Citation analysis of Post Graduate Theses submitted to Department of Post Harvest Management of Meat, Poultry & Fish in Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli

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ABSTRACT

Citation analysis helps in finding the users approach to find information for their use. Through citation analysis obsolescence rate can be obtained. The present paper finds the obsolescence rate of publications in the field of Post Harvest Management of Meat, Poultry and Fish. By using citation analysis of Master degree theses submitted to the to the department of Post Harvest Management of Meat, Poultry & Fish of the Post Graduate Institute of Post Harvest Management, Killa-Roha, Dist. Raigad, a constituent college of Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli, Dist. Ratnagiri, Maharashtra. Theses submitted during the years 2012 to 2019 are taken for the study. There are total 15 theses, yielding 1259 citations. Analysis is also done to find out the Authorship Pattern, Chronological Distribution, Forms of the Information Sources cited by researchers in their theses.

KEYWORDS: Citation Analysis, Obsolescence study, Authorship study**.**

INTRODUCTION

The growing rate of knowledge & knowledge resources is the biggest & toughest challenge to pick out the required content for the library. On the other side, growing rate in price of resources made librarian to be selective in procuring resources for his / her library. Librarians conduct many user studies and use studies to gather information needs of library users. Citation analysis of student assignments, master theses, doctoral dissertations is a tool to avail information needs. Citation is the representation of a decision made by author who wants to show the relation between the documents he is writing and the work of another (at a particular point). Shaw (1979 stated that the citation establishes relation among authors who is measure of the extent to which they communicate indirectly through the literature. The References and Citations are used synonymy the precise difference between these terms

was given by [Egge & Rousseau (1990)]. Citation implies the relationship between a part or whole of the cited document and part or a whole the citing document. References are taken as the acknowledgement.

Post Harvest Management of Meat, Poultry & Fish is the branch which deals with reducing the post harvest losses, preservation, storage, processing, marketing & the overall management of Meat, Poultry & Fish and their products, by-products. Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli, Dist. Ratnagiri, Maharashtra was established on 18.05.1972 and Post Graduate Institute of Post Harvest Management, a constituent college was established in the year 2010.

Here onwards following abbreviations will be used alternatively:

DBSKKV   : Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth

PGIPHM   : Post Graduate Institute of Post Harvest Management

PHM   : Post Harvest Management

PHM of MPF : Post Harvest Management of Meat, Poultry & Fish

REVIEW OF RELATED LITERATURE

In a study conducted by Bandyopadhya (1996), a database management software tool (dBase III+) was used to undertake a bibliometric research of the citations in 27 doctoral dissertations in mathematics submitted at Burdwan University (West Bengal) from 1981 to 1990, as well as the references in the published publications mentioned in these theses. The bibliographic forms of literature used, a ranked list of journals in pure mathematics, applied mathematics, and statistics, a normalised ranking of journals with corrected citation numbers based on Sengupta's formula, and a correlation study between two lists discovered using the software developed are all presented. The programme that comes with this publication can be used to conduct similar research.

Deshpande & Rajyalakshmi (1997) carried out a study in which the majority of the 65 dissertations in library and information science submitted to Nagpur University (India) between 1990 and 1994 are in the field of literature survey and trends in various aspects of library and information science, according to a study of 65 dissertations in library and information science submitted to Nagpur University (India) between 1990 and 1994. The sorts of referenced source materials, authorship pattern, and chronological distribution of cited references were all investigated by citation analysis. Deshpande & Rajyalakshmi (1997) found that, 'The Annals of Library Science and Documentation' is the most referenced journal, according to the ranking list of journals.

Chikate & Patil (2008) carried out a bibliometric analysis that included 27 LIS dissertations and 6,257 citations in total. The majority of citations (42.2%), largely from US and Indian journals, come from periodicals. Journal papers account for over half of all citations (2,639, or 42.2%). LIS journals accounted for over three-quarters of the journal papers, with the remaining 33 subject categories accounting for the remainder. The most cited journal is College and Research Libraries, which is followed by Scientometrics. Out of the total amount of citations, 55 are from journals.

According to Kittur & Bankapur (2017) Citation analysis is a useful technique for determining how consumers seek information for their needs. Citation analysis can also be used to determine the pace of obsolescence of publications. The purpose of this study is to determine the rate of obsolescence of publications in the field of agronomy using citation analysis of doctoral theses submitted to the University of Agricultural Sciences' department of agronomy. The study is based on theses submitted between 1987 and 2013. There are a total of 92 theses with a total of 16976

citations. The authorship pattern, chronological distribution, and formats of the information resources cited by researchers in their thesis are also investigated.

Between 1996 and 2000, the Ohio State University Chemistry Department's Ph.D. dissertations were examined by Gooden (2001). The conclusion reached is that only 12 publications are required to cover 50% of the resources, demonstrating that the vast majority of citations are for papers published in scientific journals.

Haycock looked at the citations in dissertations on Education Sciences that were completed between 2000 and 2002 to see which journals were most commonly cited and what the link was between monographs and articles in scientific journals. To help construct the collection, the reference lists of forty-three education dissertations on curriculum and instruction completed at the University of Minnesota between the years 2000 and 2002 were evaluated. Citation analysis provided statistics to inform journal selection, retention, and cancellation decisions as one measure of use of the academic library collection.

The goal of the project was to keep the most frequently cited journals on subscription. The citation ratio for serial monographs was also compared to other studies and investigated in the context of funding ratios. In addition to informing selection decisions, the results of citation studies can serve as a starting point for liaison dialogues with academics. This study project could be beneficial. Haycock (2013).

The major goal of research conducted by Khandare & Sonwane (2021) is to examine the application of Bradford's Law of Scattering and the Leimkuhler model in citations from Dr. Babasaheb Ambedkar Marathwada University, Aurangabad's Economics Ph.D. theses. The information was gathered from citations of Ph.D. theses in Economics from 1967 to 2017. A total of 30,611 citations were received from 319 Ph.D. theses during the study period. Journal citations account for 7750 of the 30611 total citations. A ranked list of journals was created, and it was discovered that 'Economic and Political Weekly' was the most productive, publishing 1076 articles (13.88 percent) in total. As a result, the link between the zones and the data does not mathematically fit Bradford's law of scattering, but it does verbally. The data does not fit in the current data set for Bradford multiplier k=12.42, according to the Leimkuhler model.

A total of 52609 citations were chosen from 194 doctoral theses in chemistry submitted to the Department of Chemistry, Bangalore University, Bangalore, between 1972 and 2014 by Kaur & Sehgal (2021). The citation analysis technique was employed to evaluate the periodical rankings in this study. The study's findings were cross-checked against the host library's periodicals collection using the ranking table. Only 190 (34.74%) of the library's periodicals collections are subscribed. As a result, it is recommended that the authorities subscribe to additional magazines in order to benefit users.

The research conducted by Sharma et.al. (2021) examines citations in PhD theses submitted to Panjab University, Chandigarh, in the field of library and information science, from 1976 to 2017. The research is based on 10961 citations from 63 library and information science PhD theses. The study looked at a variety of factors, including the type of documents referenced, authorship patterns, geographical citation scattering, chronological citation distribution, subject distribution of citations, and a ranked list of LIS journals. According to the study, single-authored citations account for 72.92 percent of all citations, whereas journal articles account for 55.10 percent of all

citations. According to the geographical study, India has 43.20 percent of the citations, followed by the United States and so on.

The research conducted by Veerabasavaiah. & Mohan Kumar (2021) looks at 28 Ph.D. theses that were submitted between 1995 and 2018. According to the report, 2016 was the most productive year, and male research scholars contributed more than female research researchers. Prof. K. L. Mahawar has supervised the most theses, 14 in total, accounting for 50% of the total. The majority of references are from single-authored journals. The most cited journal is Library Philosophy and Practice (e-journal). The most researched subdomain of LIS is development and information seeking behaviour. Bibliometric studies on PhD theses have been undertaken in a variety of nations and fields, but a review of the published literature reveals that India has made only a few attempts, and that too in the Library and Information Science sector. Researchers, academicians, and librarians may find the study useful in determining bibliographic traits.

OBJECTIVES

✓ To know the research output of Department of Post Harvest Management of Meat, Poultry & Fish of Post Graduate Institute of Post Harvest Management, Killa-Roha, Dist. Raigad, a constituent college of Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli, Dist. Ratnagiri, Maharashtra.

✓ To study various forms of information sources approached by researchers of PHM of MPF, PGIPHM, Killa-Roha, Dist. Raigad of DBSKKV, Dapoli

✓ To study age of the sources approached by the researchers of PHM of MPF, PGIPHM, Killa-Roha, Dist. Raigad of DBSKKV, Dapoli

✓ To study the authorship pattern of the sources approached by the researchers of PHM of MPF, PGIPHM, Killa-Roha, Dist. Raigad of DBSKKV, Dapoli

✓ To study the Obsolescence rate of PHM of MPF Journals and Books.

SCOPE

The present study is to derive the obsolescence rate of publications in the field of Post Harvest Management of Meat, Poultry & Fish. The methodology opted is Citation Analysis of Master degree theses submitted to the Department of Post Harvest Management of Meat, Poultry & Fish of Post Graduate Institute of Post Harvest Management, Killa-Roha, Dist. Raigad, a constituent college of Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli, Dist. Ratnagiri, Maharashtra. The duration is from 2012 to 2019 and the total number of theses is 15, having 1259 citations.

METHODOLOGY

The data for the study were collected from the theses submitted to M.Sc. (PHM) in Meat, Poultry & Fish department of Post Graduate Institute of Post Harvest Management, Killa-Roha, Dist. Raigad of Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli. The title page and the references given at the end of the theses were photocopied. The demographic details of M.Sc. theses and the citations were entered in MS-Excel. Unique identification number was given to each thesis and its corresponding citations. The data entered in MS-Excel was analyzed by the structure of the subject, distribution of documents by author characteristics and document characteristics to meet the objectives of the study. The interpretation of data findings of study is recorded.

RESULTS AND ANALYSIS

Research output from Department of Post Harvest Management of Meat, Poultry & Fish in PGIPHM, Killa-Roha, Dist. Raigad of Dr. BSKKV, Dapoli.

The following Table 1 reveals the rate of Master Degree Awards or research output output from Department of Post Harvest Management of Meat, Poultry & Fish in PGIPHM, Killa-Roha, Dist. Raigad of Dr. BSKKV, Dapoli. The whole time span is from 2012 to 2019. The highest Master degrees are awarded in the year 2017 and it is 5 out of total 15 i.e., 33.33% ranking the first. In the year 2012, 5 Theses are submitted which is 26.67% standing on the 2nd rank. In the year 2018 and 2019, 3 theses are submitted each year, i.e., contributing 20% each and having the third rank.

The table 1 also contains data of number of citations added to the theses and average number of citations per thesis. The average number of citations added in the year 2017 per thesis is 548 / 1259 i.e., 43.53%, the first rank. In the year 2018, average number of citations added is 261 / 1259 i.e., 20.73% posing the 2nd rank. The average number of citations added per thesis in the year 2012 is 235 / 1259 i.e., 18.66%, which is in the 3rd rank. And In the year 2019, average number of citations added is 261 / 1259 i.e., 20.73% posing the 2nd rank.

Table 1: Year wise Distribution of M.Sc. Theses in Post Harvest Management of Meat, Poultry & Fish

S. N.	Year	No. of Theses	Percentage	Ranking	No. of Citations	Average No. of Citations per Thesis
1	2012	4	26.67	2	235	18.66
2	**2017**	**5**	**33.33**	**1**	**548**	**43.53**
3	2018	3	20.00	3	261	20.73
4	2019	3	20.00	3	215	17.08
		15	100.00		1259	100.00

Form wise distribution of citations

M.Sc. students of Post Harvest Management of Meat, Poultry & Fish department approached wide variety of information sources for their research. The various types of resources and number of citations are given in the following Table 2. The data reveals that researchers cited the journal / periodical articles most frequently. There are 928 journal article citations among 1259 – the 1st rank and 108 Book Chapter citations – the 2nd rank and , 104 Book citations 104 among 1259 citations – the 3rd rank.

Table 2: Form wise distribution of citations

S.N.	Type of Resource	No. of Citations	Percentage	Ranking
1	Journal Article	928	73.71	1
2	Book Chapter	108	8.58	2
3	Book	104	8.26	3
4	Master degree Thesis	25	1.99	4
5	Report	11	0.87	5
6	Manual	20	1.59	6

Citation analysis of Post Graduate Theses submitted to Department of Post Harvest Management of Meat, Poultry & Fish in Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli

S.N.	Type of Resource	No. of Citations	Percentage	Ranking
7	Patent	10	0.79	7
8	Webpage / Website	9	0.71	8
9	Conference Proceedings	8	0.64	9
10	News letter	7	0.56	10
11	Institute Webpage	5	0.40	11
12	Annual Report	4	0.32	12
13	Doctoral Dissertation	3	0.24	13
14	Standards	3	0.24	13
15	Commission Report	2	0.16	14
16	Compendium	2	0.16	14
17	Handbook	2	0.16	14
18	Symposium proceedings	2	0.16	14
19	Advisory Note	1	0.08	15
20	Bibliographic input sheet	1	0.08	15
21	Brochure	1	0.08	15
22	Data sheet	1	0.08	15
23	Digest	1	0.08	15
24	Encyclopaedia	1	0.08	15
	Total	1259	100.00	

Fig. 1: Form wise Distribution of Citations (Total citations Fig. 1 (A) + Fig. 2 (B) + Fig. 3 (C) = 1259)
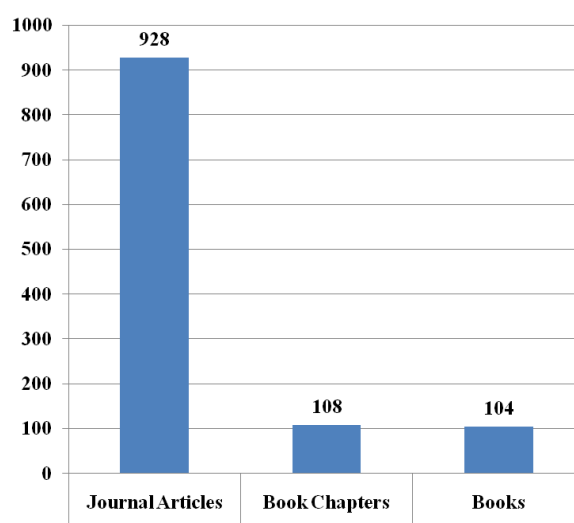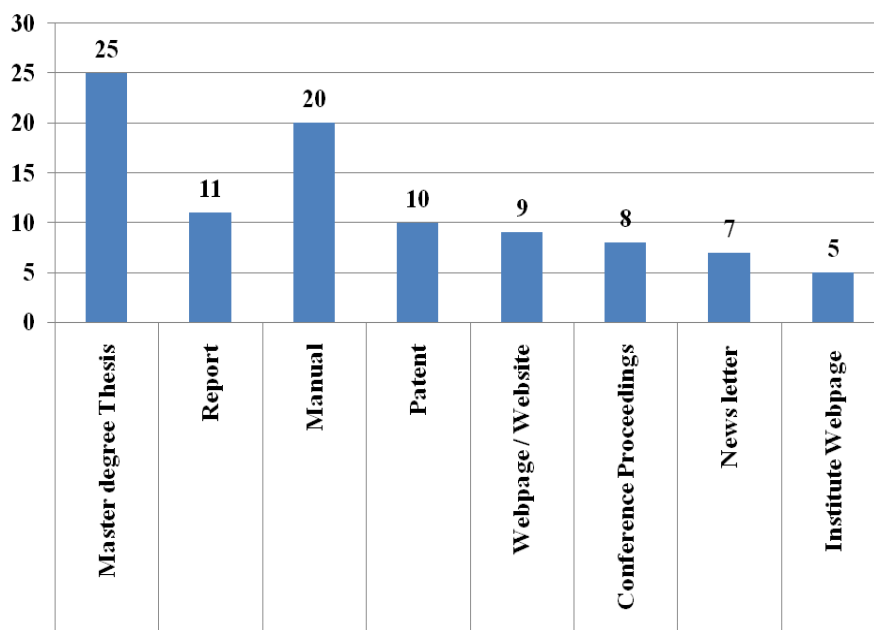

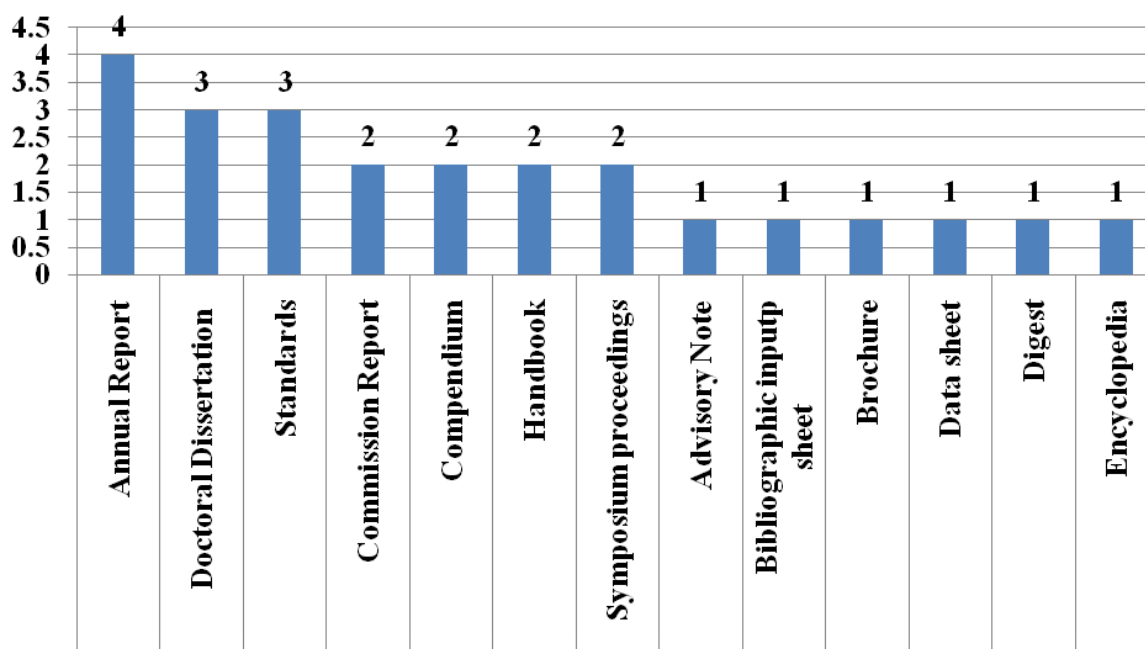**Fig. 1 (A)**

Fig. 1 (B)

Fig. 1 (C)

Authorship pattern is the study of cited publications is prepared by single authored? Or multiple authored? The following Table No. 3 shows that the researchers believe in collaboration. Only 18.82% (237/1259) literature cited is single authored, which is third place of ranking. Double authored citations rank first. It shares 22.80% (287 / 1259). Three authors is in second place of ranking which shares 22.64% (285/1259) of citations. Some publications found authored by more than eight, nine or ten, but they are counted in the 'More than Seven' authors category. The publications published by name of institution / organization / company is categorized as 'Corporate authorship'. There are 5.24% (66/1259) citations ranking 6th in the 'Corporate authorship' category.

Table 3 Authorship Pattern

S.N.	No. of Authors Contribution	No. of Citations	Percentage	Ranking
1)	Single	237	18.82	3
2)	**Double**	**287**	**22.80**	**1**
3)	Three	285	22.64	2
4)	Four	174	13.82	4
5)	Five	106	8.42	5
6)	Six	50	3.97	7
7)	Seven	40	3.18	8
8)	More than seven	14	1.11	9
9)	Corporate Authors	66	5.24	6
	Total	1259	100.00	

Chronological distribution of citations

Table 4 describes the chronological distribution of citations. The data reveals that the researchers referred recent publications for their research. From the data, the highest citations is 508/1259 i.e., 40.35% of citations are published in the duration2001-2010.The usage of publications is declined as it becomes old. The publications which are published in the years 1780-1960 are rarely used, and their usage is 12/1259 i.e., 0.95% ranking 7th position.

Table 4 Chronological distribution of citations

S.N.	Years	No. of citations	Percentage	Ranking
1)	1790-1960	12	0.95	7
2)	1961-1970	34	2.70	6
3)	1971-1980	65	5.16	5
4)	1981-1990	126	10.01	4
5)	1991-2000	204	16.20	3
6)	**2001-2010**	**508**	**40.35**	**1**
7)	2011-2020	310	24.63	2
	Total	1259	100.00	

Obsolescence study

Obsolescence study or Age study of publications is one of the common observation in citation analysis. It describes the decline in usage of publication or citations over a period of time. Table 5 represents the obsolescence of journals and book citations. The complete 928 Journal Article citations, 108 Book Chapter citations and 104 Book citations are divided into 11 time spans having 10 years of length.

Table 5: Age Wise Distribution of Citations

SN	Age of Citations	No. of Citations	Journals	Percentage	Book Chapters	Percentage	Books	Percentage
1	**0 to 9**	511	**434**	**46.77**	15	13.89	17	16.35
2	**10 to 19**	389	289	31.14	**33**	**30.56**	**28**	**26.92**
3	20 to 29	177	102	10.99	32	29.63	23	22.12
4	30 to 39	98	49	5.28	20	18.52	18	17.31
5	40 to 49	52	34	3.66	05	4.63	09	8.65
6	50 to 59	22	11	1.19	03	2.78	08	7.69
7	60 to 69	02	02	0.22	00	0.00	00	0.00
8	70 to 79	02	02	0.22	00	0.00	00	0.00
9	80 to 89	04	04	0.43	00	0.00	00	0.00
10	90 to 100	00	00	0.00	00	0.00	00	0.00
11	100+	02	01	0.11	00	0.00	01	0.96
	Total	1259	**928**	100.00	**108**	100.00	**104**	100.00

Table 5 reveals that recent journals and books are approached by researchers. The citations of age 0 to 9 years are more for Journal Articles, i.e., 434 / 928 = 46.77% ranking the 1st. For Book Chapters, the citations of age 10 to 19 years are more i.e., 33/108 = 30.56% ranking the 1st. The citations of age 10 to 19 are more for Books i.e., 28/104 =26.92%, ranking the 1st.

The data gathered shows that 1077/1259 = 85.54% of citations come under the age group 0 to 29. The remaining 14.46% of citations come under the age group 30 to 100+. This proves that there is considerable decline in usage of publication when it gets old.

FINDINGS AND CONCLUSION

Citation Analysis is one of the tools bibliometric / scientometic / informetrics studies. The application of citation analysis in libraries will be used in collection management. The citation counting will help in procuring the books, periodicals and also in weeding process. It is found from the study that

➢ Researchers of Post Harvest Management of Meat, Poultry & Fish cited Journal articles most frequently. The 73.71% of total citation i.e., 928 / 1259 are the Journal Articles. The Book Chapters are ranked the 2nd with 108 / 1259 = 8.58% of citations. And The Books are ranked the 3rd with 104 / 1259 = 8.26% of citations. Researchers also cited Manuals, Patents, Standards, Conference Proceedings, Doctoral Dissertations, Master degree, different types of Reports (Annual Report, Commission Report) Theses etc. for their study.

➢ From citations cited in PHM of MPF research scholar theses,, it's observed that the studies or literary work is done with collaboration. The 237 / 1259 = 18.82% citations are single authored. While, 66/1259 = 5.24 % citations are corporate authored. The remaining 75.94?% of citations are multiple authored i.e., two or more number of authors.

➢ It is observed from the results of the analysis, that the researchers prefer the recent literature. The usage declines over the time period. The half life of Journals and Books are calculated for PHM of MPF i.e., median of the years is 52.5 years and mean of the years is 53.9 years.

Obsolescence studies help in weeding of outdated materials which makes the place for the new procurements also avoids noise in the information retrieval.

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