SENIOR MEMBER

STAFF IN TECHNICAL UNIVERSITIES' LIBRARIES.

1. Kindly tell me about yourself briefly. Touch on the following
 - i. Educational qualification
 - ii. Number of years in service of the Polytechnic
 - iii. Status/rank
2. Does your Technical University have a course of study in information literacy skills?
Yes/No
3. Does the library have a policy on teaching information literacy skills? Yes/No
4. Can you give a brief but precise definition of the term information literacy?
5. How often do faculty and librarians collaborate to organize information literacy programmes for students? Very often/ sometimes/ never
6. Give a brief suggestion on how you would prefer faculty and librarians to collaborate in implementing IL programmes
7. How frequently do you communicate with faculty (whether in person, by email, by telephone etc.) at your institution? Please choose only one of the following: Often [] a few times [] Never []
8. How feasible is faculty- librarian collaboration in integrating for IL programme in the normal curricula?

10. On average, how often do you organize collaborative activities between librarians?

Often: [] a few times [] Rarely: [] Never []

11. Will you propose the introduction of a formal course of study into curricula for the teaching and learning of information literacy skills in your institution? Yes/ No

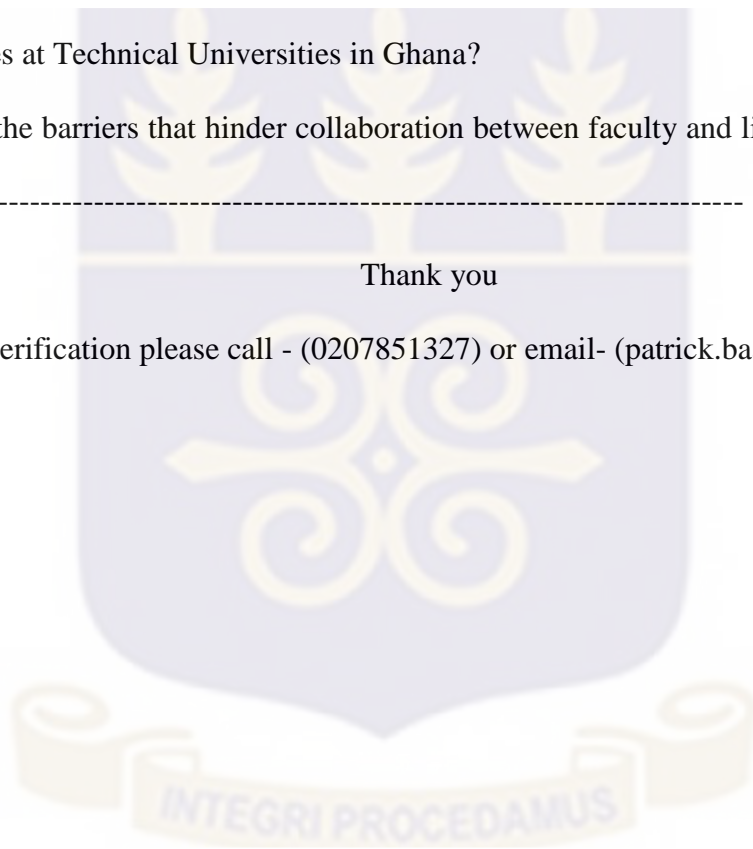
12. Give reasons for your answer

13. Do you agree there are challenges/barriers that may hinder faculty-librarians collaboration in IL activities at Technical Universities in Ghana?

14. Mention the barriers that hinder collaboration between faculty and librarians -----

Thank you

For any verification please call - (0207851327) or email- (patrick.baayel@gmail.com)



Appendix C: Introductory Letters



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

Ref. No.:-----

May 15, 2017

The Registrar
Koforidua Technical University
Koforidua

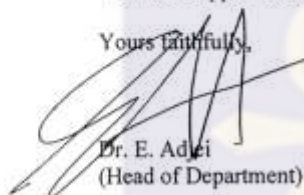
Dear Sir,

LETTER OF INTRODUCTION

This is to introduce to you Patrick Baayel an MPhil student of the Department of Information Studies. He is researching on the topic: "**Faculty Librarian collaboration in enhancing students' information literacy skills**". Patrick is expected to submit his dissertation as part of the requirement for the MPhil programme.

We would appreciate any support you can give him.

Yours faithfully,



Dr. E. Adjei
(Head of Department)

COLLEGE OF EDUCATION

• Tel:(+233-302) 000000 / 00000000

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

• Website: www.ug.edu.gh

APPENDIX D



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

Ref. No.:

May 15, 2017

The Registrar
Kumasi Technical University
Kumasi

Dear Sir,

LETTER OF INTRODUCTION

This is to introduce to you Patrick Baayel an MPhil student of the Department of Information Studies. He is researching on the topic: **“Faculty Librarian collaboration in enhancing students’ information literacy skills”**. Patrick is expected to submit his dissertation as part of the requirement for the MPhil programme.

We would appreciate any support you can give him.

Yours faithfully,

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Dr. E. Adjei
(Head of Department)

COLLEGE OF EDUCATION

• Tel: (+233-302) 000000 / 00000000

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

• Website: www.ug.edu.gh

APPENDIX E



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

Ref. No.:-----

May 15, 2017

The Registrar
Accra Technical University
Accra

Dear Sir,

LETTER OF INTRODUCTION

This is to introduce to you Patrick Baayel an MPhil student of the Department of Information Studies. He is researching on the topic: **“Faculty Librarian collaboration in enhancing students’ information literacy skills”**. Patrick is expected to submit his dissertation as part of the requirement for the MPhil programme.

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APPENDIX F



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

Ref. No.:

May 15, 2017

The Registrar
Ho Technical University
Ho

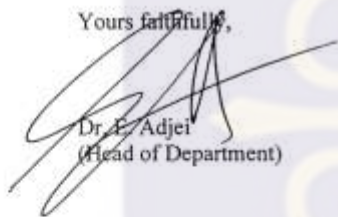
Dear Sir,

LETTER OF INTRODUCTION

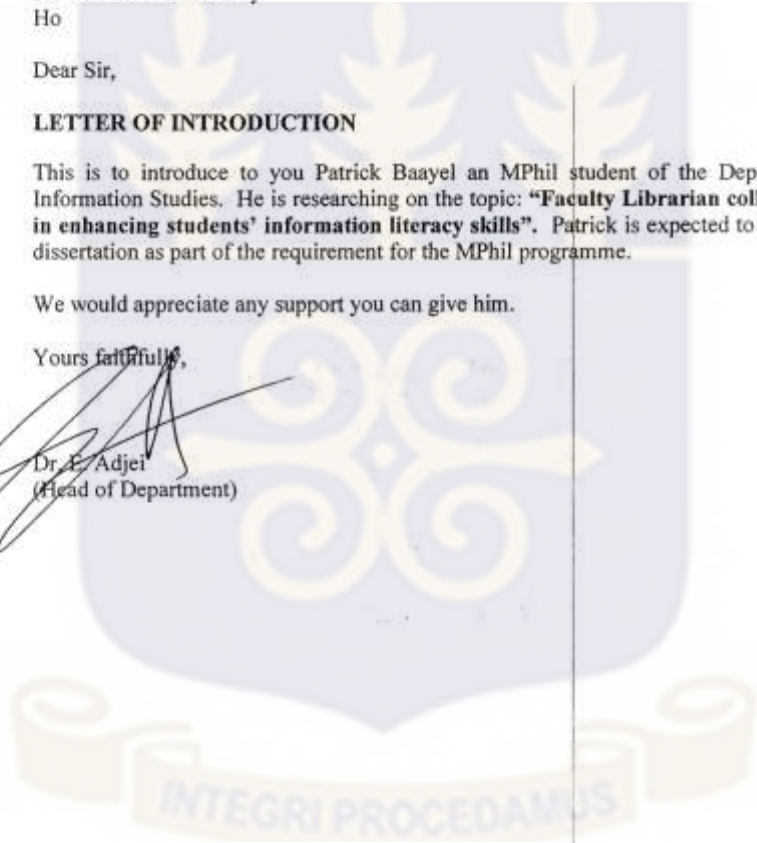
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