



An Analysis of the relationship between Library Use and Student's Achievement at a Master Level

تحليل العلاقة بين إستخدام المكتبة و إنجازات الطالب على مستوى الماجستير

By

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ABSTRACT

This study was conducted on student's achievement in the use of library resources at a Master's level. The overall grade point average and the number of books check-out was collected for students who graduated from 2009 to 2010 was the main instrument for identifying the relationship of borrowing of books with their final grade. To supplement the findings, an online library questionnaire was distributed to students currently registered for Semester 1 of Academic year 2011/12 and 135 were returned. This study was carried out to determine how borrowing of books will have an impact to student achievement performance for students at a Master level. In addition, the result will serve as an assessment of library usage to demonstrate effective management and leadership practices that will result in continuous improvement with an increasing use of resources and services.

Keywords: library use, academic library, student achievement, grade point average, graduate students

الماجستير مستوى على الطالب إنجازات و المكتبة إستخدام بين العلاقة تحليل

أجريت هذه الدراسة لبحث العلاقة بين إنجازات الطلاب و إستعمال مصادر المكتبة على مستوى الماجستير. الأداة الرئيسية للتعرف على العلاقة بين إستعارة الكتب و علامات الطلاب النهائية كانت بجمع المعلومات عن المعدل العام لخريجين 2009-2010 و عدد الكتب التي إستعاروها .

ولتكمل النتائج وزع إستبيان على الإنترنت على الطلبة المسجلين في الفصل الأول للعام الدراسي 2011-2012 أعيد منها 135 إستبيان.

هذه الدراسة أجريت لتبين كيف تؤثر عملية إستعارة الكتب على إنجازات الطلاب و يمكن إستخدام النتيجة أيضاً في تقييم إستعمال المكتبة. و يمكن للنتيجة أن تساعد في إدارة أكثر فعالية مما يؤدي لتحسن مستمر و زيادة لإستخدام الخدمات و الموارد .

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DEDICATION

For my daughter, Hershey Mae Sulit-Leonen and younger brother, Ryan Christian Sulit to serve as an inspiration to do well in school, pursue a career on their own interest and a dream to obtain higher education;

For our mother, who continuously watches us from our Creator and without her, I would not be here where I am right now;

For our God Almighty, for all his graces and blessings. I owe my life to you.

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CHAPTER 1

INTRODUCTION

A library has always been referred to as the “heart of institution”. This metaphor was assumed to have been first stated by Charles Elliot, long-time President of Harvard, in 1873 (Weiner, 2005). This is viewed particularly in a larger extent (University), is measured by its services provided by its unique contribution to over-all goals of the university (Edem, Ani, Ocheibi, 2009). There are several types of library and one a college, institution or university is called “academic library”. The main purpose of an academic library is to support the teaching and research needs of the university (De Jager, 2002). Pritchard (1996) states that academic libraries are not separate units but part of the institution and their quality must be determined by their relationship with the outcomes that are important to the college or university (In Whitmire, 2002). Library plays a vital role in teaching and learning particularly in an institution that demonstrates library usage contributes to student’s achievement will also reflect university effectiveness.

Very little library literature is published on the library’s contributions to institutional effectiveness and most emphasize on the input/output measures and program evaluation rather than impact. According to Poll & Payne (2006), library impact should support the institutional goals and objectives. A good example of impact of the libraries in relation to institutional goals is effective teaching resulting in higher grades. Students with higher grades can be influenced from others and one of it could be the library usage.

Assessing impact is not easy and it is often not possible to find proof that will evaluate the impact of library usage to academic achievement. In a recent study conducted by Wong and Webb (2011), it was stated that the Hong Kong Baptist University (HKBU) Library contributes positively to student academic performance and university's effectiveness as it was showed positive correlation of book check-outs and the student's grade point average (GPA).

1.1 Role of the Library in Institutional Effectiveness

Local organizations such as Ministry of Higher Education and Scientific Research (MoHESR) created library measures that focused on input/output. Accrediting agencies like Commission on Academic Accreditation (CAA) followed the standard requirements from libraries. The UAE Standards for Licensure and Accreditation (2011) relevant to the Library states that the institution should provide learning resources and services for students and faculty members that adequately support teaching and learning, and research in ways that are consistent with the institution's mission and goals. The institution should demonstrate in evidence the information needs in order to support the curricular offerings at the appropriate level for the programmes. In addition, it is worthwhile to consider looking at the international standards such as Association of College and Research Libraries (ACRL) Standards for Libraries in Higher Education (2011) and Association of Research Libraries (ARL) which will be a tool for planning and assessing the value libraries bring to institutional effectiveness. These standards can make a statement of

what libraries are, what they do, and how they contribute and add value to the institution and to the community.

1.2 Background of the Study

In order to achieve its licensure and accreditation of the programmes offered, a series of visits from Commission on Academic Accreditation (CAA) and Ministry of Higher Education and Scientific Research (MoHESR) were faced by the Library to assess current resources and being able to provide a description of library provisions for collection development and services that need to be improved in order to support the programmes. Since 2004, BUiD Library has started developing its print collection and access to electronic resources relies on the cooperative agreement between BUiD and UK University partners. Over the years, acquisition has focused on developing the gaps on the availability of the required readings as stated on the module descriptors. In 2009, Library acquired a total of 3,774 titles, whereby the largest number of acquisition were in 300-399 class of Social Sciences and Education with 1,135 titles, followed by 600-699 class in Engineering, Management and Materials Science collection with 911 titles and the 400-499 collection in Linguistics/ Language with 720 titles. However, in the year 2010 and 2011, there was a dramatic decrease in number of acquisition due to financial constraints. A detail of the total acquisition by classification from 2009 to 2011 is can be found on Appendix 1.

The acquisition table shows that the recommendation from accrediting bodies across all programmes, which is to develop its collection and being able to demonstrate an appropriate library acquisition plan was addressed in order to support the teaching and curricular needs of the programme. Thus, the need to evaluate the existing collection through collection analysis should be considered to identify the strength and able to improve its weaknesses. However, the development of electronic resources is not covered in this study.

1.3 Significance of the Study

Academic libraries exist in an atmosphere of changing resources, stakeholder expectations, technologies, and scholarly publishing (Cassey, 2011). On these days where assessing the collection size, circulation statistics, and usage of databases have changed dramatically may not be sufficient for the University administration especially during financial constraints. The significance of this study is to identify if there is a relationship between book check-outs and the student's academic performance. Also, it will facilitate assessing how and why a graduate student uses the library. With its limited resources, being able to show if checking out of books can contribute to student academic performance becomes relevant to find out in order to assess the value of print collection in this new world of changing economy in information resources. Also central to the research agenda is the assessment of library use particularly at a Master's level for their research and study. Finally, the findings could assist the Librarian to demonstrate

effective management and leadership practices that result in continuous improvement with an increasing use of resources and services during periods of turbulence.

There was no previous survey conducted at BUiD Library, thus, the researcher found out that there was a library survey held last 2006, and due to staff leaving the University, no formal report of the survey was conducted. This study can be considered as unique to BUiD Library that aims to assess the use of print collections of students who graduated from 2009 and 2010 to determine if there is a relationship between academic performance and the number of books check-out during their course of study in the university. Secondly, it also covers how the current registered students view the Library that will facilitate to improve its collection and services for future students of the University. There are two groups of participants in this study: (1) students who graduated from 2009 and 2010 to investigate if there is a relationship between book check-outs and academic performance; and (2) current registered students for 2011-2012 on how they perceived to use the Library resources and its services.

1.4 Research Questions

The following types of questions were developed to act as a guide in completing this study. They are listed below:

1. With its limited resources, being able to show that there is a large number of acquisition for the last three years, is there a correlation between check out

books and general point average for students who graduated from 2009 and 2010? Does library usage contribute to academic success?

2. What are the most important library resources to Graduate research? What are the common problems faced by a Graduate student in research?
3. Having the majority of Master students studying part-time, what are the different strategies a Graduate student uses when seeking information resources?

To find out if few researches has been done to support these research questions, very little literature has been published on the effectiveness of library use on academic achievement and its contribution to institutional goals.

1.5 Research Hypotheses

There are many indicators of library effectiveness in student achievement have been investigated and implemented but little research have been published. In this study, the researcher seeks to answer the research questions. The first question asked does library use will have a relationship on student academic success at a graduate level. As mentioned earlier, the experimental project of HKBU Library on investigating the number of book check-outs for both undergraduate and graduate students have had a positive impact on student achievement. It was hypothesized that it does have an effect

on student achievement for Graduate students. This study aims to find out if the same hypothesis will be carried out.

The hypothesis for research questions 2 & 3 will support the researcher's own perspective on library usage. It is believed that graduate students heavily rely on access to information resources and thus below hypothesis are based on the researcher's initiative.

- Graduate students require an extensive access to a wide range of journal articles, dissertations and books. With the emerging trends in technologies, accessibility to these resources will be the common problems faced by a graduate student.
- Majority of Graduate students are studying part-time because they have to work to support their families. Having said that, access to information resources electronically would be the best format for them to work at home or remotely.

These hypotheses will be discussed further to the next chapter to determine the validity of this view.

CHAPTER TWO

LITERATURE REVIEW

The main purpose of this study is to investigate if there is a relationship between book check outs and their academic performance of Masters Students who graduated from 2009-2010. It also looks at how current students perceive using the library for its resources and services. The library literature offers very few studies on library use and academic performance at a graduate level. The information examined in this literature review includes thesis and dissertations, library association reports, and journal articles dealing with young adults and adults. If you input keyword in search terms like “student achievement”, “academic achievement”, “graduate students” we can get thousands of articles but if you limit your search to “library use”, “library usage”, “academic library”, “use of library”, we can get very few results. Several sources were used to locate these keywords, including Educational Resources Information Center (ERIC), ProQuest Thesis and Dissertations, and other various databases and the bibliographies of previously cited articles. Most library studies focus on the assessment practices and methods rather than the impacts of library use to students in relation to academic performance and institutional effectiveness. Few studies have been conducted if library usage does contribute positively to student academic performance.

2.1 Impact of Library Use & Academic Achievement

Researchers are trying to find different output measure on the impact of library use on student academic achievement. Many indicators were studied in assessing the impact of library use and one of those is to show the correlation of borrowing books in the library and their overall grade point average (GPA) which is the main focus of this study.

Most of the research studies investigated on library use is on undergraduate students and very few on graduate students. Very little research is published on determining the relationship of borrowing books and academic achievement. One of the first studies conducted on determining the relationship of book loans to academic achievement is the literature stated on DeJager (2002) study. He reviewed literatures that emphasize previous studies on library use and academic success as early as 1960's. Findings from studies (Barkey 1965; Russell et.al. 1982, cited in DeJager 2002) found a direct relationship of borrowing and their grade point average. In contrast, Hiscock findings in 1986 (cited in DeJager 2002) showed that he was not able to prove the relation between borrowing books and academic performance.

DeJager (2002) studies, attempted to see whether it is possible for undergraduate Economics students at University of Cape Town (UCT) with high scores has more borrowed books than those with low academic scores. He found out that borrowing of books for students in Economics seemed no influence on the marks with a response that Economists does not read books. After this finding, the UCT library system was changed

and was unable to get student records to investigate for other disciplines. However, by the end of 2000, with the new library system, he investigated once again and found that there was a possibility of establishing a correlation between book loans and student achievement in certain disciplines.

A recent study conducted by Wong and Webb (2011) showed that there is a mathematical correlation exists between student cumulative grade point average and their loan of books and audio-visual for Hong Kong Baptist University (HKBU) students both at undergraduate and graduate level. The study was experimental and has defined one variable that had a positive impact on student learning is the book check-outs. The study does not include the use of electronic resources and focused on the number of check outs which did not include renewals. From the results, it was statistically proven to be valid that students who have borrowed more library books and audio-visual materials, the higher GPA they acquire; neither students that have higher GPA have more library books and audio-visual materials use. The result brings about that the library plays a vital role in student learning and their academic success. Out of 7 faculties, the result showed to be proven valid for five faculties. Thus, it may demonstrate that the other two faculties are heavily reliant on multimedia or electronic materials. Similarly, according to Goodall and Pattern (2010, p.160), a recent study conducted by Huddersfield University Library staff has found a historical correlation between library usage and degree classification. It appears that students “who read more, measured in terms of borrowing books and accessing electronic resources, achieve better grades”.

2.2 The Role of the Library

There are several ways on measuring the impact of library services on academic success which may vary on specific investigation whether it is a school, public or academic library. Several studies showed that information literacy programmes has an impact to academic achievement. Information literacy (IL) is defined as provided by CILIP (2011): “Information literacy knows when and why you need information, where to find it and how to evaluate, use and communicate it in an ethical manner”. IL is part of learning as a student. Typically, it includes orientation to library facilities, resources and services; systems organization and use of information tools to locate resources (Madland 1985). Findings from studies (Dreifuss 1981; Fernberg 1983, cited in Madland 1985, p.163) that while many teachers assume that graduate students have acquired the basic research skills during their undergraduate years, there is no need for library instruction.

One of the early studies on information literacy that has an impact to academic achievement was conducted by Corlett in 1974. She investigated the relationship of library orientation to college freshmen enrolled in English class with academic success given the criterion used was the grade point average at the end of the semester. She had used the Library Orientation Test (LOT) to measure library skills usage. The multiple regression analysis was used to determine the relationship. She found out that LOT appeared to be valid for forecasting success in college. Klaib (2009) conducted a study on the resources and methods used in information instruction provided at private university libraries in Jordan. Different instructional methods were identified and showed that there is a weakness in delivering various methods of information literacy. He used Statistical

Package of Social Sciences (SPSS) to analyze the data. He found out that 85.7 % of responding libraries do not use credit or non-credit courses specialized in library use and have no curricula exercises/ unit. It has been recommended to allocate specialized credit or non-credit course that will support and increase library use. An extension of recent study by Wong last July 2011, co-authored by Cmor investigated if correlation exists between library instructions attendance with student academic achievement in higher education settings. The study states that if more than one or two library workshops were offered, there is a higher tendency of having a positive impact on the final GPA. The results indicate that library instruction has a direct correlation with academic performance if certain number of workshops is provided.

As far as graduate students are concerned, Madland (1985) has designed a library instruction program for graduate students. Many faculties believed that graduate students have already grasped the basic skills on how to do research and writing their thesis. Eventually, only 14 percent of the students had prior knowledge to graduate-level library instruction (cited in Madland, 1985). It has been proposed that students should be taking the Research Foundation course as a preliminary work for their master's thesis. The process of library instruction begins with literature review. The librarian will visit the class for a 50-minute session to present organization of materials, research strategies, how to find information. At the end of the session, students are invited to sign up for individual consultations at any point during their research process. This process continues to flourish since then but in class library instruction has drawn up two advantages: (1) all

graduate students were given the chance to expose on basic library skills and (2) it is efficient.

Another indicator for library use that may have an impact on academic success may include the usage of automated library systems. A recent study was conducted by Ossai-Ugbah (2010). He examined the use of automated electronic information services by students of Nigerian Universities with student's academic performance. Internet usage has been modernized in automated library service in selected Nigerian Universities. Ossai-Ugbah's study attempted to find out the impact of automated library services and usage. He came up with four null hypotheses and used Chi-square test of significance to test the significance. The result shows that there is a significant relationship in the academic performance of students with automated library access and those without. This suggests that as the information access is changing, the means of accessing this information is also changing.

2.3 Library Use & User Satisfaction

Library use and user satisfaction are two multidimensional concepts. One for instance is the library user as the object and his/her opinions using the library. Secondly, user satisfaction is indirectly measured using a certain number of indicators in assessing library performance (Niyonsenga, Bizimana 1996). Central to the research agenda, assessing the library use of graduate students becomes an interesting task. There are very few studies are related to library usage of graduate students. This is because it is

generally assumed that the basic skills of research and writing have been developed at undergraduate level and that they can apply these skills to their research and thesis writing (Madland 1985; Zuber, 1987; Onwuegbuzie, Jiao 1998).

The only literature that has been found relevant to graduate students was conducted by Kayongo and Helm. Their study showed how graduate students use their library and how they acquire relevant research materials. Kayongo and Helm (2010) stated that Notre Dame (ND) graduate students found that their library collections are very useful in their research and studies. The method used was an online survey that contains quantitative and qualitative questions as well as options for additional comments. The survey questionnaire consists of research purposes, reasons for visiting, frequency of use of library resources, methods used to find resources, ranking of most important library resources and the level of satisfaction on library collection and services. The results showed that a large percentage of the graduate student contacts with the library, regardless of the method, for their own research and studies. It also pointed out that the ND library system most often had the books and journals they needed for their research either in print and electronic. The findings showed that for graduate students, their dependence in research is heavily reliant on the access to collections and reference queries to subject specialists are less important.

A study conducted focusing on undergraduate use of library was conducted by Grimmes and Charters (2000). They examine the extent of time spent in the library of undergraduate students in Economics at Mississippi State University (MSU) and had identified the factors influencing students on the time spent in the library that facilitate to

learning. The results reveal that students in the sample have limited formal instruction in library skills with only 10.7 percent during the semester. There are different library activities included in the survey and the most popular is the use of photocopying facilities and secondly, as a place of study. Only about half of the students are using the library's online catalog or internet connections as a research tool. Even fewer students about 38.5 percent are using the library reference services. The findings showed that the research skills of undergraduate Economic students at MCU are likely to be problematic if much of their time spent in the library includes making photocopies and socializing.

The Library should act as a Learning Centre and plays a larger role in providing access to a broader world of information. This study introduces two approaches to perceive the library use of graduate students who is believed often make an extensive use of library materials.

CHAPTER THREE

The British University in Dubai

3.1 Institutional Profile

The British University in Dubai (BUiD) situated in United Arab Emirates, known as the Middle East's leading non-profit research-based postgraduate university, was established in 2004. As the University is young and growing, it has now over 25 full-time staff both academic and administration positions with more than 480 full-time/part-time students. BUiD is accredited by the UAE Ministry of Higher Education and Scientific Research and internationally recognized for its top quality education, which is on partnership with British standards in association with top UK-based universities including the University of Edinburgh, the University of Birmingham, the University of Manchester, Cardiff University, King's College London, and the Birmingham Business School at University of Birmingham. BUiD offers full-time and part-time research based Master's Degree programmes, the regions first accredited Doctorate in Education and Continuing Professional Development courses in: Education, Finance and Banking, Human Resource Management, Information Technology, IT Management, Project Management, Systems Engineering, Construction Law and Dispute Resolution, and Sustainable Design of the Built Environment. Following to the emergence of the new post graduate programmes, the University aims to offer undergraduate programmes in September 2012.

In the report issued by the Office of Quality on University Strategic Review in 2006, the British University in Dubai (BUiD) achieved licensure from Ministry of Higher Education and Scientific Research (MoHESR) and accreditation for six Master's programmes: Information Technology, Project Management, Education, Environmental Design and Buildings, Finance and Banking, and IT Management. From February 2009, new programmes were offered simultaneously: Systems Engineering, Intelligent Building Design and Automation, and Construction Law and Dispute Resolution. Recently, the Doctorate in Education, Construction Law and Dispute Resolution programme has begun in September 2009 followed by the PhD in Project Management that will commence in September 2012.

3.2 Student Enrollment

The British University in Dubai (BUiD) opened in September 2004 and has now registered 905 students. In the academic year 2009-2010, BUiD has registered 107 Master students and 20 Doctorate students of whom 63 were female and 64 were male. The current modes of study are full-time with 29 students and part-time with 98 students. Majority of the students at a post-graduate level are professionals working in their own field of specializations and therefore, part-time mode are more convenient to students studying in the evening. The majority of students are UAE Nationals with 47 students and other Arabic speakers coming from other Arab countries with 47 students. International students from other countries were 26 and 7 students are English native

speakers. A detail of the overall enrollment statistics of students from 2004-2011 can be found on Appendix 2.

In 2011, BUiD has a total graduate of 307 students of whom 171 are female and 136 are male. Only 20% of graduates have passed with distinction. In the academic year 2009-2010, BUiD had a total of 116 graduates of whom 67 were female and 55 were male. There were 28 students who graduated with distinction of whom 19 were female and 9 were male. There were 91 students who are studying part-time and 25 students are full-time. This study will focus on 2009-2010 graduates to investigate the correlation of library use to academic achievement.

In the academic year 2011-2012, BUiD registered 300 students pursuing their Master's degree and 31 Doctorate students under taught modules of whom are 252 are part-time and 79 are in full-time mode. In addition, there were 131 students registered working on a Dissertation of whom 68 were female and 63 were male. There were 121 students working full-time and 128 students were part-time. The second part of this study will focus on 2011-12 enrollments as target participants on the questionnaire survey on use of the BUiD Library.

3.3 BUiD Programmes

Students who have met the minimum entry requirements may pursue to register in any of 11 graduate programmes for Masters and one at Doctorate level. Each programme

is associated with a leading UK University in order to aid BUiD to meet their sets of standards for excellence in research and teaching.

Overall, the largest programme is Project Management with 36%, following Master of Education with 18% and Sustainable Design and Built Environment with 12%. In 2009-2010, the master programmes that have the largest number of enrollment are Education with 21 students, Project Management with 16 students and Sustainable Built Design & Environment with 15 students. Other programmes have less than 10 enrollments. These top three programmes are consistent for academic year 2010-2011 and 2011-12. Summary of enrollment per academic year by programme can be found in Appendix 3.

In order to complete the programme, the required number of months for full-time students should have at least 12 to 18 months and a minimum of 24 months for part-time students including the eight months of working on dissertation. Every student is registered on the student database for five years (60 months) until their registration has lapsed, they will need to be re-admitted on the programme which rarely happens. There are 5 students who have graduated from this year 2009-2010, with the length of months to complete the programme between 12 to 18 months for full-time. Students studied part-time graduated within 24 months to a maximum of 30 months were 12. However, those students who have graduated more than the required months to complete their programme either part-time or full-time, indicates that 19 students has either suspended their study for a period of time nor have requested to extend their dissertation submission that

delayed them in completing the programme. One student has reached 66 months in order to complete the programme and was re-admitted.

3.4 The Services

The University is starting to grow every academic year as shown on the enrollment summary per academic year (see appendix 3). Services to students where academic support is concern is Academic Advising, which is common across all programmes like giving each student a Personal Tutor, Module Tutor, and Dissertation Supervisor; a different supervision to Doctorate students through Director of Studies, Academic Advisor from UK University partner and Second Supervisor where appropriate was provided to the students that plays an important role to student learning. In addition, there are services provided by Students Services Office. These may include career guidance and counseling, employment information, accommodation, lost and found, student hub, and Alumni society. To know the full listing and description of the University services, see the BUiD Student Handbook - September 2011 issue.

One of the popular-known services is the workshops conducted by Academic Success Unit (ASU) to students by the Learning and Teaching Advisor. Each new intake are required to take the Skills Audit which assess their academic writing and to advised on what workshops are recommended to improve. Referencing workshops are mandatory and are conducted in two parts to acquaint students to avoid Plagiarism. There are also mandatory writing workshops across all programmes to support them during their study

in the University such as writing critiques, writing a research proposal, data commentary & analysis, writing critically using evidence to support ideas/arguments, writing description of context/problem, analysis and solutions. Apart from the workshops of ASU, Library skills sessions are scheduled to acquaint students on how to locate and access information are conducted by the Librarian. The sessions offered by the Library include library orientation, in-class library instruction, using databases, using the Library, and specialized information skills for Education, Finance and Banking, and Sustainable Design of Built Environment in particular. These sessions are conducted on a trial and error basis and there are no regular or mandatory sessions offered at a particular period. However, no evaluation method has been made to ensure that the impact of these services on facilitating student learning.

3.5 Library Feedback

Breavik (1987, p.44), states that the way to assess quality in a college is “by the resources for learning on the campus and the extent to which students become independent, self-directed learners”. The establishment of the BUiD Library challenges the Librarian to select and acquire resources based on its mission to support the teaching, curricular and research needs of the University in a variety of formats. BUiD Library plays an important role in accrediting programmes and has seen a rapid growth of its print collection even during the time of financial turbulence. Three factors were considered to improve its print collection: (1) availability of the resources as stated on the

module descriptors, (2) recommendation of academic staffs; and (3) through the feedbacks of accrediting agencies to assist the Library evaluates its existing resources. Whilst, access to electronic resources is one of the key resource that is continuously changing is dependent through cooperative agreements of the University with UK University partners. Recently, the need to build BUiD's own electronic resources is progressing due to the demands of students who do not have access to electronic resources. However, this study does not cover the use of electronic resources thus will provide a brief discussion on the importance of electronic resources at a Graduate level at a later part.

In order to assess the quality of resources and services provided by the Library, the Office of Quality is conducting three types of surveys that may be relevant to the Library: (1) the Academic Staff-Student Liason Committee (ASSLC) meeting includes two student representatives by cohort to raise any issues and concerns during their study in the University; (2) the module feedback survey held every semester by the students by module through an online questionnaire; (3) the Annual Review Report where faculty representatives are present to raise their issues and concerns, points of interest and recommendation.

In the report issued in October 2010 by the Office of Quality on the University Annual Review, states the following areas of concern by programme relevant to the Library: (1) Project Management - library provision for Abu Dhabi group of students to have physical access to key readings and common books relevant to the programme; (2) Finance & Banking – to provide direct access to electronic resources; (3) Systems

Engineering – the number of books available in the library has improved compare to the previous year; (4) Informatics – students are facing difficulties on accessing electronic resources. Only one point of interest has been raised for Finance & Banking that is on electronic resources issue, “it has been recommended that an option of providing a “Reader” that includes all recommended literature (articles) should be considered by programme team”. In the following year (October 2011), issues and concern rose from October 2010 review is still pending. The library provision for Abu Dhabi students for Project Management and a request to produce a list of dissertations currently held by the Library for Project Management in response to get more guidance on research topics; Human Resource Management – students are facing issues on accessing electronic resources, in response, the Library has arranged for a specialized session specifically for this programme; Finance and Banking – access to electronic resources has not been resolved, and was recommended to subscribe to databases; Education has the same issue on access to electronic resources. Appropriate support for both programmes was being provided by the programme team and library staff to ensure the availability of required articles to students. However, this will not suffice the research needs of the students. It has also been suggested that library sessions should be mandatory for new students (BUiD, Annual Reviews). These library feedbacks were raised during Annual Reviews and should be addressed to the Librarian to respond and consider for library planning both in short and long term plans and to maintain the strength of its services. It has been found out that not all these issues and concerns where addressed to the Librarian to give an appropriate plan of action.

The Office of Quality regularly conducts the module feedback survey at every end of the semester requesting evaluations of University services. This includes overall students' participation to assess the University teaching and services every semester by programme through an online questionnaire. On the survey, it only state a general question related to the library, by rating if library resources and services were sufficient for the module. For the 2009 and 2010 survey results, Library received an average rating of satisfaction. Particularly in 2009, it shows that 42.10% of the students agree that the current resources and services were sufficient for their module. However, in 2010, there is a decrease on the overall satisfaction with 33.50%. This implicates that there are gaps in the resources and services that needs to be improved. This study can be applied to determine these gaps for future planning. Details of the overall results for the module feedback survey for 2009 and 2010 can be found in Appendix 4.

The Academic Staff-Student Liaison Committee (ASSLC) minutes of meeting was also considered to search for library feedback from a student perspective every year. The purpose of the meeting is to obtain comments on the programme that would enable the University to address any issues that could hinder the learning objectives and help academic staff to understand and improve the teaching environment and University services. The result of the meetings from 2009-2010 shows three main issues relevant to the Library: (1) access to electronic resources, where most of the programmes commented that they are struggling in accessing electronic resources; (2) there are insufficient books physically available in the library; (3) lack of information skills

session. This study will not cover on how these comments can be assessed however, it is recommended for future research.

3.6 Library Statistics

Library statistics can be helpful in understanding the graduate student research in a number of ways. Examining the circulation statistics, interlibrary loan analysis, and library session were the only services available from 2009-2010. Since the library acquired a new Library Management System (LMS) last September 2009, both old and new library system were considered for this study. Table 1 shows the total circulation count of book collection in 2009 and 2010 that was generated from the new library system.

Table 1. Circulation Count by Classification

Classification	2009	2010
000 - 099	41	71
100 - 199	26	68
200 - 299		1
300 - 399	423	1004
400 - 499	170	346
500 - 599	25	58
600 - 699	312	563
700 - 799	113	191
800 - 899	45	82
900 - 999		14
Total	1155	2398

In this study, book check-out is the main variable to identify if there is a relationship with student achievement. This circulation count indicates the number of

books borrowed by the students in a particular year and not those used inside the library. The Library uses the Dewey Decimal Classification system in organizing the collection. The collection that has high circulation count was the Social Sciences, Languages, and Technology. While there is an increase in student enrollment in 2009-2010, it also shows that there is an increase of library usage with 1,155 total book check out in 2009, and 2,398 in 2010 which doubled from the previous year. This implies that as the Library strives to improve its print resources, students are motivated to use the library.

Library offers database searching and has completed a total of 1,495 searches from 2009 to 2011. Of those 1,383 were only provided. The information on patron status and other related information were not clearly identified on particular Master programmes. These figures should be viewed carefully as 112 requests were not identified. The need to improve on this service should be considered.

Library offers regular library induction every semester. This 5-minute induction provides a brief introduction about the library but this will not suffice to know more about its resources and services. A separate library session on how to use your library is scheduled every semester to acquaint new students of the available resources including a quick tour in the Library. Various information skills sessions were scheduled every semester by programme. Of which session for Faculty of Business specifically for Project Management, Human Resources Management, Systems Engineering and Intelligent Building Design Automation is repeated thrice due to the number of students registered in the programmes on how to find information resources. Other programmes were offered once either through in-class library instruction or on a definite date and time in

coordination with the Head of Programme. This statement do not tell us which faculty receives the most session but do give us an indication of which programme emphasizes library skills training.

CHAPTER FOUR

Research Design and Methodology

It is believe that graduate students often make extensive use of library materials (Kayongo and Helm, 2010; Parrish, 1989). The British University in Dubai is comprised of graduate programmes both at a Master's and Doctorate level. This study sought to determine the extent to which the library meets the needs of a Master's student. It focused on how students use the library in their research and studies and how does this contribute to their academic success. Three questions were developed to act as a guide in completing this study. They were:

1. Is there a correlation between book check outs and grade point average (GPA) for students who graduated in 2009 and 2010? Does library usage contribute to academic success?
2. Having the majority of Master students studying part-time, is there an impact of the duration of study to student achievement?
3. What are the most important library resources to Graduate research? What are the common problems faced by a Graduate student in research?

As discussed in the literature review, little research has been carried out to find out if library usage does contribute to academic success for Graduate students. Most of the research conducted was specifically for undergraduate students that may require

knowledge on basic skills on how to do research and use of the library. Because there are many indicators to assess the effectiveness of library use to student achievement at a Masters level, this study is hoping to add to this field.

4.1 Research design

This quantitative study has been designed to use the Spearman's R_s : nonparametric test of correlation and a 2-tailed significant test for analysis. This method is commonly used to measure the relationship of two variables. According to Greene & D'Oliviera (2006) correlations are measured in terms of coefficients, which indicate the size of a correlation between two variables. The interpretation of the correlation coefficient "r" will be used to satisfy the assumptions.

Wong & Webb (2011) states that "a two-tailed significance tests will be carried out on the sample coefficient (r) to examine if it could provide valid inferences from the sample to the corresponding population". Therefore, a two-tailed significance tests will also be carried out on this study.

To investigate the impact of library use on student's achievement, two approaches have been considered on this study. These are:

Approach one: The researcher used the group of students who graduated from 2009 to 2010. These two groups is the first batch of students that has utilized both the old LMS and the new one. These years were the period when the Library was trying to improve its print collection. Both LMS is considered to identify the number of check-outs

for this group. The relationship of book check-outs and their final GPA can be studied and interpreted.

Approach two: The researcher used the current students registered for the first semester of academic year 2011/12. An online survey questionnaire was sent to this group to analyze how students perceive the Library at this developing stage of improving the resources and services.

4.2 Population of the Study

There are two groups of participants identified in this study: (1) students who graduated from 2009 to 2010; and (2) current registered students from September 2012 intake.

The first group is composed of 116 graduate students where 62 were female and 54 are male. The two independent variables in this group were (1) overall GPA of the students, and (2) the number of book check-outs during their study in the University not including renewals. The result hopes to establish if there is a relationship between borrowing books and student achievement. The use of electronic resources is not included but will be a subject of a brief discussion at a later part of this study.

The second group focused on how and why they use the library. An online survey questionnaire was sent to students to participate in this survey. There are a total of 312 students who were registered for September 2012. The result may be linked if a graduate student uses a library for their research and studies that will have an impact on student

learning. Overall, the results may provide valuable implications such as helping the University Librarian to develop and improve its long range plan of the library and to show as an evident to the administration the needs of a graduate student to support their research needs.

4.3 Sample and Sampling Procedure

The research is designed to collect information from the Head of Student Services and students over a period of two months. For approach one, a complete list of graduate students from the targeted year was received from the Head of Student Services with the final GPA. The full list was considered as the sample and 116 graduate students were identified. As for the second approach, an email has been sent out to registered students to participate in the survey. A reminder email was sent weekly to encourage students to participate on the survey. A random sampling was done, 45.3 % of them have responded to the survey questionnaire.

4.4 Instrumentation and Data Collection

There are two instruments were utilized to collect data: the GPA spreadsheets and the student survey questionnaire. These tools have been designed to collect appropriate and accurate data. For approach one, a list of students who has graduated from 2009 to 2010 were requested from the Head of Student Service after receiving the approval from the Registrar to disclose the overall GPA of selected students. The list given by the Head of Student Services were checked against the circulation report which was generated

from both Library Management System (LMS) to check its accuracy. BUiD Library comprises majority of print materials and a very few audio-visual materials. According to Wong & Webb (2011), audio-materials are part of the library usage. However, no audio-visual materials were borrowed by the first group. As for approach two, a total of 312 registered students both part-time and full-time were emailed requesting to participate in the online survey.

4.4.1 Group one: Students overall grade spreadsheet

In order to collect student's GPA who graduated from 2009 to 2010, the researcher constructed an instrument which is in a tabular format (see appendix 5). The table format consist of student's ID, programme, nationality, gender, months completed the programme, study mode, class (pass and with distinction) and number of check-outs.

4.4.2 Group two: Students online questionnaire

The questionnaire part of collecting data comes as a supplement to support the findings of student's grade point average (GPA) and book check out. The researcher wanted to know if how graduate students use the Library. This may also help the Librarian to assess current resources and services of the Library to improve for future planning. The researcher sent an online questionnaire to 312 students who are currently registered for Semester 1 of academic year 2011/12.

4.4.3 Questionnaire design & structure

The last library survey conducted was held in 2006. No formal report has been submitted, so there is no other way to track what have been the results or the needs to be improved. This study can be considered as a pilot study for the Library. The purpose of this survey is to assess the current library resources and services on a student's perspective. In this way, this study can document the results of the survey to show as an evident to the top administrators the value of improving the resources. Also, this will help the University Librarian to identify the areas to be improved.

The questionnaire (see appendix 6) has a brief introduction on the purpose of conducting the survey. This twenty items questionnaire comprises with three parts: Using the Library, Resources and Services, and Demographics. The large portion of the questionnaire deals with Resources and Services. Both open and open-end questions were used to construct this questionnaire. In part 1, there are six questions related in when they are visiting the library and their reasons for visiting, how they rate existing physical facilities and the accessibility of information sources. The second part deals with resources and services, there are nine questions related on how many times they have been acquainted by the library staff, how often they use the current services and six questions on which collection/ services they feel that needs to be improved or beneficial to their programme including the overall satisfaction of using the library. Finally, the third part is composed of four questions on demographics related to age, programme, gender, geographical location and a portion to add any comments to the Library.

4.5 Ethical Considerations

As a common ethical practice to pursue the study, an approval from the University Registrar is needed to request permission to access information particularly on the final GPA of the graduate student in coordination with the Head of Student Services to obtain a list of graduate students from 2009-2010 and to ensure the confidentiality of information. The researcher sends a written request (see appendix 7) to the Registrar to seek approval allowing the Head of Student Services to disclose the required information.

4.6 Data Preparation

This quantitative research data will be in the form of student's overall grade point average and responses from students on the questionnaires. Descriptive and inferential statistics will be used to analyse the quantitative data. Both the student's overall grade point average and the results from the online survey shall be collected and entered into MS Excel format. The University has subscribed to Bristol Online Survey that was used to create the online survey questionnaire. As soon as the data were collected, both in MS Excel format shall be exported to Statistical Package for Social Science (SPSS) software to analyse and interpret.

4.7 Definition of Variables

According to Greene & D'Oliveira (2006), the variable that the researcher decides to test is known as independent variable. This is the number of books borrowed by

selected students. The overall grade point average of students and the total months to complete the programme are selected by the researcher independently is known as independent variable.

The definitions of variables under this study are:

Number of books check-out. Students registered in the programme are a bonafide user of the Library. Registered users are allowed to borrow books or any library resources depending on the type of user with a corresponding number of items allowed for borrowing. Students who are in taught module are allowed to take five items at a time. Students working on their dissertation have increased to ten items at a time as they may require more readings during their writing stage. The items borrowed can be renewed but does not include in this study. The total number of book check outs obtained can be linked to student achievement.

Overall grade point average (GPA). Students will normally be expected to pass all elements of assessment which count towards the final overall module grade. The minimum pass mark for all taught modules and the dissertation is 50% (Grade C). An average C grade across all modules is required to graduate in all programme. The British Higher Education System does not normally use GPA when calculating student status but in coordination with the Head of Student Services for the benefit of this study, we have identified the overall grade point average of selected students using the University's M-level grade descriptors. The GPA is selected independent by the researcher if there is an impact on the number of books borrowed.

Duration of study. This refers to the total number of months completed the programme. The allowed duration of study is calculated from the date of the first registration in the relevant programme and includes all suspend study periods. This variable was selected by the researcher independently that might have an impact on student success.

4.8 Procedure for Testing Hypothesis

As discussed in the literature review, various methods and/or a combination of methods were used to investigate research questions. This quantitative study is a correlational study that attempts to investigate the relationship of book check-outs and the overall GPA that can be linked to how Master students find information in order to attain academic success.

The data collected on GPA is an ordinal data. According to Greene & D'Oliveira (2006), "ordinal data refers to scores that can be ranked in order from lowest score to highest score" (p.13). The test to measure an ordinal data is known as nonparametric test. In Brace (2009), states that when the data for one or two or both of the variables are not linear, then the researcher should use a nonparametric measure of correlation – Spearman's r_s , (Greek letter Rho), an inferential statistical test of correlation to analyse nonparametric data. This test will be performed by carrying out more than one correlation at once. There are three variables that will investigate the relationship between each variable with each other of the other two. The outcome of this statistical test will estimate the probability of obtaining the observed results assuming the null hypothesis is true. If

that probability is equal to or less than the significance level the null hypothesis is rejected or retained.

CHAPTER FIVE

Data Analysis and Interpretation of Results

This chapter will analyse the quantitative data of the two approaches in this study using the Spearman's nonparametric test, a two-tailed significance test and by using descriptive data to determine the relationship between library use and student's academic success. This chapter is composed of two sections: analysis of data collected on student's overall grade mark and the response from students on the use of library following interpretation of results on both approaches.

5.1 Description of Data

This section is designed to provide a general descriptive analysis for the two groups:

5.1.1 Group one: Students overall grade mark

There is a frequency difference of 8 between males and females with females contributing 53.4% of graduates in 2009 and 2010 (see table 2).

		Frequency	Percent
Valid	Female	62	53.4
	Male	54	46.6
	Total	116	100.0

Table 2 shows the distribution of gender of group one

Figure 1 (below) shows the frequency of the overall grade point average using a letter grade scheme. Grade A is interpreted as 'excellent' is composed of students who

has final marks between 70-100; Grade B interpreted as ‘very good’ is for students who has received final marks between 60-69; Grade C is interpreted as ‘ good’ with a final mark between 50-59. The minimum pass mark for overall is 50% (Grade C). An average C grade across all modules is required to graduate in all programmes. There exists that the frequency of students who have graduated with overall Grade A is 31.9% (see Table 3).

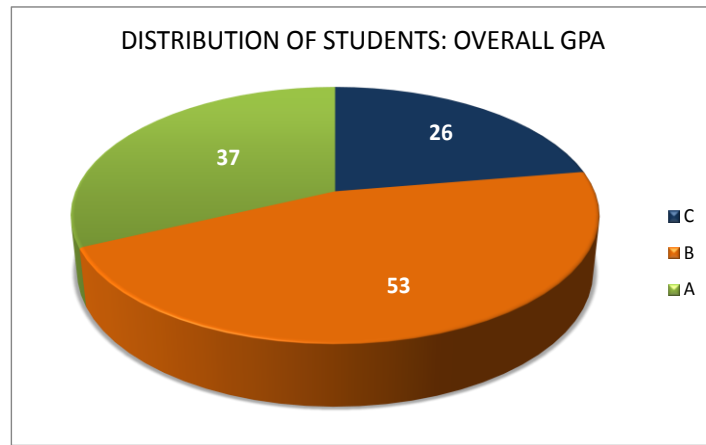


Figure 1 shows the distribution of students overall grade point average

		Frequency	Percent
Valid	A	37	31.9
	B	53	45.7
	C	26	22.4
Total		116	100.0

Table3 shows the overall GPA percentage of group one

Table 3 shows that 19 female and 9 male students graduated with distinction. This reveals that females performed better academically.

		Gender		Total
		F	M	
Class	Pass	43	45	88
	Pass with Distinction	19	9	28
Total		62	54	116

Table 4 shows a cross tabulation of gender graduated in a class

There is a frequency difference of 53 between pass and with distinction that have completed the programme at a part-time mode (see table 4). The two tables show that those females who graduated with distinction are studying part-time. This suggests that more females can manage their time between family, work and study.

		Mode		Total
		PT	FT	
Class	Pass	72	16	88
	Pass with Distinction	19	9	28
Total		91	25	116

Table 5 shows a cross tabulation of study mode with class

The programme has a large number of graduates is the MSc in Project Management with a total of 53. However, the programme that produced a large number of “A” grade is 10 from the Master of Education. This suggests that Master of Education programme is creating better graduates.

		Overall GPA			Total
		A	B	C	
Programme	Education	10	9	2	21
	F&B	8	3	0	11
	IT	8	4	1	13
	ITM	1	6	1	8
	PM	7	25	21	53
	SDBE	3	6	1	10
Total		37	53	26	116

Table 6 shows a cross tabulation of programme and the overall GPA

Table 7 shows a total of 116 participants in the study completed the Masters program at BUiD within a period ranges from 14 to 69 months (mean=37.31, SD=10.738). Further analysis reveals that the overall GPA for all the participants ranges between 2 and 4 on a scale of 4 (mean=3.09, SD=0.734).

	N	Minimum	Maximum	Mean	Std. Deviation
Months to complete	116	14	69	37.31	10.738
Overall GPA	116	2	4	3.09	.734
Valid N (listwise)	116				

Table 7 shows the number, mean and standard deviation of the duration of study

5.1.1 Analysis of book check-outs

Figure 2 shows the distribution of students according to the number of book check-outs throughout their study at BUiD. The figure reveals that the data is not normally distributed and represented by L-Shape (negatively skewed) with 43 (37%) students borrowed less than ten books throughout the entire program and 3 (2.6%) students borrowed more than 50 books. It is also noted from figure 2 that the overall

average number of books a student at the master program borrow from BUiD library is 17.35 with a standard deviation of 15.29.

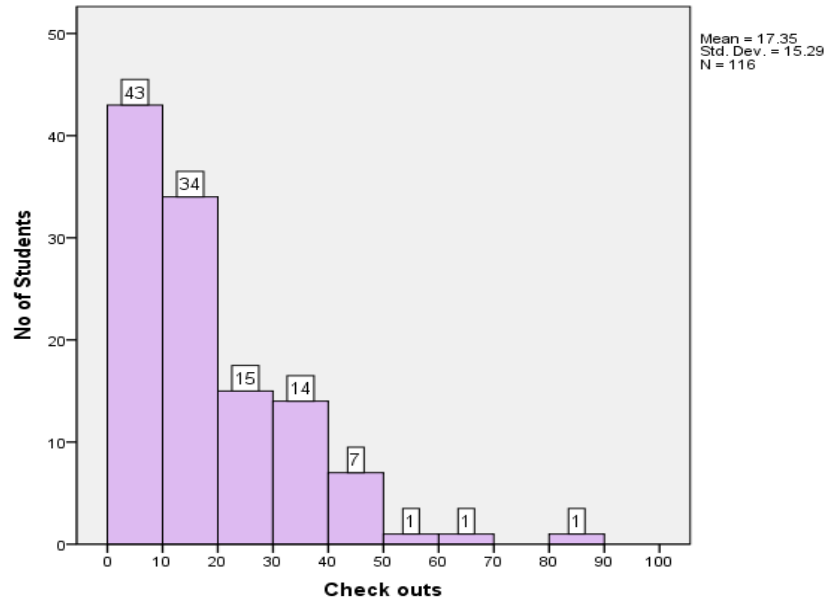


Figure 2 Distribution of students and the number of book check-outs

5.1.1.2 Correlations

Spearman's R_s correlation test reveals that there exists significant negative correlation between the number of months to complete the programme and the overall grade point average ($Rho = -0.292$, $N = 116$, $P = 0.001$, 2-tailed). In other words the higher the number of months to complete the degree, the lower the GPA obtained by the student (see table 8).

			Check outs	Overall GPA
Spearman's rho	Months to complete	Correlation Coefficient	-.007	-.292**
		Sig. (2-tailed)	.942	.001
		N	116	116
	Check outs	Correlation Coefficient		.168
		Sig. (2-tailed)		.072
		N		116

Table 8 shows the correlation of coefficients of variables

There exists no correlation between the number of months to complete the programme and the number of book check-outs ($Rho = -0.007$, $n = 116$, $P = 0.942$, 2-tailed). This reveals that the number of months to complete is not correlated with the number of books borrowed.

There exist a weak correlation that is not statistically significant between the number of books borrowed and the overall grade point average ($Rho = 0.168$, $n = 116$, $P = 0.072$, 2-tailed). In other words, the size effect reveals that only $= 2.82\%$ of the variation is explained that means this figure could be due to chance.

5.1.2 Group two: Student's online questionnaire

5.1.2.1 Quantitative questionnaire results

According to Krejcie and Morgan (1970), the relationship between sample size and total population is illustrated in Appendix 8. Based on the illustration the total population size of 300 should have a sample size of 169. In this study, the population size is 312 and the sample is 135. A total of 73 (54.1%) were female and 62 (45.9) were male.

		Frequency	Percent
Valid	Female	73	54.1
	Male	62	45.9
	Total	135	100.0

Table 9 shows the frequency and percent of gender for group B

Data from the questionnaire has been selected to supplement the findings for approach one. This section will interpret selected questions in three parts:

A. Use of the Library

Question 1 on how often students use the library shows that 61 (45.2%) students are visiting the library once every week (see appendix 9). Following question 2, the reason why students visit the library is to borrow books, and for reference/research are 22 (16.3%). Question 3 posed to question 2 if they find the resources they are looking for when visiting the library reveals that 73 (54.1%) students find the resources most of the time (see appendix 10).

B. Resources and Services

On the resources, question 7 was asked on how often they use the following library resources and services. The figure below shows how the

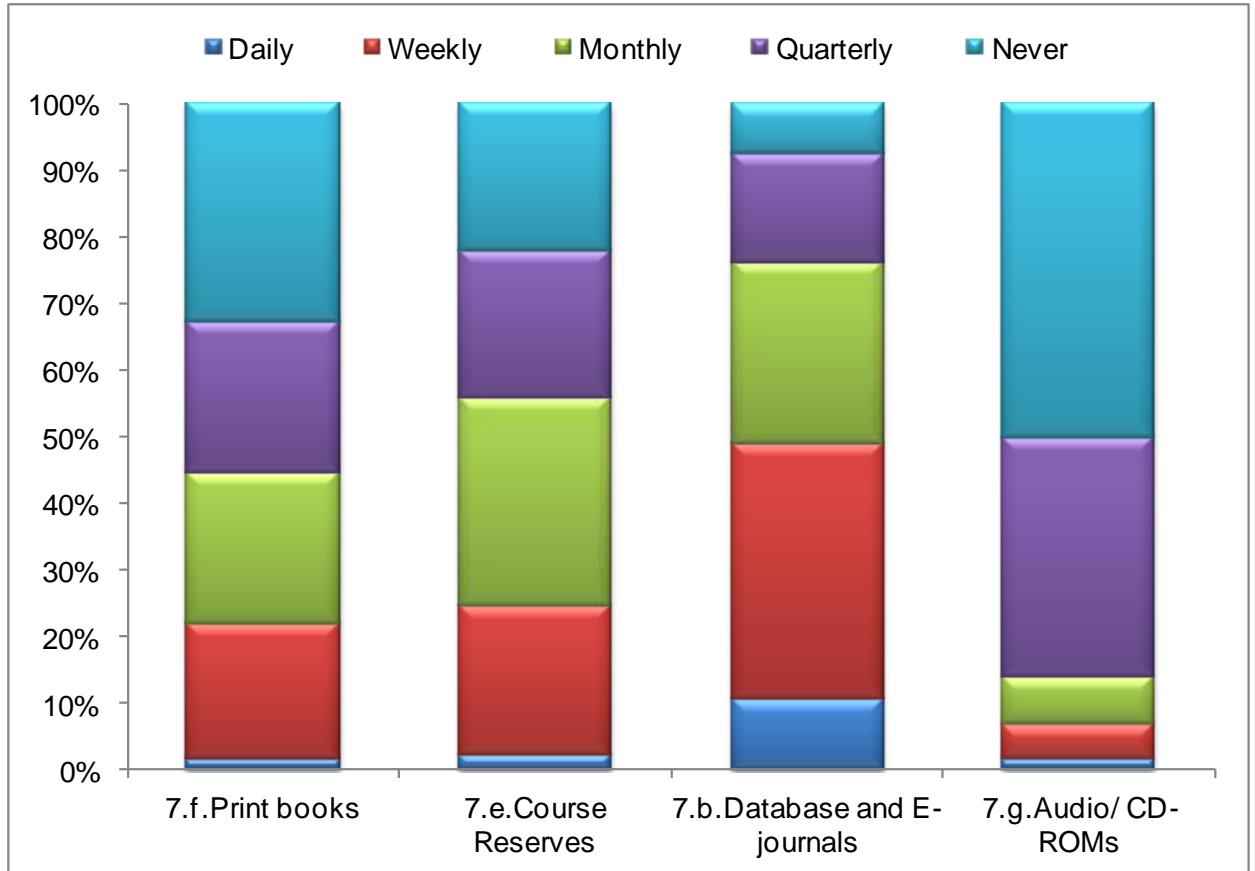


Figure 3 shows the overall use of library resources for Question 7

students use the following resources in the Library. It shows that 42 (31.1%) students never use print books during their study. This reveals that half of the sample size used databases and e-journals weekly with 52 (38.5%) students. Not surprisingly, use of Audio/CD-ROMs for Master

students is not appropriate for their study with 90 (66.7%) students answered that they never used it at all.

Question 8 asked which collection they would like to see to be improved. The figure below, shows that the collection area that needs to be improved is Social Sciences and Education with 63 students. 40 of them felt that it should be Business & Law and a frequency difference of four on Engineering. (See Appendix 11 for the suggested areas to be improved)

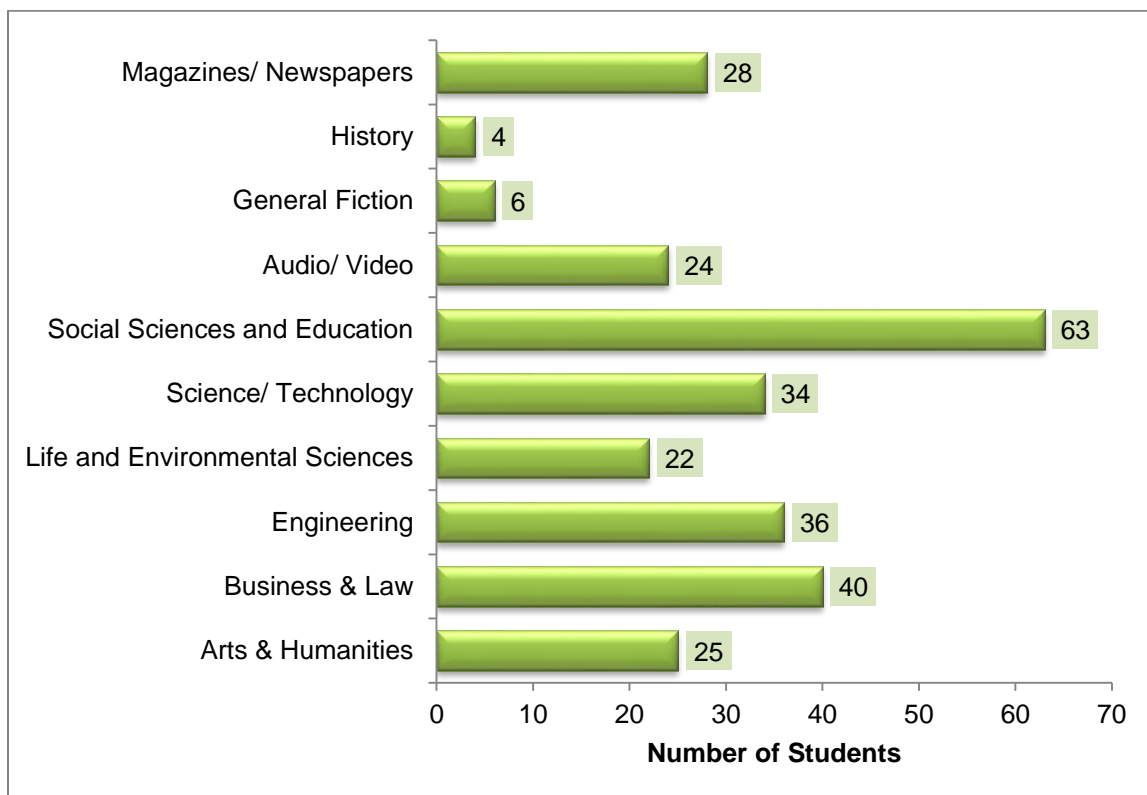


Figure 4 shows the areas to be improved on library collection

Question 7a, 7c and 7d were clustered as Library services namely: use of online catalogue, interlibrary loan and reference queries. This reveals that 48 (35.6%) students monthly used the online catalogue to find information available in the Library; 42 (31.1%) students monthly requests documents through interlibrary loan and 45 (33.3%) students weekly approached the library staff for reference queries (see figure 5).

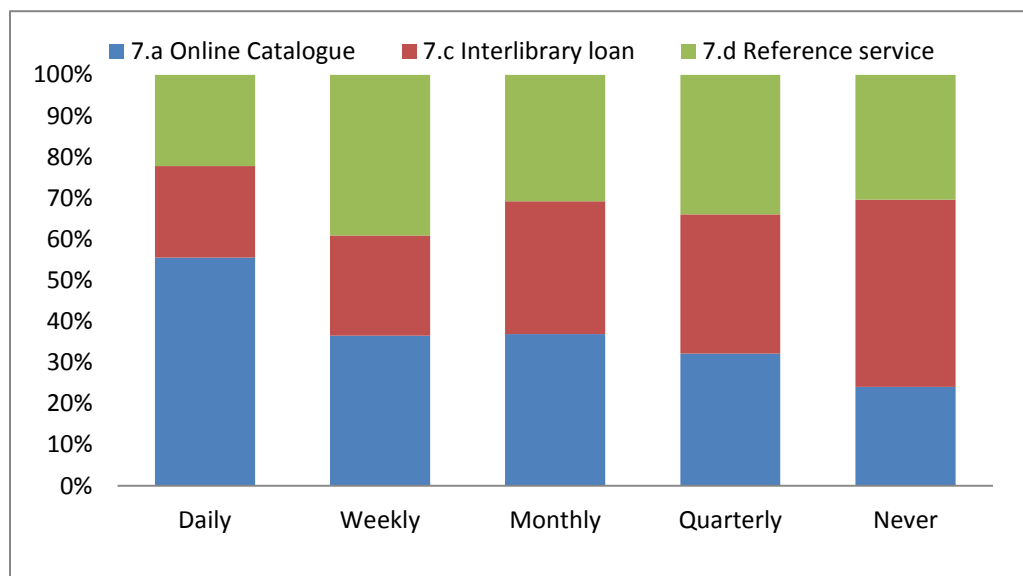


Figure 5 shows the how students use the Library services available

Question 10 asked on which library session did the students attended to gain information on Library resources and services. Figure shows that 46% have attended the University General Induction with at least five minutes talk about the Library. 21% of group B have been part of the in-class library session offered with a difference of 1% who attended a 50-minute library orientation.

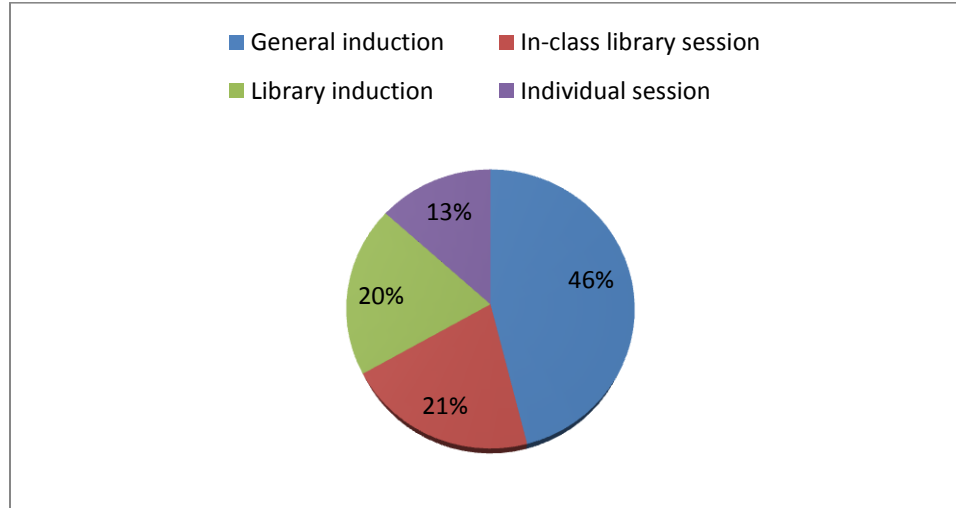


Figure 6 shows the distribution of library sessions attended by group B

C. Demographics

Question 16 to 19 asked questions on demographics. This section will describe the frequency of majority of the sample size. According to the tables (see appendix 12), it shows that there a larger number of female than male with 57 (42.2%) students age were between 31-40 and 59 (43.7%) where residing in Dubai. 44 (32.6%) students where from Master of Education programme.

5.1.2.2 Qualitative questionnaire results

Library online survey questionnaire also includes four qualitative questions. The researcher chooses below questions to supplement the findings of this study.

Question 15 asked the participants what they would like to see implemented or improved in the library to meet their needs.

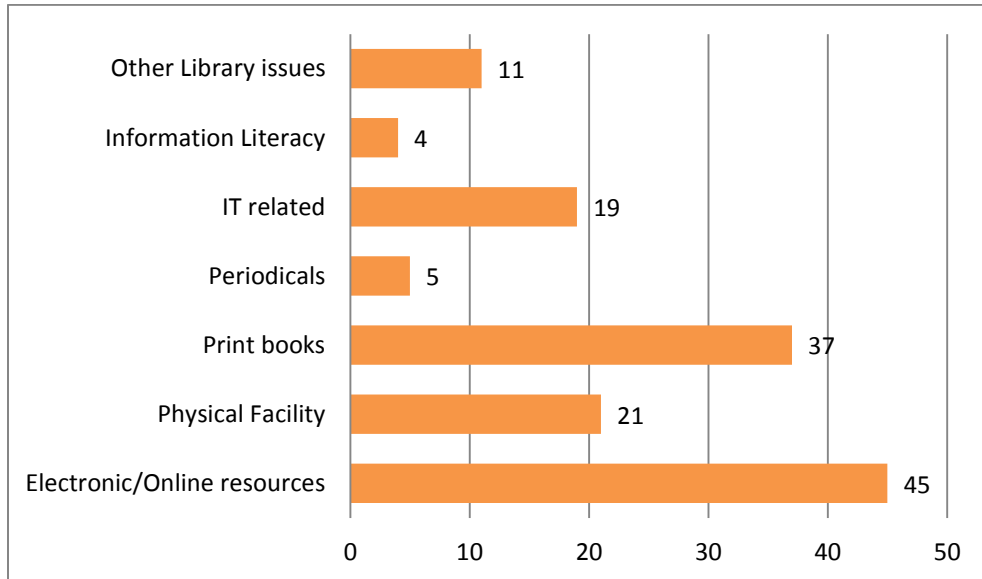


Figure 7 shows the frequency of the areas to be improved

According to the figure, there is a high expectation on developing electronic/online resources with 45 students and a need to improve print books with 37 students. 21 of them felt that there is a need to improve the space and other library facilities such as individual study carrels and group study room. 19 of them said that a change should be planned relating to IT services especially on printing and photocopying services. (See Appendix 13 for additional comments to the library)

5.2 Overall analysis

This section attempts to answer the research questions and thus accept or reject the hypothesis.

Research Question 1: Is there a correlation between book check out and general point average for students who graduated from 2009 and 2010? Does library usage contribute to academic success?

Hypothesis one: Student with higher number of books borrowed is believed to have a higher grade point average (GPA).

The findings reveal that only 3% percent has a positive impact on the number of book check-out to student achievement. Thus, it rejects the hypothesis as stated. However, it was seen that the duration of study to complete the programme has an impact on the overall grade point average.

Research Question 2: What are the most important library resources to Graduate research? What are the common problems faced by a Graduate student in research?

Hypothesis two: Graduate students require an extensive access to a wide range of journal articles, dissertations and books.

The result of the survey for question 15 reveals that the most important library resource to Graduate students to meet their research needs is to have access to electronic/online resources that includes e-books, e-journals and databases. Therefore, it accepts the hypothesis of the researcher's view.

Research Question 3: Having the majority of Master students studying part-time, what are the different strategies a Graduate students uses when seeking information resources?

Hypothesis 3: Accessibility and availability of library resources may result a positive behavior on seeking information.

Question 1 posed how often student's visit the library resulted to 45.2% who are visiting the library once every week which may link to question 2 that 54.1% find the resources in the library most of the time. In contrast, question 7 result showed that 38.5% are using databases and e-journals weekly. Therefore, the hypothesis can either be accepted or rejected.

The next chapter on Findings and Discussions will further discuss how these hypotheses can be linked to previous research findings and illustrates some research implications.

CHAPTER SIX

Findings and Discussions

This chapter will discuss the findings of this study thus will accept or reject the hypothesis stated on the earlier chapter. The discussion will be carried out into two perspectives based on the findings. Firstly, the correlation of library usage to student's achievement, results of the previous research and the researchers own viewpoint. The second part will supplement the findings in relation to library usage of Master's students.

6.1 Correlation of books borrowed to student's academic achievement

There are many indicators of library effectiveness that can be measured. One of these indicators is library usage that varies on different factors. A number of researchers attempted to investigate the correlation between library usage and academic achievement and this is not new at all either. Most of these studies were conducted to undergraduates. This is because according to de Jager (2002), "undergraduates come to academic institutions to gain enough knowledge, experience and skill to become graduates in their chosen fields. A library that wishes to serve this population should legitimately ask itself how much it has contributed to that process of enabling students to graduate". Findings from de Jager (2002) studies and the previous studies mentioned in the literature review chapter showed that there is a positive correlation between books borrowed and student grade point average. Although, one or two studies mentioned in the literature review that

resulted to negative correlation for specific disciplines, it has been proven to have a positive correlation after further investigations. For this study, however, book borrowing was used as one indicator of library use at a Master level. The researcher wanted to investigate if this perception is valid to graduate students who are believed to be the heavy users of the Library.

de Jager's first attempt to study the relationship between academic performance and library use was in 1995. The study was focused on undergraduate students on the main campus of University of Cape Town. The researcher found out that there is a high correlation significant of borrowing books and their marks for students of History and Sociology and seemed to have no influence on the marks for students of Economics. So, the question remains to find out for other disciplines. The researcher tried another investigation in 2002 which was carried out on a different group of population. Findings showed that there is a high statistically significant for students in Psychology. An interesting observation has been seen for English students who are the most actively borrowing a numerous number of books is regardless whether they obtained a high or low marks. It has been concluded that borrowing of books is indeed correlates significantly with academic achievement in certain subjects. The previous result for Economics students has now been possible to establish a correlation of book loans. Both study showed that borrowing books of undergraduate students has a positive relationship to their grade point average in certain subjects. This is mainly because other disciplines is using other resources such as electronic/ online resources or audio-visual materials.

As far as for graduate students are concerned the findings on the experimental project of HKBU Library includes both undergraduate and graduate students that resulted to 65% percent of the sample group has a positive relationship between book check out and the grade point average and only 35% have no clear relationships. The sample groups having a correlation strength very close to “large” includes Humanities-GS with $r=0.472$, Translation-GS with $r=0.471$, and Mathematics-GS with $r=0.494$ (Wong and Webb, 2011). The researchers concluded that the more library books and audiovisual materials they use, the higher GPA they acquire. It is neither simple nor obvious that Graduate students for the three disciplines at HKBU are the heavy users of their library. Therefore, it is proven in this study that graduate students borrowing of books has an impact to their grade point average. Although, it has mentioned for faculty that has a weak correlation that e-resources might be useful rather than borrowing of books.

For this study, a total of 116 graduate students for 2009 to 2010 have been selected to determine the relationship of book loans to overall grade point average. Among this sample group, this reveals that only 3% is statistically proven that there is a correlation between book check-outs and the overall grade point average for graduate students ($Rho=0.168$, $n=116$, $P=0.072$, 2-tailed). The remaining percent had no clear relationships. Therefore, the hypothesis mentioned earlier was rejected. Two factors that might be considered are the availability of library resources and the use of electronic resources which includes databases, and e-journals. According to McAdoo (2010), there are three issues or concern on the research process on writing a research paper or assignment: (1) students lack familiarity with the research process – many faculty

assumed that graduate students had already grasped the basic skills in research and thus, students are expected to know the research strategy; (2) topic selection – is one of the key challenges the students are facing if their topics are too broad or too narrow. As a result, they struggle of what search terms they will use; (3) a required resources is unavailable – many faculty introduce those textbooks and readings to the library. However, no library can have everything. Based on these issues, the findings of this study assumed that the library has inadequate resources to support the information needs of a graduate student. To supplement this assumption, the result of the library survey is considered.

A particular interesting observation found on this study on the student's academic achievement is the duration of study in completing the programme. The correlation coefficient of the months to complete the programme proves that there it is statistically significant on the overall grade point average of a graduate student. On the descriptive analysis for group one, it appears that there is a larger number of part-time (91) students than full-time (25). Having said that, this finding reveals that the higher the number of months to complete the programme, the lower the grade point average obtained by the student. While this finding has no indicator on measuring the impact of library use, it may become one of the pressing tasks to investigate.

A library survey has been conducted to supplement findings on approach one. The population size of the survey is 312 and, 135 has responded. Among this sample size, Question 7 related to resources and services, asked on how often they use specific library resources and services. The result reveals that majority of the graduate students are using databases and e-journals weekly (38.5%) to support their study and research. However,

there is a high percentage of 31.1% stated that they never use print books during their study. This percentage of non-usage of books is in contrast on the circulation count in Table 1. It appears on this table that circulation of books was doubled in 2010, the period that the Library is on the process of improving its print collection. The need for borrowing library material including the non-usage seems requires an investigation within each faculty.

From figure 3 one may conclude that a need to improve the electronic/online resources is the most helpful resource to graduate students following print collection, which may pose to question 8 on what collection areas they are expecting to be improved to meet their needs. From figure 4, it reveals that the first three subject collection that needs to be improved is the Social Sciences and Education (63), Business & Law (40), and Engineering (36). In contrary, table 1 shows the total number of acquisition per year, the subject collection that has a large number of purchases from 2009 to 2011 is the Social Sciences and Education, following Business that includes Engineering (see appendix 1). Surprisingly, it can be assumed that the current collections for these subject areas are not sufficient to meet the information needs of a graduate student. This assumption is proven based on McArdo (2010) that unavailability of a required resource is one of the issues or concern of students when completing an assignment or a research paper that might have an impact on student learning.

6.2 Student's questionnaire results

Among the 135 sample size, it shows that 56 students represent the Faculty of Education, 47 for Faculty of Business and 32 for Faculty of Engineering & Informatics (see appendix 12). According to Krejcie & Morgan (1970), the sample size of 135 is acceptable to represent the given population to determine the validity of the findings. Question 13 asked on which library resource finds to be more useful or helpful for their research. Figure 8 shows the distribution of specific library resources which a graduate student find it most useful. From this figure, 48% stated that a book either print or electronic is the most helpful resource with a difference of 4% for online resources that includes e-journals and databases. This may imply that books and e-journals/ databases are the two most heavily used resources by graduate students.

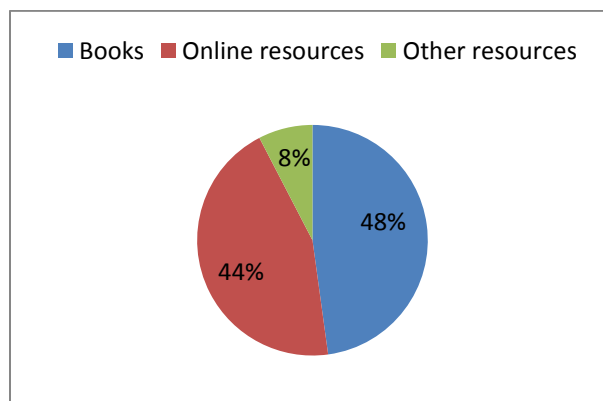


Figure 8 shows the distribution of important library resources

As mentioned earlier, the discussion on questions 7 and 8 suggest that the need to improve the electronic resources is expected by graduate students in the coming semesters. With the BUiD's cooperative agreement with UK partner universities, access to a wide range of electronic resources is seen for selected faculty only. With this

agreement selected students registered for these selected faculties have access to their UK partner universities electronic resources. For example, Faculty of Education, who has the largest number of respondents to represent their faculty, does not have an access to electronic resources from their UK partner university. To aid the students in finding appropriate information, faculty had initiated to build a database of open access list of electronic resources that might be useful to their students. However, based on the library feedbacks stated on the report gathered from the Office of Quality, this will not suffice the research needs of a graduate student and that should be exposed to scholarly publications. Another interesting observation is that students that have access to these resources through their UK partner universities, might prove that access to these wide variety of electronic resources will have an impact to their marks. However, issues on identifying different search strategies and a lack of information skills session was mentioned during a meeting of the Academic Staff-Student Liaison Committee in 2009 & 2010 which will be discussed on the information literacy part of this study. It seems that there is a need to investigate the usage of electronic resources for those students who have had access to their UK partner universities electronic resources and those that have limited access will have an impact to academic success.

Information literacy as defined earlier is the ability to know when and why you need information, how to find, use and evaluate the information. Information skills in higher education is regarded as 'knowledge creation' activity and the information technology skills are both essential as a wider definition of Information Literacy (SCONUL paper). Information literacy is a set of skills developing from a basic library

skills and IT skills. This may be considered as one of many indicators to measure library use to academic achievement. This study will not focus whether this assumption appears to be valid or not, however previous studies showed that there is a positive impact on academic performance. Studies conducted by Madland (1985) and Klaib (2009) showed that attending library workshop or having more than two library workshops have a positive impact on students to be information literate. On this study, the researcher has considered this indicator for measuring library usage to determine the common problems faced by a graduate student when accessing information. Information is defined as “data represented in readily comprehensible form to which meaning has been attributed within the context of its use. In a more dynamic sense, the message conveyed by the use of a medium of communication or expression. More concretely, all the facts, conclusions, ideas and creative works of the human intellect and imagination have been communicated formally or informally, in any form” (ODLIS – Online Dictionary of Library and Information Science). According to McAdoo (2010), one of the issues faced by a student in completing an assignment or research paper is a lack of skills on the research process. This may include problems from topic selection to search strategy issues and even to the writing process. Going back to the basic library skills, where the first thing a student will do is to select a topic of their interest and find resources related to their topic through available online catalog. Firstly, students will search their library catalogue if there are enough resources available. If the student finds no resources available to them, one may conclude that search terms are not the standard headings or keywords or it may directly imply that library has inadequate collection. From figure 5, it shows that 35.6% of the

sample size is accessing the online catalogue every month, 33.3% requires weekly staff assistance for reference queries and the result on question 3 that 54.1% stated that they find most of the time the resources they need in the Library will have some implications. Students are using the online catalog monthly to find resources available in the library. However, they would require staff assistance to locate resources that is not available to them. Therefore, they can state that they get the required information most of the time in the library either by borrowing a book or through requests. This may suggest two perspectives, (1) a lack of library workshops on different search strategies such as how to use the online catalog, database searching and other resources available to them; (2) they do not have the time to search different sources in different platforms or they are focused on the resource or database they are familiar and if they found not very good results they will seek assistance of the library staff through Interlibrary loan/ Document request. One may conclude that students are facing problems on accessing the required information to support their study and research. The researcher assumed that this problem may possibly be resolved by attending Library workshops and improving library resources particularly on books and electronic resources which were proven on the findings of this study. However, there are different factors that might affect a graduate student when finding information. As mentioned earlier, it has been believed that graduate students had already grasped the basic skills of research during their undergraduate years. Therefore, there is a need for future investigation to prove this assumption for graduate students.

Access to information is keep on changing. In this Internet age, a person can find any information through the World Wide Web. Keeping in mind that graduate students

are mostly working full-time and studying part-time is popular to enhance his/her knowledge of expertise. Having said that, graduate students who are working, with families living with them and other activities is said to be hard and tough in pursuing a higher degree and balancing your career and study depends on the environmental influences. To be in a university again, students are required to attend classes and studying part-time requires time management to attend classes. Attending classes is required to pass the module while, completion of course assignments/ projects has a larger percentage on the overall mark for a student. This statement seeks to answer the different strategies does a graduate students uses when seeking information resources. It has been hypothesized earlier that access via electronically is the most helpful medium for a graduate student to find information. Question 9 asked on how they manage to complete their assignment showed that 48% of students is physically visiting BUiD Library which may be linked to question 1 that also showed a 45.2% of the sample size is visiting the library once every week. Notably, the result rejects the hypothesis for research question 3 that part-time students would prefer online resources so they can work on completing their assignments remotely at their convenient time. Figure 8 show that only 8% stated that they manage to complete their assignment through online access. One may conclude that either the Library does not have adequate online resources that include e-books, e-journals and databases or they cannot find scholarly publications through open sources and therefore, require visiting the library to borrow books and to access available electronic resources which require on-campus access.

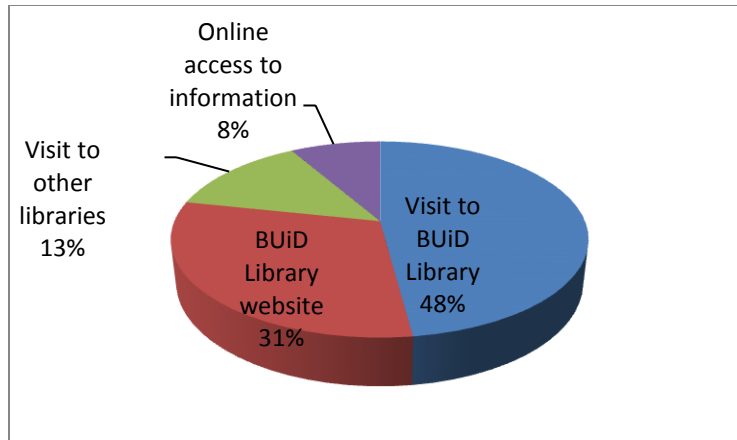


Figure 9 shows the distribution of access to information

Surprisingly, despite of the fact that it is statistically proven that BUiD library holds insufficient resources in print, it shows that 48% is visiting the library having the top reason for the visit is to borrow books and for reference/ research (see appendix 10). This indicates library holds inadequate electronic resources available remotely which would be the most helpful resource to graduate students especially those who are studying part-time. Books and e-journals are the most beneficial resources for BUiD students particularly at a Master level. The next chapter will provide the conclusion and recommendations for future study.

CHAPTER SEVEN

Conclusions and Recommendation

In conclusion there exist many indicators to measure the effectiveness of library usage to student learning and academic achievement. These indicators could be borrowing of books, attending library workshops/ sessions, use of automated library system, library services such as one to one session, reference service or assistance to name a few. The author of this study suggested that there would be a positive impact of borrowing of books on academic achievement but this was rejected by the results and that 3% that has a positive correlation is due by chance. The researcher had concluded that if borrowing of books is statistically insignificant to student grade point average, access to electronic resources is the most beneficial resource graduate students should have in order to complete their assignments or research paper. As a supplement to this conclusion, the result on the survey questionnaire showed that even if there is a high percentage of circulation of books, and book acquisition this will not suffice the research needs of a graduate and it appears that electronic resources is lacking. The result of this study will also serve as a tool in planning for the next three to five years to satisfy the research needs of a graduate student. Improving the library takes time and will depend on the budgetary limitations. The result may bring meaningful implications to present to the top administrators that library usage will have a positive impact if the resources are adequate for the fulfillment of the research needs of a graduate student that will also reflect on the University's effectiveness on teaching and learning. However, the author

does suggest that as the University is young, the need to establish a good library strategic plan should be considered and further recommendation is offered.

7.1 Recommendations

Based on the analysis discussed on the earlier chapter, some recommendations could assist the Librarian to improve its resources and services and establish a library that will uphold the students to better performed academically. Results from the previous studies have showed the positive correlation regardless of the indicator they use will have an impact to student's achievement. The following recommendation is offered in order to get positive results for future investigations and improvement.

1. If borrowing of books does have a weak correlation to student's grade point average, further study on the use of electronic resources is suggested for future researchers. As the University is in association with the UK partner universities and access to a wide range of electronic resources depends with them for selected programmes, two sample groups can be carried out where those students who have access and those that don't have. It may provide meaningful implication to the University's administrators to support the conclusion of this study.
2. It has been observed that there are issues on familiarity of the research process that includes basic library and IT skills. Academic success support is popular to both students and the faculty that conducts workshops related to academic

writing and study skills support. However, it would not be identifiable if writing academically would not suffice if the basic library and IT skills are not developed. There should be a joint collaboration between the Library and Academic Success to help students developed the required skills for a graduate students. One may consider investigating the impact of attending library sessions to student's learning.

3. One may consider studying the relationship of the duration of study to student achievement. It was observed in this study, that the months to complete the programme have a correlation with the student's academic achievement
4. There are a larger number of percentages who stated that they never use printed books, this result seems to be uncertain despite of the fact that the Library tries to improve the "standard" resources to fulfill their research needs. It has been suggested that an investigation on which format a graduate student should prefer should be considered. In this new era of Internet age, e-books are now booming. However, not all students prefer reading a book in an ebook reader or in any mobile phones. This may envisage on how students prefer to get their resources either in print or electronically.
5. This study has also been observed non-users of the library. Future researchers may find this an interesting task if graduate students are believed to be the heavy users of a library.
6. The result on the resources seems to be complicated. Results showed that the most consistent on which resources that needs for improvement is the Social

Science and Education collection which is also seen as the area with a large number of acquisitions over the last three years. It may be useful for further investigation on this by conducting a collection evaluation to identify the strengths and weaknesses of the overall collection. This might be useful to develop a collection development plan to support the Library's strategic plan.

7. The University has students living outside Dubai and this recommends evaluating how these students are coping up on the resources they need. If electronic resources are inadequate, and they cannot visit the Library more often to borrow books or use the available resources on-campus, this may be an interesting task to find out.
8. The University aims to offer one more Doctorate programme that will require a comprehensive use of library resources. This study may serve as a model to look further on the needs of a Doctorate student. Furthermore, offering Bachelor's programmes are on its way and it will be interesting to use this population if the findings on the previous studies is similar for BUiD students.

7.2 Further investigations

The author of this study is the Librarian of the University and is not satisfied on the result on student achievement. So, the question still remains if borrowing of books will have an impact on student achievement. Since the study have used two different library systems to generate the reports it would be better to consider for future investigation covering those years that the library system is stable. It may also worth

looking the geographical location of the students if they can manage to come to the Library to borrow books that may provide a meaningful implication for students residing outside Dubai which was one of the library feedbacks raised on the previous minutes of meeting under the Office of Quality. Sample size is relatively small although it has been accepted to be valid. It would be better to encourage the target population to participate by giving more time to answer the online questionnaire. Keeping in mind that majority of the graduate students are part-time so sending the questionnaire in a timely manner will give you a better sample size to represent each faculty. It can also be suggested that conducting interviews with the faculty will help to identify the needs of a student when finding information. The interview might include a copy of task in the assignment given to the student that might relate to information skills. This may help the Librarian to focus on what research strategy does a student has when it comes to finding resources.

To generate a more comprehensive picture, the author of this study would like to investigate again if there is a relationship between borrowing books and academic achievement at a Graduate level in the next three years.

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Appendices

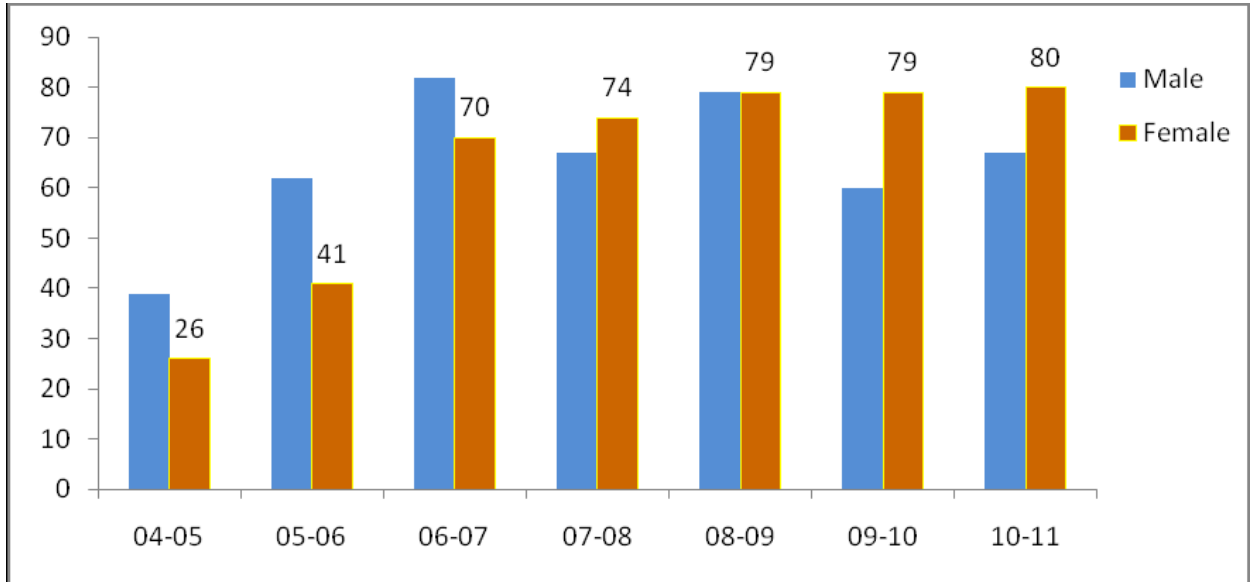
Appendix 1

Total Acquisition by classification per year

Classification	2009		2010		2011	
	Count	Percentage	Count	Percentage	Count	Percentage
001 - 099	387	10.25	16	1.74	58	8.06
100 - 199	108	2.86	40	4.35	27	3.75
200 - 299	1	0.025	2	0.22	1	0.14
300 - 399	1135	30.07	475	51.69	305	42.36
400 - 499	720	19.08	62	6.75	44	6.11
500 - 599	202	5.35	26	2.83	37	5.14
600 - 699	911	24.14	222	24.16	207	28.75
700 - 799	155	4.11	37	4.03	28	3.89
800 - 899	120	3.18	14	1.52	7	0.97
900 - 999	35	0.92	25	2.72	6	0.83
TOTAL	3774		919		720	

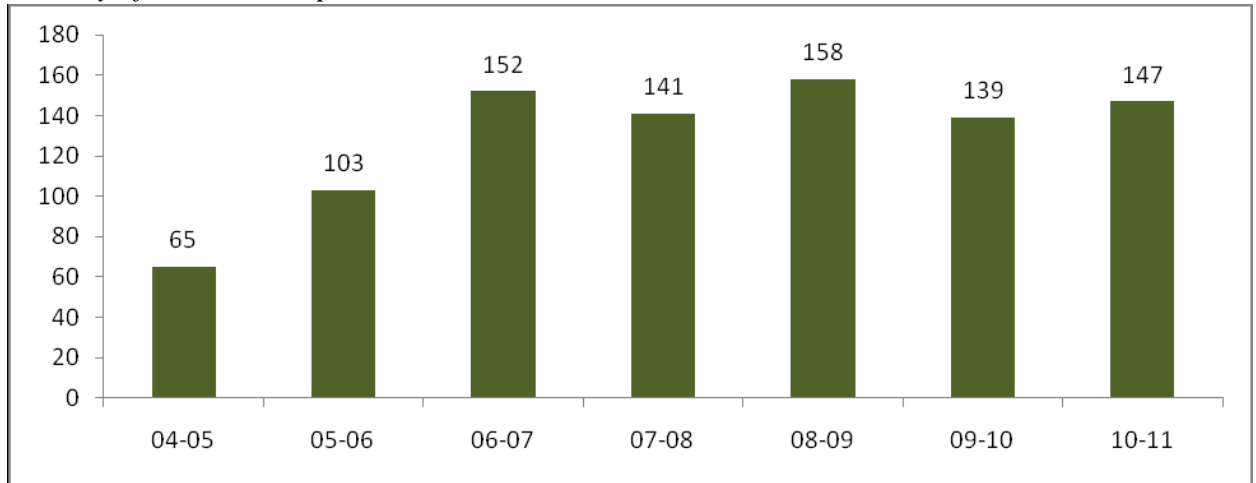
Appendix 2

Enrollment by Gender by Academic Year









Appendix 3

Summary of Enrollments per Academic Year









Appendix 4

Module Feedback Survey Overall results for 2009

38. The library resources and services were sufficient for this module			
Definitely agree:		14.70%	52
Mostly agree:		42.10%	149
Neither agree nor disagree:		22.90%	81
Mostly disagree:		12.10%	43
Definitely disagree:		5.90%	21
Not applicable:		2.30%	8

Module Feedback Survey Overall results for 2010

29. The library resources and services were sufficient for this module			
Definitely agree:		24.30%	76
Mostly agree:		33.50%	105
Neither agree nor disagree:		23.60%	74
Mostly disagree:		7.70%	24
Definitely disagree:		8.00%	25
Not applicable:		2.90%	9

Appendix 5

Spreadsheet on Student's Information for Group A

ID No	Programme	Nationality	Gender	Duration of Study	Study Mode	Class	GPA	No of Check-outs

Appendix 6

Library Survey Questionnaire

The **British University in Dubai Library (BUiD)** is conducting a library user survey. The purpose of this survey is to find out your library use and to help us evaluate library services. Please take a few minutes to complete this survey BEFORE you leave. Drop the survey off in the box near the counter. Your input is important in planning for the future. Thank you.

THE LIBRARY

1. How often do you use the Library? Mark (X) one

- | | |
|---|--|
| <input type="checkbox"/> 4 or more times per week | <input type="checkbox"/> Monthly |
| <input type="checkbox"/> 2-3 times per week | <input type="checkbox"/> Once per semester |
| <input type="checkbox"/> Weekly | <input type="checkbox"/> Never |

2. What are your main reasons for using the Library? Check all that apply

- | | |
|---|--|
| <input type="checkbox"/> To borrow books | <input type="checkbox"/> To read newspapers, magazines |
| <input type="checkbox"/> For reference/ research | <input type="checkbox"/> To use the internet |
| <input type="checkbox"/> To use library computers | <input type="checkbox"/> To study individually |
| <input type="checkbox"/> To use the copying machine | <input type="checkbox"/> To print from computer |
| <input type="checkbox"/> Others, please specify _____ | |

3. Did you find what you were looking for when visiting the Library? Check the most appropriate

- Always Most of the time Partly

4. How important are the following services to you in the Library? Circle the most appropriate

	Very Important			Not important	
Use of library computers	5	4	3	2	1
Assistance from library staff	5	4	3	2	1
Access to on-site collections	5	4	3	2	1
Access to online library resources	5	4	3	2	1
Place to work individually	5	4	3	2	1
Place to work in groups	5	4	3	2	1
Application software on library computers (Word, Excel)	5	4	3	2	1
Electrical outlets by seating areas	5	4	3	2	1

Photocopying services	5	4	3	2	1
Printing services	5	4	3	2	1

5. Mark (X) all the area(s) in which you think the Library can improve.

- | | |
|---|---|
| <input type="checkbox"/> More individual carrels | <input type="checkbox"/> More study tables |
| <input type="checkbox"/> Study rooms | <input type="checkbox"/> More computers |
| <input type="checkbox"/> More CD-ROM workstations | <input type="checkbox"/> More on-line databases |

6. How would you rate the Library on the following?

	Excellent			Poor		Not applicable
	5	4	3	2	1	
Access to computers	5	4	3	2	1	0
Space where I can work on my own	5	4	3	2	1	0
Space where I can work with groups	5	4	3	2	1	0
Quality of collections	5	4	3	2	1	0
Quality of customer service	5	4	3	2	1	0
Ease of finding collection locations and service points	5	4	3	2	1	0
Hours open	5	4	3	2	1	0
Inviting environment	5	4	3	2	1	0

LIBRARY RESOURCES AND SERVICES

7. How often do you use the following library resources and services? Please check one for each item

	Daily	Weekly	Monthly	Quarterly	Never
Online catalogue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Database and E-journals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interlibrary loan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reference services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Course Reserves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Print books	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Audio/ CD-ROMs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Mark (X) all area (s) in which you would like to see the collection improved?

- | | |
|--|--|
| <input type="checkbox"/> Social Sciences and Education | <input type="checkbox"/> History |
| <input type="checkbox"/> Science/ Technology | <input type="checkbox"/> General Fiction |
| <input type="checkbox"/> Business & Law | <input type="checkbox"/> Audio/ Video |
| <input type="checkbox"/> Magazines/ Newspapers | <input type="checkbox"/> Arts & Humanities |
| <input type="checkbox"/> Life and Environmental Sciences | <input type="checkbox"/> Engineering |

9. In order for you to complete your course assignment, (check all that apply)

- You physically visit BUiD Library
- You visit the BUiD Library website
- You visit other libraries nearer to your location
- Others, please specify _____

10. Which library session have you attended? Check where appropriate

- | | |
|---|--|
| <input type="checkbox"/> General University induction | <input type="checkbox"/> Library orientation |
| <input type="checkbox"/> In-class library instruction | <input type="checkbox"/> Individual session |

11. How helpful is the library in providing support or assistance to you when finding and getting what you need for your research?

- | | |
|---|--------------------------------------|
| <input type="checkbox"/> Very helpful | <input type="checkbox"/> Helpful |
| <input type="checkbox"/> Neutral | <input type="checkbox"/> Not helpful |
| <input type="checkbox"/> Most unhelpful | |

12. Overall, how satisfied are you with the quality of the services provided by the BUiD Library?

- | | | |
|--|--|--|
| <input type="checkbox"/> Extremely satisfied | <input type="checkbox"/> Satisfied | <input type="checkbox"/> Neither satisfied nor |
| unsatisfied | | |
| <input type="checkbox"/> Unsatisfied | <input type="checkbox"/> Extremely unsatisfied | <input type="checkbox"/> Not applicable |

13. Which library resource(s) and/or service do you find MOST useful and helpful? Please name all that apply

14. Which library resource(s) and/or service do you find LEAST useful or helpful? Please name all that apply

15. What would you like to see implemented or improved in the library to meet your needs better?

DEMOGRAPHICS

16. Please indicate your age in the following ranges:

30 and below 31-40 41-50 Over 50

17. What is your gender? Female Male

18. Please indicate your programme: _____

19. Where do you reside?

Dubai Sharjah
 Abu Dhabi Other: _____

20. Other comments: Please add any additional information which you feel will help the library plan for the future.

Thank you for taking the time to complete this survey.

Appendix 7

Sample Approval Form

Dear Sir/Madam,

I have completed all the taught modules in pursuing to complete the programme on Master of Education. One of the requirements for completing a degree at British University in Dubai is to submit a dissertation. With this, I am planning to complete a study to establish if there is relationship between library use and student's academic performance for graduated students and how do the results facilitate the strategic planning process of the Library. I also hope to identify student's perceptions at a Graduate Level of how and why they use the Library. This letter is to request your permission to have GPA data for students who graduated from 2008 – 2010.

In my career as a Librarian and throughout my education, I firmly believed that Library plays a vital role as the “heart of institution” to support the teaching and research needs of the University. It acts as a place in which information resources are kept for reading, reference and lending and as a communication centre through which these resources are made available to its users. Unfortunately, within limited financial resources the Library is facing a crisis on how we can provide more information resources for graduate students. The result of this study might provide meaningful implications. Hopefully, the result of the study will assist the Librarian and the administration to meet the needs of future library users.

My dissertation supervisor, Dr Clifton Chadwick has approved the aforementioned topic. Attach please find a brief description of the study.

If you have any questions, please feel free to discuss it with me.

Sincerely,

Marisol S Leonen

Appendix 8

TABLE I
Table for Determining Sample Size from a Given Population

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note.—*N* is population size.
S is sample size.

Appendix 9

Question 1 Survey result on library visit

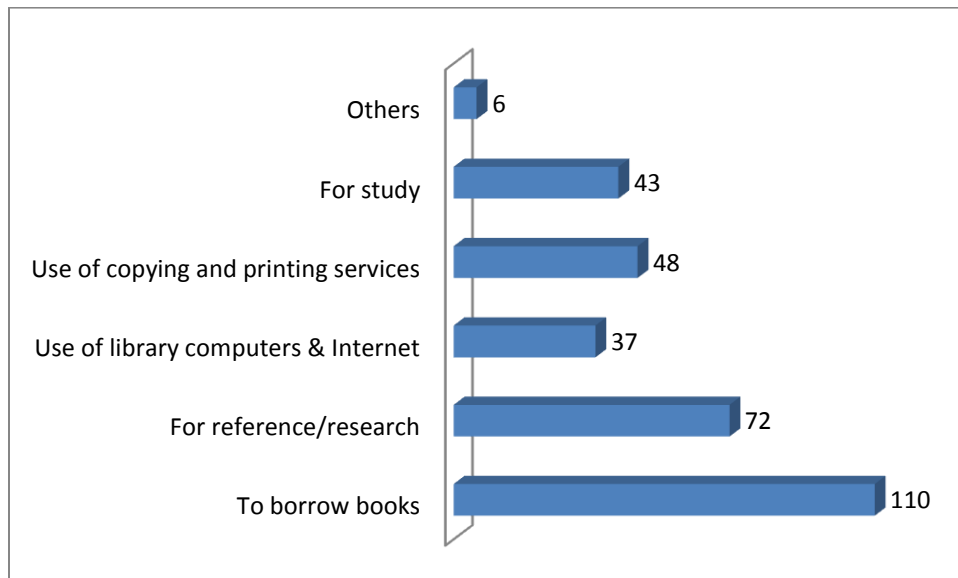
		Frequency	Percent
Valid	4 or more per week	9	6.7
	2-3 times per week	10	7.4
	Weekly	61	45.2
	Monthly	36	26.7
	Once per semester	17	12.6
	Never	2	1.5
	Total	135	100.0

Appendix 10

Question 3 Survey results on accessibility of resources

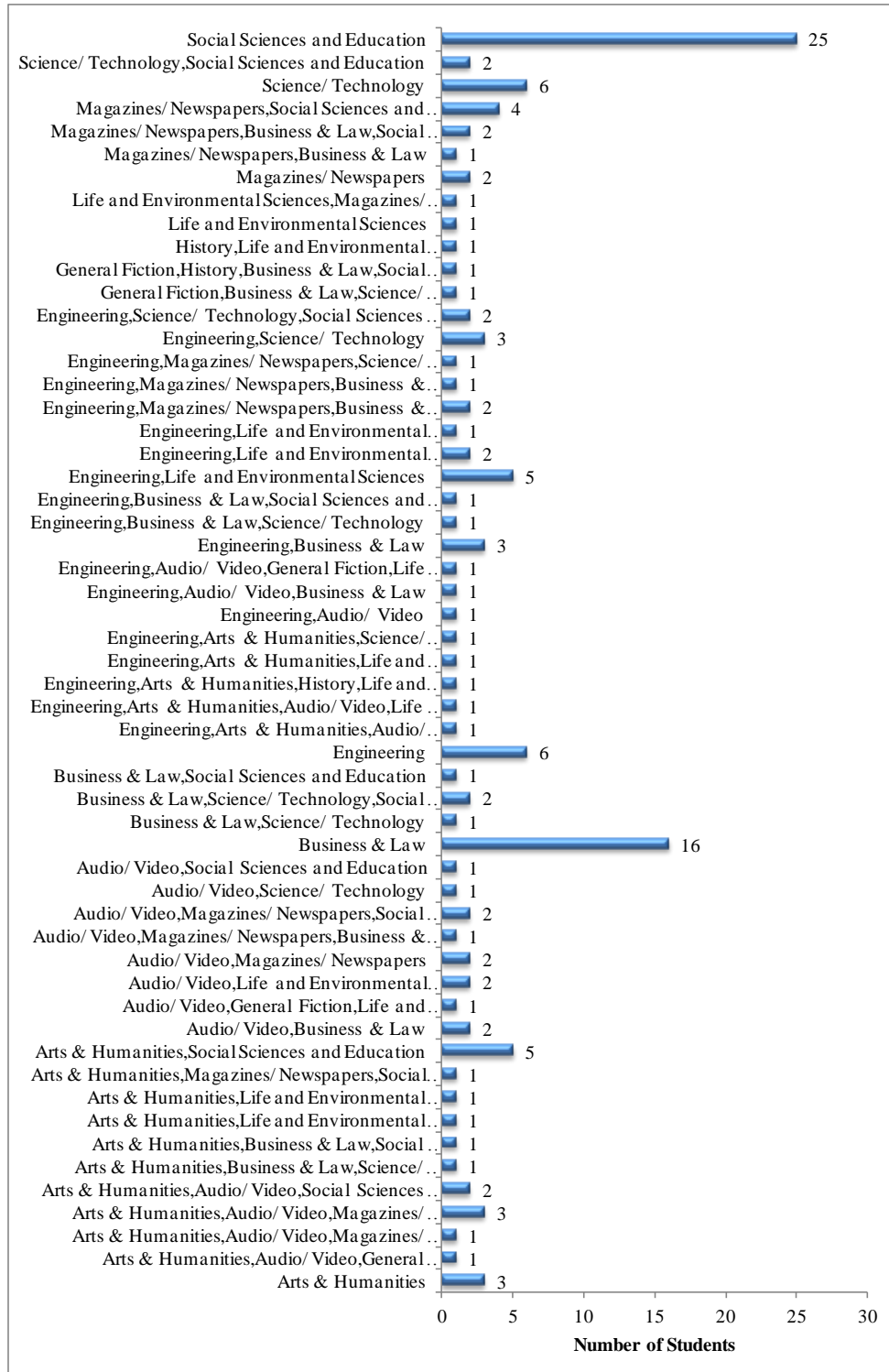
		Frequency	Percent
Valid	Always	21	15.6
	Most of the time	73	54.1
	Partly	41	30.4
	Total	135	100.0

Q2 table



Appendix 11

Suggested collection areas to be improved



Appendix 12

Demographics

16. Please indicate your age in the following ranges

	Frequency	Percent
Valid 30 and below	53	39.3
31-40	57	42.2
41-50	22	16.3
Over 50	3	2.2
Total	135	100.0

17. What is your gender?

	Frequency	Percent
Valid Female	73	54.1
Male	62	45.9
Total	135	100.0

18. Please indicate your programme

	Frequency	Percent
Valid Master of Education	44	32.6
Doctor in Education	12	8.9
Project Management	24	17.8
Finance & Banking	7	5.2
SDBE	20	14.8
CLDR	10	7.4
IT/ITM	9	6.7
IBDA	3	2.2
HRM	6	4.4
Total	135	100.0

19. Where do you reside?

		Frequency	Percent
Valid	Dubai	59	43.7
	Abu Dhabi	23	17.0
	Sharjah	23	17.0
	Ajman	6	4.4
	RAK	6	4.4
	Al Ain	5	3.7
	Fujairah	6	4.4
	Outside UAE	5	3.7
	UAQ	2	1.5
	Total	135	100.0

Appendix 13

15. What would you like to see implemented or improved in the library to meet your needs better?			
		Frequency	Percent
Valid	-	12	8.9
	* All day access to all BUiD partner universities e-library at home * e-Book service	1	.7
	*****	1	.7
	0	1	.7
	1. Sometimes when request for a book I can't get it because they are limited, so i would appreciate if more copies are available or provide access to us to use online books. 2. Automatic renewal of our online access to databse as long as we are still students in BUiD.	1	.7
	a variety of resource books and references, also the quantity of each book	1	.7
	academic journals should be up to date	1	.7
	access to more e resources	1	.7
	allow drinks and food	1	.7
	Audio books and online books	1	.7
	Availability of books	1	.7
	better computer and printers. more than one student being able to access reuters or bloomberg at the same time	1	.7
	Better printing facilities	1	.7
	bigger area	1	.7
	bigger space. more room for group discussions	1	.7
	books	1	.7
	Books availability	1	.7
	books on gifted education	1	.7
	borrowing of books online and to be sent to those of lives outside Dubai.	1	.7
	build agroup from students to help students who need	1	.7
	Closed rooms for studying	1	.7
	database	1	.7
	Database and E-journals	1	.7
	database resources	1	.7
	databases more study spaces	1	.7
	E database	1	.7
	E-sources database	1	.7
Ease online resources	1	.7	
Ebook	1	.7	

ebooks	1	.7
electronic resources	1	.7
every thibg is good	1	.7
Getting help from somebody to find the books in the library	1	.7
getting more materials esp. books on cultures in education	1	.7
helping students with electronic material and article for research as before.	1	.7
highliting examples of previoues exams assignments desertations	1	.7
I need some support in finding out what I need from online databases for my dissertation.	1	.7
improve access to and a wider range of online resources	1	.7
improved available resources	1	.7
increase the copies number of wanted books.	1	.7
increase the individual use of computers	1	.7
increase the number of computers Reduce the cost of printing	1	.7
individual study room	1	.7
It would be easier if the links to databases with username and password are provided on each computer in the library, instead of asking the librarian to open the database(s) and then log in each time.	1	.7
Journal subscriptions and larger number of books on education topics.	1	.7
Late hours duty, more video/audio references, templates for everything.	1	.7
library data base	1	.7
Lower rate charges for printing	1	.7
make it bigger	1	.7
more access to online database	1	.7
more books	1	.7
More books	1	.7
more books about informatics subject	1	.7
more books about special needs	1	.7
more books and new books	1	.7
More books in Special Education that covers all the topics and not necessarily the topics and disorders covered in the curriculum as Students strive to learn more and a broader spectrum of topics.	1	.7
More books is needed and a larger library	1	.7
more books on educational subjects	1	.7
more books on subjects relevant to coursework	1	.7
more books that relate to the modules specially in Education -ELT	1	.7
More books,researches about UAE,Gulf Countries,Middle East in general.	1	.7

More books. But most importantly, the scanner and the computer attached to it. I think it is high time you change it.	1	.7
more collection of books	1	.7
More copies of core texts More access to online journals	1	.7
More doctorate level references	1	.7
More employees	1	.7
more online resources and books	1	.7
More online resrouces. More spaces for individual studies especially bigger tables that allow me to use my laptop and other stuff.	1	.7
More online subscriptions More specialized books	1	.7
more places to study alone.	1	.7
more power plugs more study tables provide group study areas change copier policy (coins)	1	.7
More quiet study space. More group study space. Wireless printing.	1	.7
more recent educational books and references and ore about the arab world education and research	1	.7
More reference books, Magazines, audio/video section	1	.7
More references More databases access	1	.7
more resources	3	2.2
More resources on the subject of Sustainable environments	1	.7
more space to work in individually... more books to be used for referencing..	1	.7
more study materials	1	.7
more study rooms	1	.7
N/A	1	.7
NA	3	2.2
needs to be bigger area	1	.7
NEW and faster computers Permanent 'not temporary' e-resourses	1	.7
New journals	1	.7
none	1	.7
Not specsfc	1	.7
nothing	1	.7
nothing in particular	1	.7
Online Access to Books & Articles	1	.7
online access to journals, data for research, subscription to financial magazines and research work	1	.7
Online Access to Library Journal Database	1	.7
online books instead of purchasing expensive ones	1	.7
online databases	1	.7
online resources - locating journals and retrieving articles. better collections of books & journals	1	.7

OPEN 8 AM	1	.7
Open e-resources all the time.	1	.7
photocopying	1	.7
Please make e-books available.	1	.7
Provision to use and access library during Fridays.	1	.7
Resources	1	.7
rooms for group work	1	.7
separate sections manifested according to different faculties, divided by partitions.	1	.7
spaces to work individually, special places for computers	1	.7
study rooms	1	.7
Study rooms. Copying and printing arrangements. More resources.	1	.7
The name of the section at the side of the book shelves	1	.7
The PCs, and scanning / photocopying machines	1	.7
the problem is that I'm from Abu Dhabi so it's hard for me to access the university.	1	.7
the resources and the passwords for databases	1	.7
to bring more referencing	1	.7
To keep us in touch with library resources after graduation	1	.7
to provide us with an online access to e-journals and resources & more books and specialised journals	1	.7
useful sources on how to improve academic writing skills	1	.7
Video Lecture of special skills like SPSS	1	.7
whatever possible	1	.7
wider space and more academic magazines and journals	1	.7
Wider timing range Wider range of books within a field	1	.7
yes offcourse	1	.7
Yes, getting more educational journals	1	.7
Total	135	100.0