Relationship between the Undergraduate University Library Usage for Academic Purposes and its Learning Outcome with Special reference to the Universities in Sri Lanka

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Abstract

University libraries are the knowledge hubs of universities. Therefore, Sri Lankan government as well as the universities spends a large amount of funds for the development and the maintenance of university libraries. However, most of the library professionals in Sri Lankan universities complain that the library usage for the academic purpose among the undergraduates is decreasing year by year. Any undergraduate enter the University with the final aim of having good results in examinations. As such, if there is a positive relationship between undergraduate academic outcome and the university library usage, undergraduates will automatically tend to use university libraries even if they do not receive information according to the way they need. Therefore, by conducting this study, researcher hopes to find out whether there is any significant relationship between the undergraduate university library usage and their examination results according to different faculties. Data with respect to seven faculties in each of nine government universities which admit more than 2500 students per year will be gathered using different sampling techniques. These data will be analyzed using statistical methods.

Keywords: Undergraduate, Outcome, Relationship, Library

1. Introduction

University libraries are the knowledge hub of the universities. Undergraduates as well as the academic staff can gather trustworthy information from University Libraries. According to the research carried out by George D. Kuh and Robert Gonyea, they noted that the library is the physical manifestation of the core values and activities of academic life and the library's central role relating to the academic community is unquestioned. But with the development of the internet and web browsing student as well as academic staff tend to go behind cheap and unreliable sources of information for their convenience.

In this research, the term "University Libraries" are used to denote any of the following places:

1. University Main (Central) Library
2. Faculty Libraries
3. Department Libraries

The Sri Lankan government as well as the universities spend a large amount of funds and resources for the development and the maintenance of university libraries. For an example, the budgeted expenditure for the year 2015 for the University of Colombo Main Library is as follows:

Table 1

Expenditure	Amount (Rs)
Recurrent Expenditure by Government funds	65,845,000
Capital expenditure by Government Funds	20,000,000
Online Databases Consortium by UGC	1,000,000
Expenses using other Funds	5,000,000
Total	91,845,000

As per the above details it has been very clear that the budgeted expenditure only for the Main Library for one year (Year 2015) is more than Rs. 91,800,000. After adding the budgeted expenditure of faculty and department libraries to this amount, the total figure will be much higher. But most of the library professionals like Librarians, Senior Assistant Librarians, Assistant Librarians and Library Non-academic (Administrative) staff in Sri Lankan universities complain that the library usage for academic purpose among undergraduates is decreasing year by year. The researcher, as per the observations he made during his working period as an Assistant Librarian of the University of Colombo, bears the same opinion with regard to the library usage among undergraduates.

In this study the library usage for academic purpose is defined as the use of library for any of the following purposes / activities:

1. Borrowing Library Materials such as Books, Periodicals, journals, DVDs, CDs and other materials
2. E-resource usage inside or outside the library premises through the University Library
3. Inter Library Loan requests
4. Reading Time spent within the library
5. Knowledge Exchange within the library
6. Academic Inquiries
7. Participation in seminars and workshops organized by the library.

According to the observations of the researcher during past three months, most of the students who came to the library did not use the library for their academic activities. The researcher observed that most students who visited the E-Resource Centre of the University of Colombo Main Library used it to send personal emails, to engage in video chatting, and to watch teledramas, films and videos which are not directly related to their academic activities.

Also, the research done by former Librarian of the University of Peradeniya, Pradeepa Wijethunga (Now Librarian of the University of Colombo) on Library usage of the undergraduates concludes that the library usage of undergraduates is decreasing year by year.

Furthermore, the researcher had some preliminary interviews with Senior Librarians in Sri Lankan universities who accepted that the library usage of undergraduates for academic purpose is decreasing.

Therefore, less usage of the knowledge hub of the universities by students for their academic activities is a big issue faced by the Library authorities as well as the academics.

If the library usage for academic purpose decreases year by year, there may be two main reasons according to the researcher.

1. University Libraries do not satisfactorily provide academic information to undergraduates according to their information seeking behaviour
2. There is little relationship between the undergraduate outcome (Examination Results) and the university library usage for academic purpose.

To ignore the first reason the researcher would like to come back with a strong argument that, any undergraduate enter the University with the final aim of obtaining good results. Their ultimate purpose is to obtain an honors pass at the final examination and find a good job. Therefore, if there is a relationship between student outcome and the university library usage for academic activities, even if the library does not provide the information according to the way the undergraduates prefer, they will automatically tend to use the library without giving priority to their preferences. For an example, during the examination period, the past paper section of the library is fully crowded with undergraduates because they highly believe that if they acquire a sufficient knowledge and skill to satisfactorily answer past papers, it will positively affect their results. Some students write down or photocopy all the past papers available in a particular subject although it is a very difficult task. Therefore, the first reason can be ignored. Then the reason that should be considered for decreasing the library usage would be that there may be little relationship between the examination results and the university library usage.

2. Purpose and the Importance of the study

Therefore, if there is little relationship between the undergraduate outcome and the university library usage, undergraduates will not tend to use the university libraries. If that is so, it is worthless to maintain such huge libraries by spending a large amount of funds by the government as well as the universities. Also, if there is an actual positive relationship between the undergraduate results and the university library usage for academic purpose, that information can be conveyed to the students who do not normally use the libraries. By doing so they can be motivated to use the real knowledge hub (university libraries). As a result, libraries can demand more resources as well as facilities from the government by demonstrating the value of libraries to student's final outcome.

Appropriate models to understand the relationship between undergraduate university library usage and their examination results could be developed as a valuable output of this study. This model may differ relative to the faculty and department as the scope of the academic area of the faculty or department varies. Also, it can differ relative to the different kinds of library usage. By studying, understanding and using these models, undergraduates can use the university library appropriately to achieve their desired targets easily and quickly. Once this trend is consolidated, university library usage among the undergraduates will be automatically increased. In such a situation, the government spending to university libraries will be more meaningful and appropriate.

Also, after completing this study, the findings can be used to forward necessary and appropriate recommendations to the Ministry of Higher Education, University Grants commission, Universities, Faculties and to Libraries. Library is the real knowledge hub for the undergraduates. They should search the information at the library rather than going for cheap sources of information. Therefore, if there is little or no relationship between undergraduate examination results and the university library usage, education authorities including education planners and curriculum designers should guide the universities to prepare there curricula such a way that the usage of university libraries by the undergraduates is essential to obtain good results in examinations. If there is already a positive relationship, universities and libraries can request more funds from the government to develop the university libraries. Also, the findings will be useful for libraries to control their expenses and to decide the size of the libraries. Also universities can spend more for libraries in order to maintain a higher relationship between library usage and student results by decreasing the spending to other areas. Further, libraries can acquire a good understanding about the way they should manage the funds and the resources allocated through these models.

Therefore, the researcher expects to find weather there is any relationship between the undergraduate university library usage and the student outcome according to the faculties. Further, it is also intended to develop some good models to get an understanding about the results that can be achieved using the university library. Finally the study aims to forward

recommendations to the government, universities, faculties and libraries from different viewpoints.

Also, this is the first ever research in Sri Lanka which attempts to understand about the university library usage and the student outcome in examinations. This will be the first study which is conducted by gathering Data Island wide. Also, this kind of researches is very limited all over the world, there are a few researches we can find from the literature around the different parts of the world but those researches are limited to the school level but, not for the undergraduate level. Also, in some researches data have been gathered only from a single university with one or two disciplines and in some others, only from few libraries situated closely. As such, this research will be beneficial especially for Sri Lanka and generally for the field of library and information science all over the world.

3. Review of Literature

The research conducted by Krista M. Soria, Jan Fransen, Shane Nackerud (2013) on the topic of "Library Use and Undergraduate Student Outcomes: New Evidence for Students' Retention and Academic Success" highlights the importance of library usage in first-year students' academic achievement and retention: first-year students who used libraries in their first semester had higher grade point averages and retention when other factors were controlled (. But this research has been conducted by only collecting data from thirteen (13) Library Access Points of the University, and examining only first-time, first-year students' library usage during their first semester (Fall 2011). In this study data on students' use of a variety of library services were gathered into two primary groups: the first group of data was automatically collected by virtue of student log-ins to central databases and websites. Library services used in this group include 1.Database, electronic book, and electronic journal logins, 2. Website logins, 3. Loans obtained, 4. Inter-Library loans, 5. Using Workstations. The second group of data was collected by building lists of patrons who engaged with library staff through instruction sessions and reference interactions. Library services used in this group include: 1. Library Workshops, 2. Course - integrated instructions, 3. Introduction to Library Research workshops, 4. Peer research consultations, 5. Reference.

Academic libraries are essential to the core mission of universities across the nation. To that end,

> George D. Kuh and Robert Gonyea (2003) noted that the library is the physical manifestation of the core values and activities of academic life and the library's central role in the academic community is unquestioned (p256).

Questioning the importance of libraries to student learning is, according to Kuh and Gonyea, "almost heretical"; yet, along with other higher education colleagues, academic librarians face increased external pressure for accountability while undertaking ongoing internal commitments to improvement.

Nearly two decades ago,

> Sarah Pritchard (1996) stressed the importance of assessment of library services by remarking that the future vitality of libraries in academia will be dependent upon whether they can dynamically and continually prove their value to the overall educational endeavor (p591).

Library research scholarship within the last two decades has increasingly addressed important questions related to the impact of libraries on students' acquisition of information literacy skills and development of critical thinking skills. Kuh and Gonyea's comprehensive, multi-institutional study affirmed that students who attended institutions that promoted the importance of information literacy reported higher levels of critical thinking.

John C. Ory and Larry A. Braskamp's (1988) early study demonstrated that participation in academic activities which included library experiences was moderately correlated with students' gains in critical thinking skills.

Similarly, Ethelene Whitmire (1998) discovered that students engaged in more focused library activities reported significant impacts on their critical thinking skills.

Some other studies have examined the association between library use and student learning, and student engagement; for example, Thomas F. Nelson Laird and Kuh (2005) found that participation in information and library-related activities (for example, using the library website to find academic resources, asking librarians for help, etc.) were positively and moderately correlated with student engagement in other areas; namely, collaborative learning (for example, working with other students on class projects, working with other students outside of class, etc.), student-faculty interactions (for example, discussing grades or assignments with faculty, talking about career plans with faculty, etc.), and academic challenges (for example, working harder than students thought they could meet an instructor's standards, preparing two or more drafts of a paper before turning it in, etc.).

Beyond student participation, researchers have found that the support provided by institutions to academic services results in increased engagement: Gary R. Pike (2006) and others discovered that institutional expenditures on academic support (including libraries) have strong positive correlation to student engagement. Some researchers have examined the association between library use and students' academic performance; however, many of these studies present limitations due to student age or sample sizes. Additionally, many libraries do not collect data related to students' use of services to protect library user privacy; consequently, the lack of data collection leads to a shortage of studies examining the association between library use and student outcome.

An early study conducted by Patricia B. Knapp demonstrated associations between attendance in library skills programs and students' grades, and students' GRE scores.

Patrick Barkey (1965) also discovered that "students who checked out books had higher grade point averages.

While above studies are important contributions to the literature, more contemporary evidence of associations between library use and students' academic achievements is needed. Even amidst the presence of recent scholarship in this area, more concrete and reliable research is somewhat lacking; for example, while Andrew M. Robinson and Karen Schegl (2004) found correlations between citation behavior and students' grades on assignments.

Andrew M. Robinson and Karen Schegl (2004) noted that the "correlation may have been based on the quantity of citations rather than the quality of citations.

While K. De Jager (1997) found positive correlations between students' course grades and the number of books they checked out. This study was limited to data collected from 240 students across two courses.

More promising research that further interrogated the relationship between students' library use and their academic achievement has emerged.

Shun Han Rebekah Wong & T.D. Webb (2011) discovered positive associations between the number of items that students have checked out of the library and students' grade point averages at graduation; however, the correlations were small to medium across all of the majors and colleges under review at one institution. Further, this study was limited because it only examined the association between one library activity (checking out material) and students' academic achievement. Students engage in wider variety of interactions with their libraries and it is important to examine the differences those interactions can have on student outcomes. Additionally, the researchers did not attempt to control additional variables associated with students' academic achievement (such as demographics, college experiences, pre-college academic performance, etc.).

Several researchers have also investigated the impact of libraries on students' retention while the earlier studies connected library use to retention. More recent studies have examined the relationship between library expenditures and retention rates. Elizabeth M. Mezick (2007), for example, found moderate relationships between library expenditures, library materials, serials, and student retention among several hundred four-year institutions. Yet, even among those diverse studies, there is little evidence regarding the impact of specific library activities (for example, using licensed web-based resources; interacting with reference librarians, etc.) may have on student retention. Colleges and universities have a very small window of opportunity to establish strong connections with students, as 75 percent of non-returning students withdraw during or immediately following their first semester. Therefore, activities and interventions that can be designed to enhance students' academic success and retention are valuable undertakings for higher education institutions.

4. Methodology

4.1 Target Population

All the undergraduates in the Sri Lankan Universities recognized by the University Grants Commission of Sri Lanka. These universities can be categorized as follows

1. Universities under the Ministry of Higher Education
2. Universities Under Other Ministries

4.2 Study Population

All the undergraduates in Faculties of Medicine, Faculties of Management, Faculties of Engineering, Faculties of Science, Faculties of Law, Faculties of Arts and Other Faculties in Sri Lankan Universities accepted by the University Grants commission of Sri Lanka.

4.3 Sampling

It is intended to use the probability sampling technique to obtain an appropriate and fair sample for the research. Initially the population will be divided into the following groups using stratified sampling technique.

1. Universities under Higher Education Ministry
2. Universities Under Other Ministries

Then the following universities will be selected using the purposive sampling technique. I.e. Universities which admit more than 2500 students per year.

1. University of Colombo
2. University of Sri Jayewardenepura
3. University of Moratuwa
4. University of Ruhuna
5. University of Peradeniya
6. University of Jaffna
7. University of Kalaniya
8. South Eastern University
9. General Sir John Kotalawela Defence University

After that, it will be divided into following groups using the stratified sampling technique.

- Faculty of Medicine (1st Year, 2nd Year, 3rd Year, 4th Year)
- Faculty of Engineering (1st Year, 2nd Year, 3rd Year, 4th Year)
- Faculty of Management (1st Year, 2nd Year, 3rd Year, 4th Year)
- Faculty of Arts (1st Year, 2nd Year, 3rd Year, 4th Year)
- Faculty of Law (1st Year, 2nd Year, 3rd Year, 4th Year)
- Faculty of Science (1st Year, 2nd Year, 3rd Year, 4th Year)
- Faculty of Allied Health Sciences (1st Year, 2nd Year, 3rd Year, 4th Year)

Then, 5% of students will be selected from each academic year using the random sampling technique. Sample from which data will be collected is as follows:

Table 2

University	Faculties								Total
	Med	Eng	Mgt	Art	Law	Sci	AHS	Oth	
	5% 1st year to 4th year								
Colombo	44	0	84	110	50	73	6	24	391
Sri Jayewardenepura	30	0	240	135	0	156	15	5	581
Moratuwa	0	164	80	0	0	0	0	70	314
Ruhuna	32	45	64	70	0	68	25	55	359
Peradeniya	80	83	50	120	10	86	37	43	509
Jaffna	27	10	80	100	10	105	22	8	362
Kalaniya	32	10	130	240	0	90	0	40	542
South Eastern	0	20	70	60	0	60	0	0	210
KDU	10	40	10	2.5	8	0	40	20	131
Total	255	372	808	838	78	638	145	265	3399

4.4 Analytical Framework

Above data will be analyzed using the regression analysis using MS Excel data tool pack to find out the correlations and to develop models that can demonstrate the relationship between the university library usage and the undergraduate GPA. Further, using MS Excel, Hypothetical testing will be done considering the Chi Square distribution to find out whether there is any significant difference of GPA between the Library users and the library non users. All the data will be analyzed and recorded using the MS Excel software. If there is any further analysis that cannot be done using MS Excel, SPASS statistical software will be used for that purpose.

5. Expected outcome

After completing this study the researcher expects to achieve following targets.

- To find out the different kinds of correlations between the undergraduate university library usage and the student GPA, academic year wise as well as faculty wise.
- To construct models to predict the GPA that can be achieved with the undergraduate Library usage.
- To find out whether there is any significant difference of GPA between the undergraduates who use the library and those who do not use.
- To open new areas of research to find out the correlation between university library usage and the achievement of postgraduate students

- To forward necessary and appropriate recommendations to the Ministry of Higher Education, University Grants Commission, Universities and University libraries with regard to the undergraduate library usage and the Expenditure of Libraries
- Cost comparison with regard to the undergraduate library usage and expenditure made by libraries

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