

INFORMATION SOURCES USED BY POSTGRADUATE STUDENTS IN GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY: A CITATION ANALYSIS OF THESES

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Abstract

This study is based on 2627 citations, appended in sixty five M.Sc. theses submitted to the General Sir John Kotelawala Defence University (KDU) during the time period from 2008 to 2013. The objectives of the study were to identify the bibliographic form of the used information sources by postgraduate students in KDU; determine types of information sources such as primary, secondary and tertiary used by them and determine subject-wise distribution of citations. The study revealed that books were the most cited bibliographic form of information source used by postgraduate students at KDU. Thirteen (13) different bibliographic forms were identified among the citations. Secondary sources were the most preferred information source type (64%) used by them. According to the study, management is the most favored subject discipline among the cited books.

Keywords: Citation analysis, Information sources, Kotalawela Defence University, Theses, Postgraduate students

Introduction

Academic libraries are facing different challenges in present information society. Increasing price of books, cut back of the fund allocation, variations of the information media and sources, complexity of information needs among different user categories can be identified as

some challenges faced by academic librarians at present. As a result of development of modern technology, formats and categories of information sources have changed. Role of librarians' has become more complicated with above facts. In this situation better identification of user needs as well as most required sources for users are essential for librarians to maintain a balanced collection and to provide excellent information services. This identification will be help to improve the collection development policy. Especially librarians must have a clear understanding of information needs and information resources used by researchers. In this case citation analysis is an excellent method for the identification of information needs in different subject disciplines and sources used by different user categories and it is a way to understand the users. This citation analysis gives valuable information in the management of library collection. As per the Echezona, Okafor, Ukwoma (2011), citation analysis is an aspect of bibliometrics which studies the references used in articles and it has become well established part of information research. Accordingly this study was done based on the postgraduate theses collection (Defence Studies) at General Sir John Kotelawala Defence University (KDU) Sri Lanka in order to identify the information needs and information sources used by postgraduate students for their theses. This identification is important for librarians to build and manage the collection.

General Sir John Kotelawala Defence University was formed by the Parliament Act No 68 in 1981 as Kotelawala Defense Academy and was upgraded later to the university status by the Parliament Act No. 29 in 1988. KDU is governed by the Ministry of Defense and later on, in 2007, it was renamed as General Sir John Kotelawala Defense University. At present, KDU has become the authorized university to offer a number of bachelor's and postgraduate degrees in various subject areas. It is the only university that offers graduate courses in defense studies in the South Asian region. Postgraduate degrees are offered by the Faculty of Graduate Studies (FGS) of KDU was established in 2001 to provide an opportunity for tri-services and Police officers to obtain postgraduate qualifications. At present apart from Tri-Services (Sri Lanka Army, Sri Lanka Navy and Sri Lanka Air Force) and Police officers, public and private sector personnel

are also following postgraduate courses provided by KDU. The entire collections of M.Sc. (Defence Studies) theses (65) submitted during the period of 2008 - 2013 to KDU were examined for this study.

Objectives

Objectives of the study are as follow,

1. To identify the bibliographic form of the used information sources by postgraduate students at KDU.
2. To determine types of information sources such as primary, secondary and tertiary sources used by Postgraduates students of KDU.
3. To determine subject-wise distribution of citations.

Methodology

Citation analysis is the research method used for this study. The population of the study is all the theses (65) of M.Sc. (Defence Studies) submitted to the General Sir John Kotelawala Defence University during the time period of 2008 – 2013. All references in footnotes and bibliographies of the above mentioned sixty five theses were analyzed in this study.

Review of Literature

Different types of studies in citation analysis were found among the available literature. Review of related literature is important to identify the background knowledge for the study as well as to gain awareness about the method that we follow for the study. As stated by the Hoffmann and Doucette (2012), citation analysis is a branch of bibliometrics that examine the citations found in publications such as journal articles and books to look for patterns of use. This type of study typically involves recording the details of the reference list of number of publications to determine what materials are being consulted and then analyzing those materials by type, frequency, age, local holdings, or other factors.

There are number of studies in citation analysis of different disciplines. Review of the previous studies is leading to present study. Gupta and Khare (2013), investigated in" Citation analysis of PhD theses of LIS in

Dr. Harisingh Gour University, Sagar". The study covered 7284 citations and evaluated different aspects of citations study. It was revealed that most of the cited sources were journals, and majority of cited books were in single authorship. It also determined that most of the contributions of journals were from USA.

With the purpose of investigating authorship pattern of the citations, type and form of literature cited, and compiled a rank list of core journals in chemical sciences, Gohain and Saikia (2014) carried out a study on "Citation analysis of PhD theses submitted to the Department of Chemical Sciences, Tezpur University, Assam". The study revealed that journals were the most preferred sources of information used by the researchers in the field of chemical sciences accounting for 78.83% of total citations, followed by books with 15.57% citations. The study further revealed that, the collaborative research more than three authors is prevailing in chemical science theses. In addition, the result proved that out of the total number of 8658 journal citations, 39.89% are written by more than three authors, followed by those two authors with 22.28%.

Echezona, Okafor and Ukwoma (2011) have studied citation analysis of dissertations of postgraduate students in library and information science and have discovered that journal articles (53.8%) were most cited information sources by the postgraduate students. This is in line with Olatokun and Makinde (2009), Gupta and Khare (2013), Gohain and Saikia (2014), Zafrunnisha (2012) who found that researchers refer to more journal articles than other information sources in literature search.

Kushkowski, Parsons and Wiese (2003) analyzed citations of over 9100 citations from master's and doctoral theses written between 1973 and 1992 at a large Mid-Western Land-Grant University. The results of this study suggested that graduate students writing theses favor current research regardless of disciplinary affiliation. In addition, it was found that the length of theses increased over time and the number of citations in thesis bibliographies varied by discipline. In concluding authors point out that graduate students are citing recent literature in their theses is particularly note worthy.

Results and Discussion

In this study 2,627 citations were identified from sixty five postgraduate M.Sc. (Defence Studies) theses submitted in 2008-2013. The analysis of the data has been done on the following aspects to meet the stated objectives.

Table 1- Year-wise and student's category -wise distribution of theses

Year submitted	Military Officers	Civil personnel	Total	Percentage
2008	11	7	18	28%
2009	10	1	11	17%
2010	7	1	8	12%
2011	9	3	12	19%
2012	4	4	8	12%
2013	3	5	8	12%
Total	44	21	65	100%

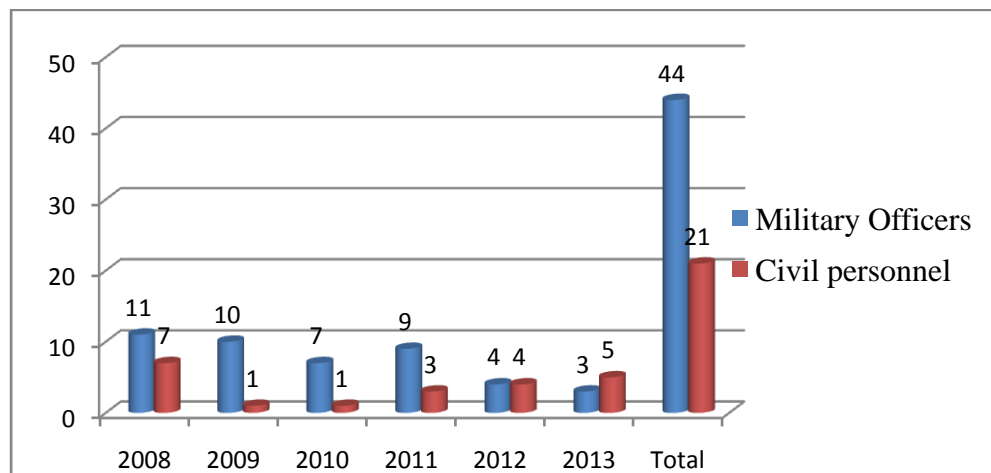


Figure 1- Year-wise and student category -wise distribution of theses

According to the table 1 and figure 1, there are two main categories of postgraduate students who have submitted theses to the FGS of Kotelawala Defence University. Out of that population 68% theses were submitted by military officers and that is the majority. Army, Navy and Air Force officers are included in above percentage. Second category is civil personnel and their contribution is 32%. In additional above table and figure shows the year-wise distribution of Postgraduate theses submitted to KDU. A maximum of 28% (18) theses was submitted in the year 2008. There is equality among the number of theses submitted in the years 2010, 2012 and 2013 (12%).

Table 2- Bibliographic forms of distribution

Rank	Information sources	Number of citation	Percentage of Citation
1	Books	957	37%
2	Web resources	562	21%
3	Journals	319	12%
4	Reports	197	8%
5	Interviews	116	5%
6	Proceedings	111	4%
7	Government Publication	81	3%
8	News papers	78	3%
9	Theses/ Dissertation	63	2%
10	Pamphlets	54	2%
11	Official Documents	36	1%
12	Magazine	33	1%
13	Reference sources	20	1%
	Total	2627	100%

Table 2 shows different bibliographic forms of the cited information sources by postgraduate students of KDU for their M.Sc. theses. In this study 2,627 citations from sixty five postgraduate theses submitted in 2008-2013 were identified. Out of 2627 citations, thirteen main bibliographic forms were identified as books, web resources, journals, reports, interviews, proceedings, government publications, newspapers, theses/dissertations, pamphlets, official documents, magazines and reference sources. Analysis of data indicates that the books contributed to the highest number (37%) of citations followed by web resources (21%) and academic journals (12%). This reveals that books are the most preferred sources used by the postgraduate students in KDU and web resources are the second most cited source. It was identified that official web sites of different institutions, organizations and military related sites as major web sites accessed by postgraduate students when they doing theses. This study reveals that reference sources such as encyclopedias, dictionaries, handbooks and magazines as well as official documents are shows less usage. Internal memorandums, Army orders, Air force orders, circulars were identified as official documents used by them.

Table 3- Types of Information sources-wise Distribution

Types of Information Sources		No. of Citations
Primary Sources	Published	804
	Unpublished	116
Secondary sources		1687
Tertiary sources		20
Total		2627

Types of information sources-wise distribution of citations in theses completed by postgraduate students is presented in Table 3 and figure 2. Types of information sources were categorized as primary, secondary and tertiary Sources. Primary source is a document or physical object which was written or created during the time under study. These sources were present during and experience or time period and offer an inside view of particular event. A secondary source of information is one that was created by someone who did not have a first-hand experience or participate in the events being researched. Tertiary sources are works which list primary and secondary resources in a specific subject area. In this study, primary sources were identified in two categories named published and unpublished. Data show that secondary sources such as books, web resources, government publications (64%) were the most preferred information sources used by the postgraduate students in KDU. Analysis of data indicate that postgraduate students have cited 35% primary sources both published and unpublished in their theses such as academic journals, reports, interviews, newspapers, theses and official documents. According to the above table and figure very less citations were found in tertiary sources such as handbooks, encyclopedias, dictionaries among the examined theses.

Table 4- Subject distribution of citations in books.

Rank	Subject	No of Citation
1	Management	416
2	Defence & Strategic studies	113
3	History	47
4	Psychology	35
5	Tourism	33
6	Social science	32
7	Engineering	29
8	Environmental science	28
9	Mass communication	28
10	Cultural studies	28
11	Economics	27
12	Law	20
13	Religion	18
14	Transportation	16
15	Ethnic conflict	15
16	Globalization	13
17	Political science	13
18	Research methodology	12
19	Democracy	9
20	Statistics	9
21	Education	8
22	Others	8
	Total	957

Table 4 shows that subject distributions of citations in books used by postgraduate students in KDU and twenty two main subject areas were identified. Results reveal that management is the most cited subject discipline. Out of 957 citations of books, 113 citations were found in Defence & Strategic Studies. History, Psychology, Tourism and Social Science also can be mentioned as other major subject disciplines found among the cited books in the entire collection of theses. Subject areas were ranked by considering frequency of citations in books which were found from examined theses of KDU.

Conclusion

In this study 2627 citations were analyzed from sixty five postgraduate (Defence Studies) theses in KDU and it was to obtain a better understanding of the information sources used by postgraduate students. Analysis of data indicates that the majority of postgraduate students are military officers represent the Tri forces. Therefore, most theses were focused on military related topics. Literature review shows that journals are the most preferred bibliographic form of postgraduate students in different categories. But according to this study books are the most preferred bibliographic form of information used, which is followed by web resources, academic journals, reports, interviews and proceedings. Most of the military officers have completed their theses while working at rural areas and it might have effected the above results, because easily available materials for them among the aforementioned bibliographic forms were the books. Gazettes and Parliamentary Acts were identified as government publications and memorandums, circulars and Army orders were included in the official document category. Types of Information sources-wise distribution was analyzed and the finding shows that secondary sources are the most cited information source for M.Sc. theses, and academic journals, reports, interviews are the primary sources used for their studies. The results very clearly shows that Management and Defence & Strategic Studies are the main focused subject areas found among the cited books. History, Psychology, Tourism, Law, Ethnic Conflict, Environmental Science, etc. are the other subject disciplines cited by researchers for their M.Sc. theses. The study reveals that tertiary sources were poorly cited, which may be due to lack of awareness and inadequate availability of resources in the library. Postgraduate students must have guidance regarding standard citation formats as well as usage of information sources. If the library can organize information literacy programmes and user awareness programmes for the Postgraduate students it will be more useful for them and will increase their online journal usage too. Findings of this study are important to provide a better service and to

maintain a quality and balanced library collection at Kotelawala Defence University.

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