



LIBRARY COLLECTIONS CONTRIBUTE TO DOCTORAL RESEARCH: A CITATION ANALYSIS OF THESES IN THE FIELD OF BUSINESS ADMINISTRATION AND COMMERCE AT UNIVERSITY OF MYSORE

Manjunatha J.¹ and N. S. Harinarayana²

¹Research Scholar , Department of Studies in Library and Information Science, University of Mysore, Mysore, Karnataka, India.

²Associate Professor , Department of Studies in Library and Information Science, University of Mysore, Mysore, Karnataka, India.

ABSTRACT

The present citation analysis study has been undertaken to evaluate the University Library collections contribute to the doctoral research in the field of Business Administration and Commerce at the University of Mysore. The study examined the 1102 research materials cited in the 14 doctoral theses submitted to the University during the period from 1964 to 2013. The study covers the analysis of various variables of the citation such as type, authorship, age and library holdings to meet objectivities of the study. The study result found that the overall average number of citations per doctoral thesis in the both Business Administration and Commerce subject was 171.93. The highest number of citations was 447 and lowest number of Citations was 111. In a total 1102 citations, 43.10 percent were Journal citations, 38.29 percents were Textbook citations followed and Report (10.25%). the highest number of citations (57.42 %) was single author works followed by 23.25% works authored by joint authors. The highest percentage of citations is about 6 to 10 years of age (22.11%), followed by citations in the age range of 21 to 30 years (16.46%). The University Library owned 52.34 percent of a total 1045 cited materials found in the theses. The library owned 65.05 % of 475 cited journals found in theses and 45.02

% of 422 cited Textbook found in the theses. Library ownership of more than 40% of cited research materials belongs to the age group of below 1 to 100 years during the period.

KEYWORDS: Citation analysis, Library collection, Bibliometrics, Collection management, References, Doctoral thesis.

INTRODUCTION :

The reading materials available in libraries in general, academic libraries in

particular play a very significant role in enhancing the knowledge of the users or more particularly scholars involving in cutting edge research in academic institutions. Thus, relevancy of the library collection becomes very significant. The advancement in information and communication technologies in the early part of the 21st century posed a substantial threat to the libraries. The information access through the Internet has been growing ever since Tim Berners-Lee of CERN (The



European Organization for Nuclear Research) introduced first web browser for wider public access of Internet in 1991. At the same time, the dwindling budget of libraries has also become a major issue across the world (Gao, Yu, & Lao, 2009; Kumar & Dora, 2011). Many libraries had to cut short their budget and had to reduce the subscription and purchasing cost of library materials. However, the demand of the users to access information has never come down. In fact, the demand for information use has increased considerably as more and more information proliferated in different form and format. In this context, here an attempt has been made to study the citations available in doctoral theses submitted to the University of Mysore. The study also aimed at determining the Mysore University Library collections contribute to doctoral research in the field of Business Administration and Commerce during the period from 1964 to 2013.

LITERATURE REVIEW:

The researcher has attempted to identify the availability of previous literature in the field of library collection contributions and reviewed those literature to understand the studies, which are already done in the field. There are mainly two kinds of universities; general and special universities, which owns the various form of resources for its users. Many studies were conducted to evaluate the usefulness of these resources through the citation analysis of theses or dissertations of research scholar and publications of faculties (Kayongo & Helm, 2012; Sylvia, 1998). Smith (2003) reported that 'research scholars of the general university who belongs to the discipline of Arts and Humanities, Education, Science and Social Science used around 87 % of cited materials of their dissertation from the library itself. Wilson and Tenopir (2008) examined publications of Medical faculties and identified that 90% of total cited items were accessed from the university library. Kirkwood (2009) identified that research scholar of biological, medical, industrial, mechanical, chemical, electrical and computer engineering as well as computer science have used 85 % of journals for research work. Faculties of anthropology disciplines have cited 47% of books than the journal for publication (Kayongo & Helm, 2012). Medical students are using online journals most frequently and use of print journals is significantly decreasing (Sandra and De Groot 2008). A research scholar of librarianship and faculties of anthropology discipline cited materials are less than 10-year old (Tonta, 2006; Kayongo & Helm, 2012). Many studies mainly reported that English language publications are dominated than other foreign languages.

OBJECTIVES:

The present study has been carried out with the following objectives.

- 1.To identify the genre of research materials used by the researchers in the field of Business Administration and Commerce.
- 2.To investigate the authorship pattern of the researchers.
- 3.To find out the age wise distribution of citations.
- 4.To determine library ownership of the resources cited in the theses.
- 5.To investigate whether the usefulness of the collection had changed over a period of time, say a decade.

METHODOLOGY:

The main aim of the study is to evaluate the Mysore University library collections contribute to doctoral research in the field of the Business Administration and Commerce at the University of Mysore. The citation analysis research method was employed for the study and the data source for the study is 1102 references cited in the 14 doctoral theses submitted to the University during the period between 1964 – 2013. The stratified random sampling method was used for selecting 14 theses from 5 decades for the study whereas there were no theses available during the period of 1964-1973. Hence, the study includes theses submitted between periods of 1974 to 2013. The researchers analyzed various variables of the citation to meet objectivities of the study such as type, authorship, age, and library holdings. The website citation was included for analysis of Range and Type only. The availability of the documents ascertained by using the traditional and online catalogues. The data so collected has been analyzed and interpreted in the succeeding sections of the paper.

DATA ANALYSIS AND INTERPRETATION:**1. Range of Research Materials cited in the Doctoral Theses****Table 1: Range of Research Materials cited in the Doctoral Theses**

Subject	Number of Thesis	Number of Citation	Average Number of Citation per Thesis	Lowest Number of Citation	Highest Number of Citation
Business Administration	5	439	87.6	40	126
Commerce	9	663	84.33	71	351
TOTAL	14	1102	171.93	111	477

The range of research materials cited in the doctoral theses in the field of Business Administration and Commerce is shown in Table 1. The table shows that in all 1102 citations, the average number of citations per doctoral thesis in the both Business Administration and Commerce subject overall was 171.93. The highest number of citations was 477 and lowest number of Citations was 111. The Commerce subject researcher cited the highest number of resources with an average of 84.33 resources as compared to Business Administration subject with an average of 87.6 resources.

2. Type of Research Materials cited in the Doctoral Theses

Type of research materials cited in doctoral theses during the period of five decades from 1964 to 2013 is presented in Table 2. The table indicates that there were no theses available in the subjects of Business Administration and Commerce at Mysore University Library during the period of 1964 to 1973. Hence, 1102 citations were total population found during the period of 4 decades from 1974 to 2013. Among the total 1102 citations, 43.10 percent were Journal citations and 38.29 percent were Textbook citations followed by Report (10.25%), Website (5.17%), and Conference Proceedings (1.27%). The Newspaper, Thesis, Dictionary and Working Paper were least cited resources by the researchers. The Textbook was the foremost type of resources cited by the researchers from 1984 to 2003. The journal citation has been gradually increased from 29.58% in 1974 to 48.32% in 2013 vis-a-vis the Report citation has been gradually decreased from 52.11% in 1974 to 7.34% in 2013. The researchers cited Website from 1994 onwards and its citations have been increased rapidly during the period of 2004 to 2013.

Table 2: Type of Research Materials cited in the Doctoral Theses

	Decade										All Total (1964-2013)	
	1964-1973		1974-1983		1984-1993		1994-2003		2004-2013			
Number of Thesis	0		1		3		3		7		14	
Type	Total No. of Citation	%	Total No. of Citation	%	Total No. of Citation	%	Total No. of Citation	%	Total No. of Citation	%	Total No. of Citation	%
Textbook	0	0.00	13	18.31	99	48.77	93	53.45	217	33.18	422	38.29
Conference	0	0.00	0	0.00	0	0.00	0	0.00	14	2.14	14	1.27
Dictionary	0	0.00	0	0.00	0	0.00	0	0.00	3	0.46	3	0.27
Journal	0	0.00	21	29.58	64	31.53	74	42.53	316	48.32	475	43.10
Newspaper	0	0.00	0	0.00	11	5.42	0	0.00	0	0.00	11	1.00
Working Paper	0	0.00	0	0.00	0	0.00	0	0.00	2	0.31	2	0.18
Report	0	0.00	37	52.11	28	13.79	0	0.00	48	7.34	113	10.25
Thesis	0	0.00	0	0.00	1	0.49	1	0.57	3	0.46	5	0.45
Website	0	0.00	0	0.00	0	0.00	6	3.45	51	7.80	57	5.17
TOTAL	0	0.00	71	100.00	203	100.00	174	100.00	654	100.00	1102	100.00

3. Authorship Pattern of Research Materials cited in the Doctoral Theses

Table 3 indicates the Authorship pattern of research materials cited in the doctoral theses. The Website citation type was excluded from the analysis of authorship pattern. Hence, the total number of 1045 citations were analysed to ascertain the authorship pattern of cited research materials by the researcher. The authorship pattern has grouped into four categories such single author, joint authors, three authors, four and more than four authors, and corporate authors. In all total 1045 citation, the highest number of citations (57.42 %) was single author works followed by 23.25% works authored by joint authors. 9.95% by corporate authors, 7.85% by

three authors, and 1.53% by four and more than four authors. The single-authored works have been decreasing gradually from 66.01% in 1984 to 53.40% in 2013 vis-a-vis the jointly authored works have been increased gradually from 5.63% in 1974 to 27.86% in 2013. The table clearly shows that the researcher scholar theses seem to be in favor of single authors. Researcher in the field of Business administration and Commerce seem to undertake less collaborative research.

Table 3: Authorship Pattern of Research Materials cited in the Doctoral Theses

	Decade								All Total (1974-2013) 14	
	1974-1983		1984-1993		1994-2003		2004-2013			
Number of Thesis	1		3		3		7			
Authorship	Total No. of Citation	%	Total No. of Citation	%	Total No. of Citation	%	Total No. of Citation	%	Total No. of Citation	%
Single Authors	34	47.89	134	66.01	110	65.48	322	53.40	600	57.42
Joint Authors	4	5.63	35	17.24	36	21.43	168	27.86	243	23.25
Three Authors	0	0.00	6	2.96	19	11.31	57	9.45	82	7.85
Four and More than Four Authors	0	0.00	0	0.00	3	1.79	13	2.16	16	1.53
Corporate authors	3	46.48	28	13.79	0	0.00	43	7.13	104	9.95
TOTAL	71	100.00	203	100.00	168	100.00	603	100.00	1045	100.00

4. Age of Research Materials cited in Doctoral Theses

Table 4 indicates the age of research materials cited in the doctoral theses during the period from 1974 to 2013. The citation age refers to the number of years between the completion date of the doctoral thesis and the publication date of the resource cited. It may be seen from the table that among the 1045 citations, the highest percentage of citations are about 6 to 10 years of age (22.11%), followed by citation in the age range of 21 to 30 years (16.46%) and 11 to 15 years (15.60%). The table clearly shows that the more than 60% of cited resources age belongs to the age group of 6 to 10 years. It is noted that 28% of cited resources age comes under the age group of below 1 year to 5 years and only 8.23% of cited resources age range is 31 to 100 years.

Table 4: Age of Research Materials cited in Doctoral Theses

	Decade								All Total (1974-2013) 14	
	1974-1983		1984-1993		1994-2003		2004-2013			
Number of Thesis	1		3		3		7			
Age	Total No. of Citation	%	Total No. of Citation	%	Total No. of Citation	%	Total No. of Citation	%	Total No. of Citation	%
< 1 year			10	4.93	3	1.79	2	0.33	15	1.44
1 year	2	2.82	4	1.97	8	4.76	26	4.31	40	3.83
2 years	3	4.23	4	1.97	14	8.33	28	4.64	49	4.69
3 years	8	11.27	16	7.88	17	10.12	35	5.80	76	7.27
4 years	3	4.23	6	2.96	15	8.93	29	4.81	53	5.07
5 years	5	7.04	8	3.94	17	10.12	33	5.47	63	6.03
6 to 10 years	24	33.80	47	23.15	36	21.43	124	20.56	231	22.11
11 to 15 years	13	18.31	38	18.72	24	14.29	88	14.59	163	15.60
16 to 20 years	6	8.45	13	6.40	15	8.93	63	10.45	97	9.28
21 to 30 years	5	7.04	39	19.21	13	7.74	115	19.07	172	16.46
31 to 40 years	0	0.00	11	5.42	1	0.60	49	8.13	61	5.84
41 to 50 years	0	0.00	4	1.97	1	0.60	7	1.16	12	1.15
51 to 100 years	2	2.82	3	1.48	4	2.38	4	0.66	13	1.24
Total	71	100.00	203	100.00	168	100.00	603	100.00	1045	100.00

5. Library Ownership of Cited Research Materials by Type

The Table 5 reveals the library ownership of cited research materials found in the theses of Business Administration and Commerce submitted during the period from 1974 to 2013. It may be seen from the table that the Mysore University Library owned 52.34 percent of a total 1045 cited materials found in the theses. The library ownership of cited material is different from one type to another type of research materials. The library owned 100% of 11 newspapers cited in the theses. The library owned 65.05 % of 475 cited journals found in

theses and the library ownership of cited journals has been decreasing from 100 % in 1974 to 61.08% in 2013 during the period. Out of five cited doctoral thesis, there were 60% theses available in the library. The library held 45.02 % of 422 cited Textbook in the theses and the availability of cited textbook in the library has been decreasing rapidly from 92.31% in 1974 to 32.26 % in 2013. The library held 30.09% of 113 cited report in theses. Conference proceedings, Dissertation and Working papers cited in the doctoral theses were not owned by the library.

Table 5: Library Ownership of Cited Research Materials by Type

	Decade								All Total (1974-2013)	
	1974-1983		1984-1993		1994-2003		2004-2013			
Number of Thesis	1		3		3		7		14	
Type	Total Citation	% Owned (Frequency)	Total Citation	% Owned (Frequency)	Total Citation	% Owned (Frequency)	Total Citation	% Owned (Frequency)	Total Citation	% Owned (Frequency)
Textbook	13	92.31 (12)	99	59.60 (59)	93	52.69 (49)	217	32.26 (70)	422	45.02 (190)
Conference							14	0.00 (0)	14	0.00 (0)
Dissertation							3	0.00 (0)	3	0.00 (0)
Journal	21	100.00 (21)	64	79.69 (51)	74	59.46 (44)	316	61.08 (193)	475	65.05 (309)
Newspaper			11	100.00 (11)					11	100.00 (11)
Working Paper							2	0.00 (0)	2	0.00 (0)
Report	37	21.62 (8)	28	46.43 (13)			48	27.08 (13)	113	30.09 (34)
Thesis			1	100.00 (1)	1		3	66.67 (2)	5	60.00 (3)
TOTAL	71	57.75 (41)	203	66.50 (135)	168	59.46 (93)	603	52.69 (278)	1045	52.34 (547)

Note: Figure in parentheses is the frequency of owned materials and its percentage listed above it.

6. Library Ownership of Cited Research Materials by Age

The age wise distribution of cited research materials owned by the library is shown in Table 6. The table indicates that the library owned 93.33% of 15 cited research materials which belong to the age of below one year and owned 76.92% of 13 cited materials belong to the age of 51 to 100 years. The library held the more than 50% of cited research materials belongs to each age group of 1 to 4 years, 6 to 15 years and 31 to 40 years and similarly library owned the below the 50% of cited research materials which belongs to each age groups of 21 to 30 years, 5 years and 16 to 20 years. It is clearly seen from the table that the library ownership of more than 40% of cited research materials belongs to the age group of below 1 to 100 years during the period from 1974 to 2013. The age wise availability of cited research materials was completely fluctuated from one decade to another decade.

Table 6: Library Ownership of Cited Research Materials by Age

Age	Decade								All Total (1974-2013)	
	1974-1983		1984-1993		1994-2003		2003-2013			
Number of Thesis	1		3		3		7		14	
	Total Citation	% Owned (Frequency)	Total Citation	% Owned (Frequency)	Total Citation	% Owned (Frequency)	Total Citation	% Owned (Frequency)	Total Citation	% Owned (Frequency)
< 1 year			10	100.00 (10)	3	100.00 (3)	2	50.00 (1)	15	93.33 (14)
1 year	2	0.00 (0)	4	100.00 (4)	8	62.50 (5)	26	53.85 (14)	40	57.50 (23)
2 year	3	100.00 (3)	4	50.00 (2)	14	71.43 (10)	28	39.29 (11)	49	53.06 (26)
3 year	8	75.00 (6)	16	81.25 (13)	17	58.82 (10)	35	31.43 (11)	76	52.63 (40)
4 year	3	100.00 (3)	6	83.33 (5)	15	66.67 (10)	29	44.83 (13)	53	58.49 (31)
5 year	5	40.00 (2)	8	62.50 (5)	17	41.18 (7)	33	39.39 (13)	63	42.86 (27)
6 to 10 years	24	66.67 (16)	47	63.83 (30)	36	55.56 (20)	124	53.23 (66)	231	57.14 (132)
11 to 15 years	13	53.85 (7)	38	73.68 (28)	24	41.67 (10)	88	44.32 (39)	163	51.53 (84)
16 to 20 years	6	33.33 (2)	13	30.77 (4)	15	46.67 (7)	63	42.86 (27)	97	41.24 (40)
21 to 30 years	5	20.00 (1)	39	66.67 (26)	13	38.46 (5)	115	40.00 (46)	172	45.35 (78)
31 to 40 years	0		11	45.45 (5)	1	100.00 (1)	49	59.18 (29)	61	57.38 (35)
41 to 50 years	0		4	25.00 (1)	1	100.00 (1)	7	71.43 (5)	12	58.33 (7)
51 to 100 years	2	50.00 (1)	3	66.67 (2)	4	100.00 (4)	4	75.00 (3)	13	76.92 (10)
Total	71	57.75 (41)	203	66.50 (135)	168	55.36 (93)	603	46.10 (278)	1045	52.34 (547)

Note: Figure in parentheses is the frequency of owned materials and its percentage listed above it.

CONCLUSION:

The present citation analysis study made an effort to evaluate the University Library collections contribute to the doctoral research in the field of Business Administration and Commerce at the University of Mysore. The study result affirmed that in total 1102 citations, 43.10 percent were Journal citations and 38.29 percent were Textbook citations. Hence, the librarian should have to make an appropriate plan for well maintaining Journal and Textbook collection as compared to another type of the cited materials. More than 90% of cited resources belong age groups of below 1 to 30 years. Therefore, the library collection that belongs to this age group should be well maintained. The University Library owned 52.34 percent of a total 1045 cited materials found in the theses. Library ownership of cited journals has been decreasing from 100 % in 1974 to 61.08% in 2013 and the availability of cited Textbook in the library has been decreasing rapidly from 92.31% in 1974 to 32.26 % in 2013. Hence, the library should have to adopt appropriate collection development policy for enhancing the rich collection to support the doctoral researchers.

REFERENCES:

- 1.De Groote, S. L., and Barrett, F. A. (2010). The impact of online journals on citation patterns of dentistry, nursing, and pharmacy faculty. *Journal of Medical Library Association*, 98(4).
- 2.Gao, S., Yu, W., & Luo, F. (2009). Citation analysis of Ph.D. thesis at Wuhan University, China. *Library Collections, Acquisitions, & Technical Services*, 33(1), 8-16.
- 3.Kayongo, J., & Helm, C. (2012). The relevance of library collections for graduate student research: A citation analysis study of doctoral dissertations at Notre Dame. *College & Research Libraries*, 73(1), 47-67.
- 4.Kirkwood, P. (2009). Using engineering theses and dissertations to inform collection-development decisions, especially in civil engineering. *American Society for Engineering Education 2009 Annual Conference and Exposition*, paper AC 2009-140, Austin, TX, June 14-17.
- 5.Kumar, H. A., & Dora, M. (2011). Citation analysis of doctoral dissertations at IIMA: A review of the local use of journals. *Library Collections, Acquisitions, & Technical Services* 35(1), 32-39.
- 6.Smith, E. T. (2003). Assessing collection usefulness: An investigation of library ownership of the resources graduate students Use. *College & Research Libraries*, 64(5), 344-355.

- 7.Sylvia, M. (1998). Citation analysis as an unobtrusive method for journal collection evaluation using psychology student research bibliographies. *Collection Building*, 17(1), 20-28.
- 8.Tonta, Y., & Al, U. (2006). Scatter and obsolescence of journals cited in theses and dissertations of librarianship. *Library & Information Science Research* (07408188), 28(2), 281-296.
- 9.Wilson, C. S., & Tenopir, C. (2008). Local citation analysis, publishing, and reading patterns: Using multiple methods to evaluate faculty use of an academic library's research collection. *Journal Of The American Society For Information Science & Technology*, 59(9), 1393-1408.



Manjunatha J.

**Research Scholar , Department of Studies in Library and Information Science,
University of Mysore, Mysore, Karnataka, India.**