

Citation Analysis of Undergraduate Theses on Human Resource Management at De La Salle-College of Saint Benilde's Learning Resource Center: An Assessment Tool for Collection Development

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**CITATION ANALYSIS OF UNDERGRADUATE THESES ON
HUMAN RESOURCE MANAGEMENT AT DE LA SALLE-
COLLEGE OF SAINT BENILDE'S LEARNING RESOURCE
CENTER : AN ASSESSMENT TOOL FOR COLLECTION
DEVELOPMENT**

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Introduction/Background of the Study

Citation analysis is the study of the impact and assumed quality of an article, an author or an institution based on the number of times work and/or authors have been cited by others. In the field of library and information science, one of the research methods that can be used to assess the library collection is through citation analysis to which as described by Gooden (2001) is a type of in-house evaluation often used by librarians to assist in collection maintenance. Johnson (2000) noted that citation studies reveal much about scholarly communication and can guide collection development in academic libraries.

Citation analysis is a valuable method for collecting objective quantitative data on which to base collection development decisions (Sherriff, 2010). Libraries that want to provide the greatest possible access to a plethora of resources need to know and understand the resource needs of their users, thus, citation analysis is one way to study such needs.

According to Mahapatra (2009), citation analysis reflects two major themes, that is, use of citation as tools for librarians to evaluate the library collections and services, and use of citations as tools to analyze the research activity. He noted some of the various practical applications of citation analysis in library management. For one, citation analysis data and the volume of publication in year-wise can be used in planning retrospective bibliographies which will provide some indication of both the age of material used in a discipline and the extent which more recent publication supersedes the older ones if at all. Secondly, the citations data also determines the list of highly cited journals or books which can be used in taking decision while discarding the stock of the library. Lastly, citation analysis can find out subject relationships which help in suggesting titles of journals relevant to a given discipline in a particular library.

De La Salle-College of Saint Benilde's Learning Resource Center was established in 1988 when the Career Development Program (CDP) of De La Salle-University Manila became the Community College and was renamed to De La Salle-College of Saint Benilde. When it moved to its new home at 2544 Taft Avenue Manila, it had a small library, consisting of a three-classroom set-up in the Benilde Hall of the DLS-CSB Taft Campus. Each year thereafter, due to growing population and new programs offered by the College, libraries have been built to support the College's educational needs. Today, there are four (4) library sections located at the three (3) Benilde campuses.

Through the years, DLS-CSB has become a learner centered institution, one that is committed to realizing its vision to be a Catholic, dynamic and innovative learning community that is guided by the Lasallian tradition of Religio, Mores and Culture. Indeed, the LRC is a vital and integral part of the College's efforts of turning this goal into reality especially as it moved to embrace inclusivity in the years to come.

The library collection of De La Salle-College of Saint Benilde (DLS-CSB) has not yet undergone an extensive analysis on its collection that is solely based on the outputs of the students which is why citation analysis technique must be done to help evaluate and determine how relevant the library collection is in support of the educational and research needs of the client it serves. As regards the focus of this study which is solely based on the thesis produced under HRM program, the degree has been one of the first courses DLS-CSB had offered and is still offering until now to undergraduate students. The citation extracted from the theses produced for the past 21 years will give an insight as to how the students decide on the source, format and currency of the works cited in their papers. Furthermore, it will help the LRC to improve its collection development policy by deciding on which materials should be purchased and those that should not be a part of the collection.

Purpose of the Study

This study aims to determine the relevance of De La Salle-College of Saint Benilde's (DLS-CSB) library collection by examining the citation patterns of undergraduate theses of Human Resource Management done from 1991 to 2013. Specifically, this study seeks to:

1. Determine the type of cited materials and the year of publication used by the students in their undergraduate theses.
2. Identify the most frequently cited references and prepare a ranked list of sources of information according to their frequency of citation.
3. Determine the availability of the sources cited against the library holdings.

This is the first citation analysis study of undergraduate theses on HRM at the School of Information Management Technology of the De La Salle-College of Saint Benilde. Producing a list of the most cited materials that could be found in the library can prove that its collection is really supporting the research needs of the students. In addition to the impact factor as to where the work was cited, the result of the study gives validation that the source is useful in the field of research. Hence, it should be included in the collection.

Furthermore, the result of this study could help the library in maintaining and improving its collection by using citation analysis as a tool to evaluate the relevance of the existing collection. The result can also raise the level of awareness of the need to update the collection in support of the research needs of its stakeholders such as students, faculty, staff and the administrators as well to convince the administrators that the library's collection should be enriched.

Methodology

The research used for this study is descriptive method. According to Mitchell (2013), descriptive research allows one to describe behavior accurately.

For this study, all undergraduate theses submitted by the Human Resource Management Program students from 1991-2013 were carefully examined, encoded and organized into a Microsoft Excel (spreadsheet) containing the following information extracted from the citations; type of the cited information, publication date and title of the cited material. The materials cited were categorized into: books, conference proceedings, manual, magazines, newsletters, newspapers, non-print materials, reports, school publication, theses, unpublished materials, and yearbook.

The data gathered were listed and was checked against the library collection by searching it in the online catalogue database which is the OPAC or Online Public Access Catalog. The results from this search were ranked according to the currency of the cited material.

As regards to the references that are not available in the library collection, these were kept for further analysis specially if they had high citation frequency that could help in making decision on whether to purchase the material and make it a part of the library collection.

The data extracted were analyzed using descriptive statistics which includes frequency and percentage presented in tables. The formula for percentage used in this study is as follows:

$$\text{Percentile} = \frac{\text{Frequency of Cited Title}}{\text{Total Number of Citations}} \times 100$$

Results and Discussion

The rankings were determined based on the number of times type of material, date of publication and a title has been cited by students in their undergraduate theses.

Table 1
Citation According to Type of Cited Materials

Type of cited material	Number of Citations	Per cent
Books	11,972	78.38%
Journal	2,516	16.47%
Theses	373	2.44%
Magazine	205	1.34%
Unpublished Material	132	0.86%
Newspaper	34	0.22%
Conference Paper	20	0.13%
School Publication	6	0.04%
Newsletter	5	0.03%
Non-Print	4	0.03%
Report	4	0.03%
Manual	3	0.02%
Yearbook	1	0.01%
TOTAL	15,275	100.00%

There are 628 undergraduate theses produced from 1991 to 2013, 5 of which are missing or cannot be located in the library while 11 undergraduate theses have no bibliography, which resulted into 612 undergraduate theses that generated a total of 15,275 citations, averaging to 25 citations per undergraduate thesis. As indicated in table 1, books were cited most frequently (11,972 or 78.38%), followed by journal articles (2,516 or 16.47%), theses (373 or 2.44%), magazine (205 or 1.34%) and unpublished material (132 or 0.86%). Other types of materials such as manual, newsletters, non-print, report, school publications and yearbook were cited less frequently or a fewer times only.

The finding corroborates the work of Riahinia (2010), who reported that the total number of book citations is far more than total number of other types of information materials in her work on library and information science theses in Tehran. Likewise, the study of Fasae (2011) reveals a

general preference for books (43.8%) over journals (24.9%) in which he stated that this may be due to the fact that books are readily available in their library than journals, and possibly also because, it is easier to access books and monographs than journals. This result shows that undergraduate students seemed to have limited knowledge on the online resources of the library that includes digital or e-books, journal and even articles which are categorized by subject since it only comes after books/print materials.

Table 2
Distribution of Citation by Year of Publication

YEAR	Books	Conference Paper Handbooks & Manuals	Journal	Magazine	Newsletter	Newspaper	Non-Print	Report	School Publication	Theses	Unpublished Material	Yearbook	TOTAL	Per cent	
1901-1910	20												20	0.13%	
1911-1920													0	0.00%	
1921-1930	14												14	0.09%	
1931-1940	18												18	0.12%	
1941-1950	33												33	0.22%	
1951-1960	218		22										240	1.57%	
1961-1970	636		40			1				3			680	4.45%	
1971-1980	1495		191	54						12	4		1,756	11.50%	
1981-1990	6216	13	1	935	46		12	4		72	54		7,353	48.14%	
1991-2000	2593	1	2	682	102	5	21	4		6	240	61	1	3,718	24.34%
2001-2010	56	2		435	1					9	9		512	3.35%	
2011-2013	14	3		124						12			153	1.00%	
No date of publication	659	1		87	2					25	4		778	5.09%	
	11,972	20	3	2,516	205	5	34	4	4	6	373	132	1	15,275	100.00%

It is very interesting to note that citations by year of publication span a period of over one hundred twelve years as shown in table 2. Majority of materials cited were from 1981-1990 (7,353 or 48.14%) followed by 1991-2000 (3,718 or 24.34%). This supports the result of previous studies which pinpointed the books as the most cited type of material since majority of the citations come from books on those periods. Moreover, the tradition of literature citing in those years are based on printed materials rather than studies conducted by others. The findings support Fasae (2011) which found that students were not that sensitive about the year of publication they have cited when writing their theses. Another reason could also be the library failed to subscribe to these journals so

that the students opted to use books that are found in the library instead of consulting other sources.

Table 3
Most Frequently Cited References

Rank No.	Source/Title	Frequency of Citation
1	Management (book)	390
2	Journal of Applied Psychology (journal)	332
3	Personnel and Human Resource Management (book)	248
4	Personnel Management (book)	199
5	Organizational Behavior (book)	198
6	Human Resource Management (book)	169
7	Personnel Journal (journal)	155
8	World Executive's Digest (journal)	154
9	Academy of Management Journal (journal)	91
10	Introduction to Management (book)	86
11	Essentials of Management (book)	84
	Human Behavior at Work (book)	84
12	Behavior in Organizations (book)	73
13	Fundamentals of Management (book)	69
14	Motivation and Work Behavior (book)	67
	Personnel Psychology (journal)	67
	Personnel/Human Resource Management (book)	67
15	Journal of Organizational Behavior (journal)	66
	Personnel Administration : an Experiential Skill-Building Approach (book)	66

Rank No.	Source/Title	Frequency of Citation
16	Dissertation Abstracts International (book)	65
	Introductory Statistics (book)	65
	Managing Human Resources (book)	65
17	Elementary Business Statistics : the Modern Approach (book)	64
	Human Relations in Organizations : a Skill-Building Approach (book)	64
18	Effective Personnel Management (book)	63
	Journal of Management (journal)	63
19	Research Methods (book)	62
20	Human Resources Management (book)	60
21	Journal of Personality and Social Psychology (journal)	55
	Management and Organizational Behavior (book)	55
	Psychology Applied to Work : an Introduction to Industrial and Organizational Psychology (book)	55
22	Human Resource Management : Principles and Practices (book)	44
	Journal of Vocational Behavior (journal)	44
	Wage and Salary Administration (book)	44
23	Management by Filipino Values : a Sequel to Understanding Filipino Values (book)	43
24	Harvard Business Review (magazine)	36
25	Management in the Philippine Setting (book)	32
	Personnel Management : the Utilization of Human Resources (book)	32
	Research Methods for Business and Management (book)	32

Rank No.	Source/Title	Frequency of Citation
26	Academy of Management Review (journal)	31
	People in Organization : Understanding their Behavior (book)	31
27	Human Behavior at Work : Organizational Behavior (book)	30
	Human Relations (book)	30
	Human Resource Management : Principles and Practices (book)	30
	Management of Human Resources (book)	30
	Strategic Management (book)	30
	Supervision	30
28	Human Resource Management in the Philippine Setting (book)	29
	Personnel Administration : a Point of View and a Method (book)	29
	Philippine Values Digest : the Journal for Value Education (journal)	29
	Work and Motivation (book)	29
29	International Management (book)	28
	Journal of Managerial Psychology (journal)	28
	Managing Quality (book)	28
	Personnel Management and Industrial Relations (book)	28
	Personnel Management Process, The (book)	28
	Strategic Human Resource Development (book)	28

Rank No.	Source/Title	Frequency of Citation
30	Applying Psychology : Individual and Organizational Effectiveness (book)	27
	HR Magazine (magazine)	27
	Introduction to Statistics (book)	27
	PAY : Employee Compensation and Incentive Plans (book)	27
	Personnel Management : the Efficient Management of Employees (book)	27
	Principles of Human Resource Development (book)	27
	Readings in Human Behavior in Organizations (book)	27
31	Training and Development Handbook (book)	26
32	Behavior in Organizations (book)	25
	Behavior in Organizations : an Experiential Approach (book)	25
	Business Statistics (book)	25
	Current Issues in Personnel Management (book)	25
	Ergonomics (journal)	25
	Introduction to Organizational Behavior (book)	25
	Operations Management (book)	25
	Personnel (journal)	25
	Principles of Management (book)	25
	Quality Through People : a Blueprint for Proactive Total Quality Management (book)	25
	Statistics for Business and Economics (book)	25
	Statistics for Management (book)	25

Table 3 shows the list of the most cited reference ranked according to the number of times the title has been cited. The top 3 titles were; “Management” by Richard Daft cited 390 times or 2.55%, followed by “Journal of Applied Psychology”, cited 332 times or 2.17%, and lastly “Personnel and Human Resource Management” cited 248 times or 1.62%. Of the top three (3) mentioned, it is interesting to note that the second most cited reference is not a part of the library holdings, neither the title is available through the library’s online subscription. In fact, of the ranked 32 references which is composed of 77 titles, 21 titles are not found in the library holdings (written in bold) which actually has a high number of citations. This could be assumed that students use the resources of other libraries since the college is a member of consortia with other academic libraries such as PAARL and CEAP for Catholic institutions which enables every member institution to have resource sharing. In this regard, these references must be taken into consideration for they could be added to the list of titles to be acquired by the library.

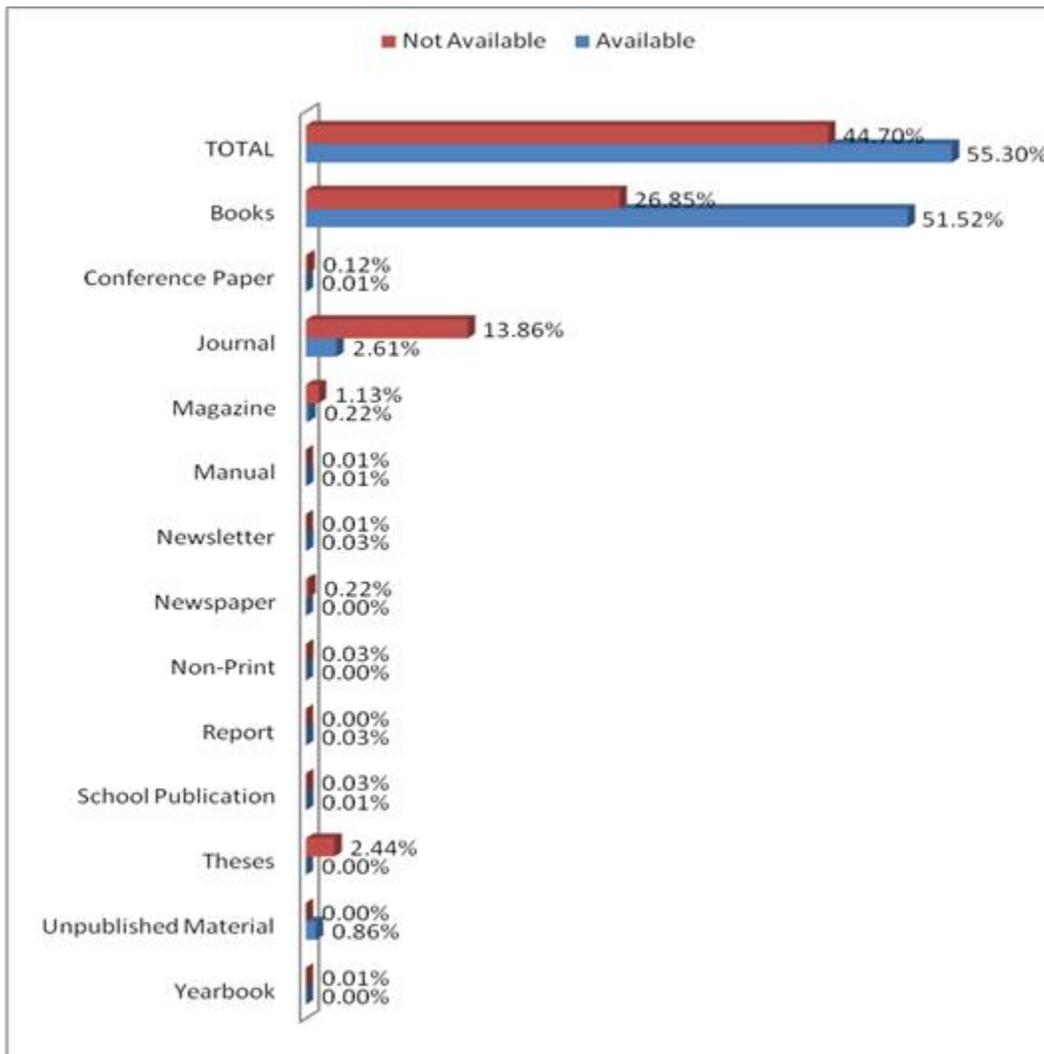


Figure 1. Availability of the Cited Material in the Library Holdings

In order to determine the availability of the cited materials in the library, the citations were cross checked against the OPAC which revealed that half of the cited materials by the students in their undergraduate theses are part of the library holdings with majority of them composed of books. Citations from journal articles came in second only as opposed to the studies of Gooden (2001) and

Burman (2011) wherein journals are the most cited materials by their students in their papers. However, it is important to emphasize that most of the journal citations are not a part of the library collection which is alarming since the College has been subscribing to print and e-journals specifically for the HRM Program alone. Therefore, the journal subscriptions must undergo thorough review as to which titles should remain, those that must be cut and those that need to be acquired by the library.

Another format that has a fair number of citations is the theses published online. This means that the College's subscription to ProQuest's Dissertation and Thesis has been doing well since most of the cited theses came from this electronic database.

Conclusion and Recommendations

Based on the result of the rankings, it can be said that books are the most cited materials followed by journals by students. It is interesting to note that most of the cited journals are not available in the library. Most of the materials cited were 20 years older even though the library has been conducting a series of book buying through the members of the faculty on a yearly basis. Lastly, most of the references used by the students are available in the library.

With these findings, the researcher recommends that the library needs to strengthen its orientation program to students and faculty to make them aware of the resources found in the library. Development and creation of service venues particularly for research/literature guidance must be available to refer the students in finding the right materials to the information they need based on the subject they are researching on. These service venues must suit the preference of the students which use social networking sites such as facebook, twitter, chat and even mobile inquiries to connect with the library. Another suggestion would be, librarian's marketing skills should be broadened and strengthened to highlight the materials they acquire that are recently published including the rich subscription to online resources. Additionally, references that have been selected by faculty must be included in the syllabus as a reference so that the materials will be used by the students.

Subscriptions to journals that are highly cited by the students must be included on the list to be acquired by the library. The results of this study must be forwarded to the Chairperson for proper evaluation of those materials they have requested as against those that have actually been cited by the students in their undergraduate theses. Another suggestion is to strengthen resource sharing of libraries particularly on electronic resources. The library does not need to acquire each and every title because consortium allows each library to share its resources to member institutions and in return, share what our own library has to offer to outside researchers.

Citation analysis which is a valuable and measurable tool used in this study may be applied across other programs/courses for the development of collections to meet the students' need in their research outputs. Also, a cost-benefit analysis methodology should be conducted in order to measure if the total cost of the materials purchased and subscriptions made were based on the allocated budget for a course/program to benefit both the stakeholders and the institution.

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