

# Citation Analysis of Journal for Nature Conservation

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## Abstract

*Zoology or animal biology is the branch of biology that studies the animal kingdom, including the structure embryology evolution habits and distribution of all animals both living and extinct how they interact with their ecosystems. This paper made an attempt to analysis citations on the subject in general and articles published in the Journal for Nature Conservation. It examined the destitution of ranked journals and Authorship patter of books citation also.*

**Keywords:** Journal citation, Nature, Conservation, Zoology journal, authorship pattern and chronologies distribution of books.

## 1. INTRODUCTION

The study on zoology started in the ancient Greeko-Roman era. In the medieval and modern world, the Microscopy was invented which paved way for characteristics and behaviour of microorganisms on the basis of Cell Theory. The Natural history was reached its heights after

the subjects like Natural theology and Mechanical philosophy got prominence. During 18th and 19th centuries, zoology became an increasingly professional scientific discipline. Explorer-naturalists such as Alexander von Humboldt made a viable observation of the interaction between organisms and their environment and explained how the relationship depends on geography. This was a lead to the foundations for Biogeography, Ecology and Ethology.

### 1.1 Definition of Zoology

**According to Cambridge English Dictionaries** a branch of biology concerned with the classification and the properties and vital phenomena of animals.

### 1.2 Importance Of Zoology

The zoology is an important field of science that applies to many real-world situations. Study of zoology is great importance to man it has helped man to recognise the

living things and to adapt himself according to the environment. Agriculture is part of applied zoology various types of living organisms are closely associated in an earthworms being lower soil upwards so that air and water can enter properly. Similarly insects pollinate the flowers, bacteria decompose the dead animals and plants present in the soil which is observed by the plants. All these are important facts in agriculture science in the field of zoology.

### 1.3 Citation Analysis

Citation Analysis a main branch of bibliometrics. With the help of this distinctive research technique an information scientist or a Librarian can easily find out the productive journals and highly potential journals for subscribing in the library. It also supports an information scientist to study the characteristics of subject by understanding the nature of citations in different citations in different branches of knowledge.

### 1.4 Areas of Application

Citation analysis can be applied to the following reasons:

1. To lead the reader to further studies in the field.

2. For the preparation of bibliographies.
3. To study the use pattern of different types of documents like Textbooks, journals, reports, thesis, etc.
4. To find out the relative use of different language.
5. To study the scattering of subject.
6. To study the use of literature from different countries.
7. To decide the obsolescence rate of documents in different subjects.
8. To determine the inter dependents and lineage of subjects.
9. To prepare rank list of journals.
10. To study the rate of collaborative research.

### 1.5 About Source Journal

The Journal wants to encourage communication between scientists and practitioners, and thereby explore new research avenues that integrate biodiversity issues with socio-economic concepts.

### 1.6 Objectives of study

- a. To determine the most Rank list of frequently used

Journals, Textbooks, Theses, Reports.

- b. To understand the Authorship pattern of book Citations.
- c. To Examine of authorship cited by master's & Dissertation's students.
- d. To measure the growth rate of literature on a particular subject.
- e. To examine the periodical growth of literature in a subject.

### **1.7 Need for the study**

In the globalised world the journals, Text books, Report, Conference proceeding, etc. are publishing extensively on the subject. Therefore the present study was undertaken to find productive list of core journals and books in zoology.

### **1.8 Scope of study**

The present study in Analysis of Citations which are appended to journal of Nature conservation during the year 2012-2016 with total 5 volumes and 30 issues were selected for the study with their 3102 citations.

### **1.9 Methodology of Research**

There are 3102 Citations were recorded in Journal for Nature conservation In the field of zoology. These Citations later grouped according to periodicals, Textbooks, Thesis, etc. There were 3102 Citations identified in the study out of which 1237 were periodical articles and Textbooks referred by the researchers.

## **2. REVIEW OF LITERATURE**

The literature review is a task of searching and reviewing the available literature in the given subject. The present research is aimed at collecting the journal article, reports, and books. The researcher studied research article thoroughly which are related to the present topic before starting the survey. These references are listed and applied American Psychological Association (6<sup>th</sup> edition ) method of Bibliography.

**Dhiman, Mondal (2014)** made a study also examines the of law of scattering and lists the core cited journals in LIS discipline. Moreover, the period wise distributions of cited journals are made and then the half-life of journals are estimated.

**Yongxia, Liang et.al (2008)** writes using of citation analysis, cluster

analysis, multidimensional scaling, social network analysis to analyze the dataset and get knowledge maps in citation analysis field. These maps could reflect the development trend find out the pivotal people and work in citation analysis field and exhibit the relation between knowledge structure and evolution process.

### 3. ANALYSIS AND INTERPRETATION OF DATA

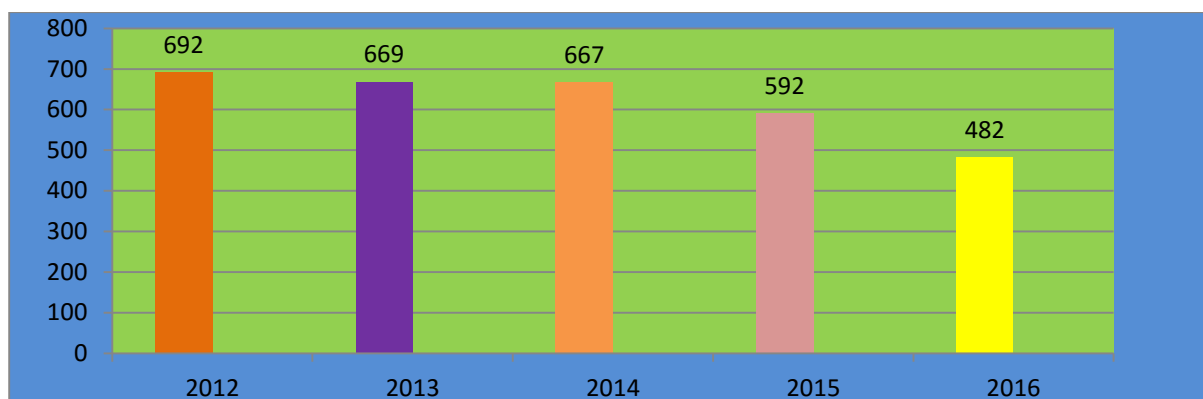
After studying the methodology and scope etc., there are 3102 citations founded out of which periodicals are the highest sources consulted by the researchers. These periodicals citations were analysed according to the following table headings.

**Table-1: Volume and Year wise distributions of citations**

Year	Volume	Issue Number	No of Articles	Percentage	Number of Citations	Percentage
2012	20	1-6	24	20.33%	692	22.30%
2013	21	1-6	23	19.49%	669	21.56%
2014	22	1-6	24	20.33%	667	21.50%
2015	23	1-6	24	20.33%	592	19.08%
2016	24	1-6	23	19.49%	482	15.53%
<b>Total</b>	<b>5</b>	<b>30</b>	<b>118</b>	<b>100%</b>	<b>3102</b>	<b>100%</b>

Table -1 presents the year and volume wise distribution of research articles in 5 volumes. Each volume contains 6 issues. A total of 3102 citations are identified. The highest number of citations are found in the year 2012 in issue1-6 with 692

(22.30%) followed by 2013 with 669 (21.56%), citations in issue 1-6 and 2014 with 667 (21.50%), citations in issue 1-6, and 2015 with 592 (19.08%), citations in issue 1-6, and 2016 with 482 (15.53%), citations in issue 1-6 respectively.



**Figure-1 Volume and Year wise distributions of citations**

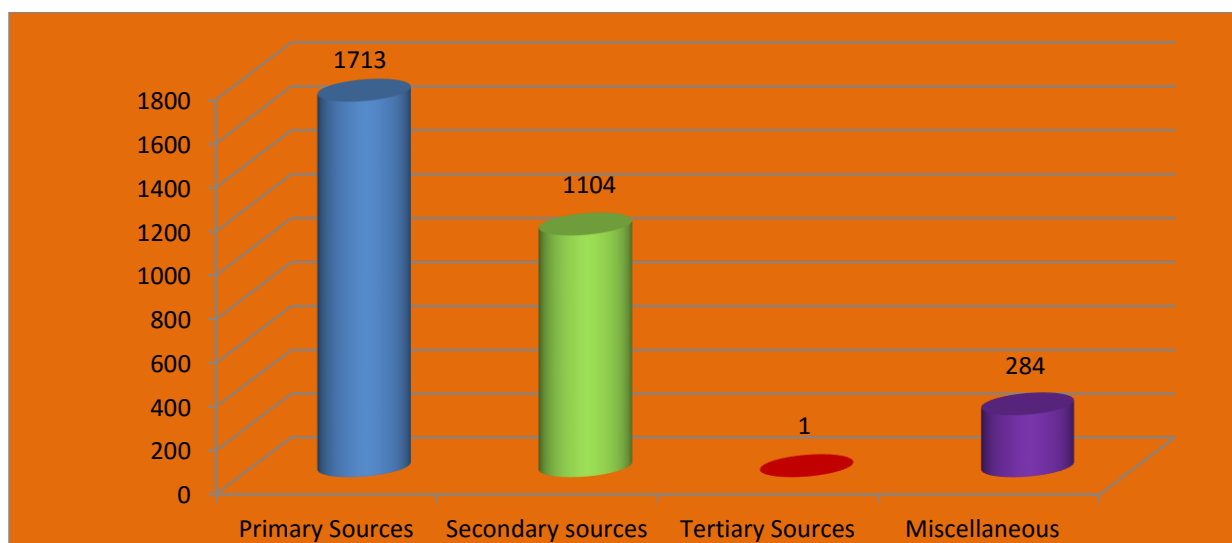
**Table-2: Source wise distribution of citations**

Sources	Number of Citations	Percentage
<b>Primary Sources</b> [Periodicals, conference/seminar, workshops, Thesis and dissertations, Reports]	1713	55.22%
<b>Secondary sources</b> [Text Books, Handbooks, Monographs, Encyclopaedia, & Dictionary]	1104	35.58%
<b>Tertiary Sources</b> [Year-books]	1	0.03%
<b>Others</b> Miscellaneous	284	9.15%
<b>Total</b>	<b>3102</b>	<b>100%</b>

Table-2 shows 55.22% of citations represent primary sources of information cited by the researchers. This is followed by 35.58% of secondary sources, miscellaneous are 9.15% of

information referred by the researcher.

From this table it is observed that, the researcher concentrate more on primary sources.



**Figure-2**Source wise distribution of citations

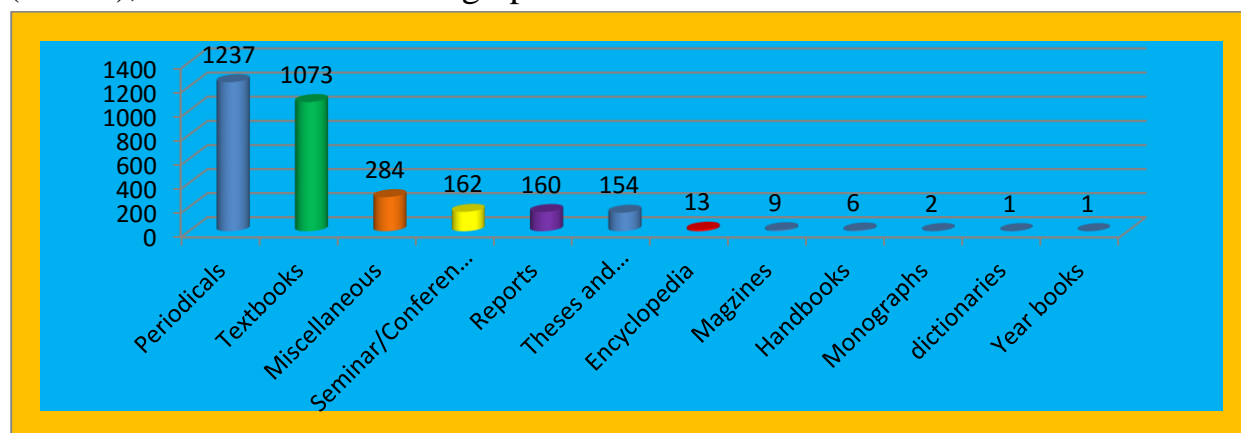
**Table-3** Form wise distribution of citations

Form of Material	Rank No.	Number of Citation	Percentage	Cumulative Citations	Cumulative Percentage
Periodicals	1	1237	39.87%	1237	39.87%
Textbooks	2	1073	34.59%	2310	74.46%
Miscellaneous	3	284	9.15%	2594	83.61%
Seminar/ Conferences	4	162	5.22%	2756	88.83%
Reports	5	160	5.15%	2916	93.98%
Theses and dissertation	6	154	4.96%	3070	98.94%
Encyclopedia	7	13	0.41%	3083	99.35%
Magzines	8	9	0.29%	3092	99.64%
Handbooks	9	6	0.19%	3098	99.83%
Monographs	10	2	0.06%	3100	99.89%
Dictionaries	11	1	0.03%	3101	99.92%
Year books	11	1	0.03%	3102	100%
<b>Total</b>		<b>3102</b>	<b>100%</b>		

Table-3 shows that analysis of citation based on the form of materials. It shows that highest citation 1237 (39.87%) from

periodicals followed by Text books 1073 (34.59%), miscellaneous 284 (9.15%), seminar/conference papers 162(5.22%), Reports

160(5.15), Theses and dissertation 2(0.06%), Dictionaries 1(0.03%),  
154(4.96%), Encyclopaedias 13(0.41 Yearbooks 1(0.03%) referred by  
(%), Magazines 9(0.29%), Handbooks 6 researchers.  
(0.19%), monographs



**Figure-3 Form Wise distribution of Citations**

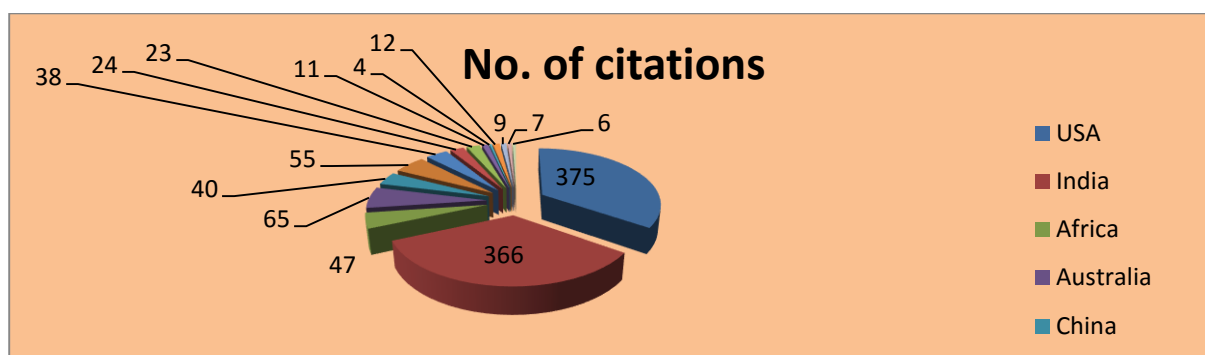
**Tables-4 country wise distribution of ranked journals.**

Country	No. of Journals	Percentage	No. of citations	Percentage
USA	20	23.25%	375	34.65%
India	18	22.93%	366	33.82%
Africa	8	9.30%	47	4.34%
Australia	6	6.97%	65	6.00%
China	6	6.97%	40	3.69%
Brazil	6	6.97%	55	5.08%
Europe	6	6.97%	38	3.51%
UK	5	5.81%	24	2.21%
Newzealand	3	3.48%	23	2.12%
Switzerland	3	3.48%	11	1.01%
Saudi Arabia	1	1.16%	4	0.36%
Spain	1	1.16%	12	1.10%
Italy	1	1.16%	9	0.83%
Israel	1	1.16%	7	0.64%
Singapore	1	1.16%	6	0.55%
<b>Total</b>	<b>86</b>	<b>100%</b>	<b>1080</b>	<b>100%</b>



Table-4 shows country wise distribution of 86 ranked journals covering 1080 citations. It is observed that (23.25%) of the cited journals are from USA covering 375 citations (34.65%). India ranks second place with (20.93%) of the

cited journals with 366 citations (33.82%), followed by Africa with (9.30%) in the 47 citations remaining citations are from Australia, China, UK, Brazil, New Zealand, Switzerland, Spain, Italy, Israel, Singapore.



**Figure-4 country wise distribution of ranked journals.**

**Table-5 Authorship pattern of text books Citations.**

No. of Authors	No. Of Citations	Percentage
Single Authors	314	29.26%
Double Authors	219	20.41%
Three Authors	211	19.66%
Four and above Authors	279	26.00%
Corporate Authors	50	4.65%
<b>Total</b>	<b>1073</b>	<b>100%</b>

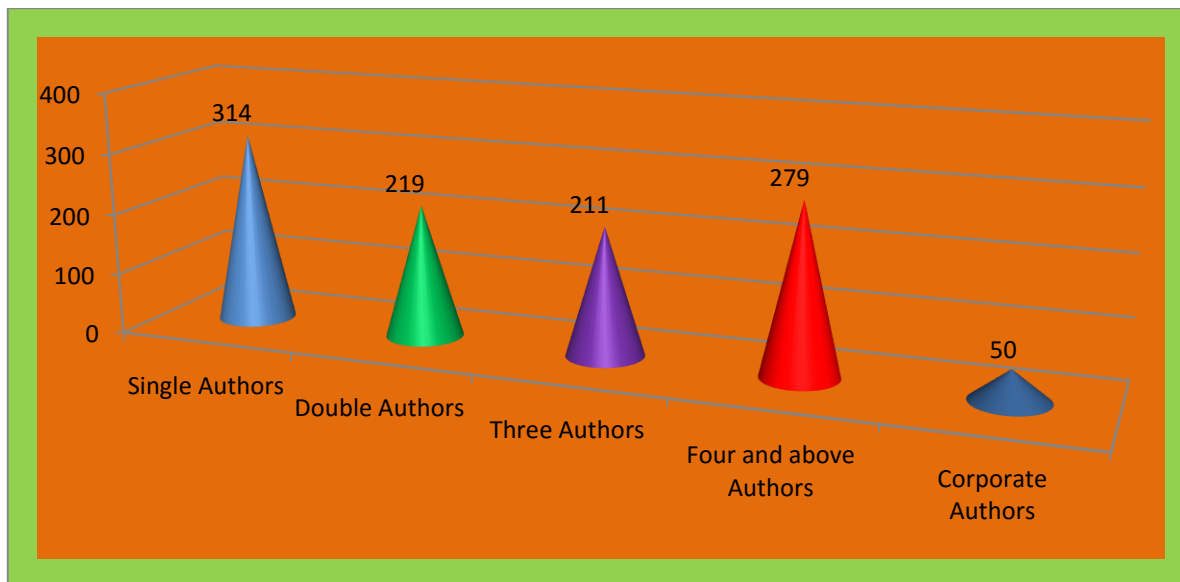
Table-5 depicts the Authorship pattern of book citations is presented in table-8 which shows

that highest citations are by single author 314 (29.26 %) next to this four and above authors 279



(26.00%). Next to this double authors 219 (20.41) and the three

authors 211 (19.66%) next to this corporate authors 50 (4.65%).



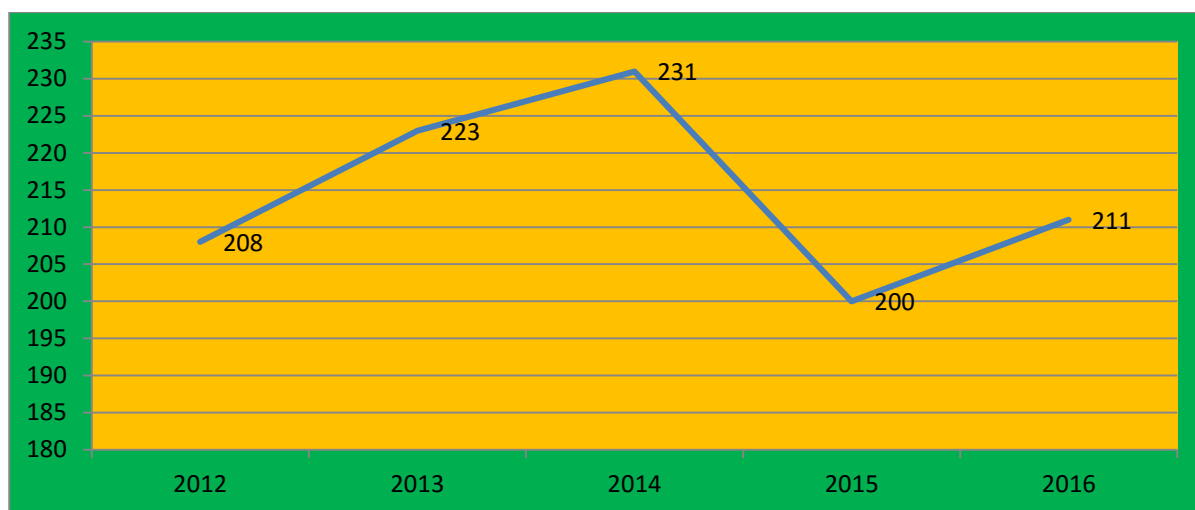
**Figure-5 Authorship pattern of text books Citations**

**Table-6 Chronological distribution of text books citations**

Year	No. Of Citation	Percentage	Cumulative Citations	Cumulative Percentage
2012	208	19.38%	208	19.38%
2013	223	20.78%	431	40.16%
2014	231	21.52%	662	61.68%
2015	200	18.63%	862	80.31%
2016	211	19.66%	1073	100%
<b>Total</b>	<b>1073</b>	<b>100%</b>		<b>100%</b>

Table-6 reveals the chronological distribution of book citations. The periodicity of citations is divided into 5 parts. Chronological distribution of books shows that more than 21.52% citations are of the period 2014.

20.78% citations are of the period 2013. And 19.66% citations are of the period 2016 and 19.38% citations are of the period 2012 and up to 18.63% are period 2015 respectively.



**Figure-6 Chronological distribution of text books citations**

## 5. FINDINGS AND CONCLUSION

### 5.1 Findings

The following are some of the major Findings that were identified from the study.

#### 5.1.1 Volume and Year Wise distribution of citations

It is observed from table 1 that the highest number of Citations in volume 20 , issue no 1-6, 692citations (22.30%) of in the year 2012 this journal.

#### 5.1.2 Source wise distribution of citations

The analysis of journal for nature conservation in the field of zoology shows that the researchers mainly depend on primary source 1713 (55.22%) & secondary sources

1104 (35.58%) for their information use.

#### 5.1.3 Form Wise distribution of information source

It is evident from the study the researchers used have been journal citation have been quoted 1237(39.870 which shows primary in fact, book citation have been quoted 1073(34.59%).The

#### 5.1.4 Country Wise distribution of ranked journals

Table-7 indicates that among country wise contribution 20(23.25%), journals of USA was mostly preferred by the researcher than 18(20.93%) journals of India which is followed by 15 (9.67%) journals of Africa etc.

### **5.1.5 Chronological distributions of journal citations**

Chronological distribution of journal citation in table 9 indicates more than 20.69 citations are of the period 1996-2000, citations are of the period 1991-1995 (20.53%), citations are of the period 2006-2015 (19.80%), citations are of the period 2001-2005 (19.56%), citations are of the period 2006-2010 (19.40%). This shows that researchers referred to more current or latest information for their research work.

### **5.1.6 Chronological distributions of text books citations**

The tables 8 reveal that Chronological distribution of books shows that more than 231(21.52%) Citations are of the period 2014, 223 (20.78%) Citations are of the period 2013, 211(19.66%) Citations are of the period 2016, 208 (19.38%) Citations are of the period 2012, 200 (18.63%) Citations are of the period 2015.

## **5.2 Conclusion**

The study shows the awareness and usage pattern of Journal for Nature Conservation.

Citation analysis also made to know the seeking behaviour of users and use pattern of information resources pertaining to the subject. The citation analysis made from the journal covering the 3102 citations. A citation analysis is one of the important Research techniques of bibliometric to analyse the productiveness of literature. The findings of the study may be used by the Faculty members, Research scholars and P G Students of department of Zoology.

## **References**

- [1]. Meho, L & Yang, K. (2007). A new era in Citation and bibliometric analysis: web of sciences, Scopus & Google scholar. Journal of American society for Information science and technology, 58 (13), 2105-2125.
- [2]. Ozcinar, Z. (2009). The topic of instructional design in research journal: A citation analysis for the years 1980-2008. Australian Journal of Educational technology, 29(4), 559-580. Retrieved from <http://www.ascilite.org.au/ajet/25/0zcinar.html>.
- [3]. Patra, S.K and Chand, P. (2006). Library and Information science research in India: a

bibliometric study. *Annals of Library and Information studies*, 53(4), 219-223.

[4]. Paul, S. Agutter & Denys, N. Weatley (2008). *Thinking about life : The history and philosophy of biology and other sciences*. Springer p, 43. ISBN 1-4020-8865-5.

[5]. Maheshwarappa, B.S & Prakash, B.P. (1982). *Literature use by the researchers in the field of botany: A Citation study of doctoral theses*. *Journal of Library and Information science*, 7(2), 15-32.

[6]. Mahapatra, G. (1994). *Indian Library and Information science journals: analysis of the rate of Citations and their characteristics*. *Library Review*, 43(3), 41-46.

[7]. Mirshamsi, S. (1991). *Brodfrud's law & bibliometrics*. *National studies on Librarianship and Information organisation*, 1, 290-324.

[8]. Mubeen, M.A. (1996). *Citation analysis of doctoral dissertations in chemistry*. *Annals of Library Science and Documentation*, 43(2), 48-58.

[9]. Prichard, A. (1969). *Statistical Bibliography or bibliometric*. *Journal of Documentation*, 25(4), 348-349.

[10]. Ramesh, L.S & Nagaraju, A.S. (2000). *Citation*

*analysis of the Indian Journal of Information, Library and Society*. *Indian Journal of Information Library and Society*, 13(3-4), 171-179.

[11]. Subramanyam, K. (1983). *Bibliometric studies of research collaboration: A review journal of information science*, 6, 33-38.