JIM - Journal of Information Management
Vol. 5, No. 2, July-December 2018, pp 89-95
DOI : 10.5958/2348-1773.2018.00013.9

Publication Productivity of Kumaun University: A Scientometric Study of Zoology Subject

Suchetan Kumar[1]*, Sunita Tewari[2] and Karnika Shah[3]

[1]Assistant Librarian and Coordinator, Department of Library and Information Science, DSB Campus, Kumaun University, Nainital, Uttarakhand, India
[2]Librarian, Droan College of Pharmacy, Dineshpur, U.S. Nagar, Uttarakhand, India
[3]Librarian, St. Mary's Convent College, Ramnee Park Nainital, Uttarakhand, India
(*Corresponding author) email id: *suchetan.sah@gmail.com, [2]sunitagudiyabisht@gmail.com, [3]ansh30.lis@gmail.com

Received: 26-7-2018; Accepted: 8-12-2018

ABSTRACT

Purpose: The purpose of the study is to identify the Publication Productivity of Kumaun University in the field of Zoology with scientometric study of Zoology Subject. **Methodology:** The researcher has adopted the arbitrary procedure to zoology Department of the Faculty of Science, Kumaun University. For this study, the researcher has taken the available theses from Central Library, Kumaun University, as secondary sources for the period of 2013-2017. A total 27 theses were collected and MS Excel was used for refining, presentation and analysis of the collected data as per the objectives of the study. **Findings:** Dr B.R. Kaushal has guided the highest research scholars and the highest number of theses was published in the year 2016. Limnology is the most interested subject amongst researcher in Zoology. *Hydrobiologia* and *Journal of Himalayan Journal of Environmental Zoology* are most favourite cited print journals. *Hydrobiologia* and *Freshwater Biology* are most favourite cited electronic journals and scholars cited their works mostly from journals. **Conclusion:** The study disclose about publication productivity of Kumaun University in term of theses submitted by the Ph.D. research scholars. The result reveal uneven pattern of publication output of theses.

Keywords: University, Kumaun, Scientometric, Zoology, Productivity

INTRODUCTION

Universities are major sources of creation and use of new information. The University status and image are related with faculty publishing productivity and is strongly associated with an individual faculty member's reputation, visibility and advancement in the academic reward structure, particularly at higher learning institutions. The roles of universities are categorised in the form of imparting education through teaching and learning, research activities, conservation of new knowledge and extension of education (Kumar and Pandey, 2018).

The purpose of education is to nurture young minds, who are the future of a nation. They have an ability to transform the conceptual knowledge into applied knowledge for the betterment of the society. The most important factor to evaluate the faculties of any university is their research contribution. The specialised research offer growth and development of the society. At the same time, research contribution is mandatory

for the promotion of faculty members. They enhance their social and economic standing through enhancement of their professionals rank from that of an assistant professor to an associate professor and then to professor. Research contribution motivates researchers to do rigorous and exhaustive research and provides a platform for the forth-coming generations of researchers. This is an essential component of a university system which shapes the students from better to best.

The procedures carried out by universities are the foundation for the development of the contemporary information society. Research reflects the image of a university and its search for new boundaries of information, knowledge and wisdom by providing suitable directions. Scientific research has transformed the life of the common people and it is a symbol of prosperity. Conservation means to preserve the traditional knowledge in the form of written documents. The purpose is to safe guard the cultural heritage of that particular time period. Extension of education serves the whole society through an easy accessibility to different courses. The progress of a university depends on the said criteria.

Scientometric is a new division of knowledge, which applies bibliometric tools for the examination of scientometric growth, level of scientific development, social relevance and impact of the applications of science and technology. The term scientometrics is derived from the Russian term 'naukometria' which means the study of the measurement of scientific and technological process. The term 'scientometric' was coined by Vassily N.N. Nalimov in 1960 and has been typically defined as the quantitative study of science and technology by Raan (1998).

SCOPE OF THE STUDY

The present research engages with the research output of the Faculty of Science, Kumaun University, for the period of 2013–2017. The scientometric techniques are applied to know the research productivity of the faculty. Zoology subject has been chosen for this study and the study is restricted with theses only.

REVIEW OF RELATED LITERATURE

Vivekanandhan and Sivasamy (2017) study examined uncited scholarly communications in the field of pollution control through scientometric analysis. The Scopus database was chosen for the collection of data and total 52,575 records were downloaded for the period of 1991–2015. The result revealed that the ratio of uncited and total number of publications was lies in between 0.26 and 0.50. Mandhirasalam (2016) in his scientometric study explored about research productivity of PSG College of Technology, Coimbatore. Scopus database were consulted for the data collection and 2357 articles were downloaded for the period of 1970–2014. During 44 years, the highest numbers of research papers were published in year 2012 with a share of 319 articles. Balasubramani and Parameswaran (2014) explained in their study about research output of faculty members of Banaras Hindu University. The Web of Science database was chosen for the study and 6943 documents were downloaded for the period of 2000–2011. The scientists preferred journal for their publication was current science and Institute of Technology had the highest publications contribution with 21% share. Kannappanvar *et al.* (2004) study examined through bibliometric method of publication pattern of Indian chemical scientists. The purpose was to explore the authorship and collaborative pattern amongst scientists. Indian Science Abstracts was chosen for the data collection and 13,587 records were identified for the period of 1996–2000. Majority of articles were multi-authored (76%) and degree of collaboration was 0.76.

OBJECTIVES OF THE STUDY

1. To know the guide-wise pattern of theses of DSB Campus, Kumaun University, from 2013 to 2017.
2. To know the year-wise growth pattern of theses.
3. To identify most predominant subject areas in the field of Zoology.
4. To identify core journals cited by the Ph.D. research scholars.
5. To identify the geographical distribution of periodicals.
6. To identify cited documents by the Ph.D. research scholars.

METHODOLOGY

The researcher has adopted the arbitrary procedure to zoology department of the Faculty of Science, Kumaun University. For this study, the researcher has taken the available theses from Central Library, Kumaun University, as secondary sources for the period of 2013–2017. A total of 27 theses were collected and MS Excel was used for refining, presentation and analysis of the collected data as per the objectives of the study.

ANALYSIS AND INTERPRETATION OF DATA

To Know the Guide-Wise Pattern of Theses of DSB Campus, Kumaun University from 2013 to 2017

Table 1 shows that Dr B.R. Kaushal has guided six research scholars followed by Dr Pramod Kumar guided four research scholars Dr S.N. Rao guided three research scholars. P.K. Gupta, Dr Deepika Goswami, Dr. H.C.S. Bisht, Dr Rakesh Kumar and Dr Manoj Kumar Arya guided two research scholars. Prof. S.S. Pathani, Dr Ila Bisht, Dr Manoj Kumar and Dr Lila Tewari guided one research scholar.

Table 1: Guide-Wise Distribution

Guide	No. of thesis
Dr B.R. Kaushal	6
Dr Pramod Kumar	4
Dr S.N. Rao	3
P.K. Gupta	2
Dr Deepika Goswami	2
Dr H.C.S. Bisht	2
Dr Rakesh Kumar	2
Dr Manoj Kumar Arya	2
Prof. S.S. Pathani	1
Dr Ila Bisht	1
Dr Mahesh Kumar	1
Dr Lila Tewari	1
Total	27

To Know the Year-Wise Growth Pattern of Theses

Table 2 shows that the highest number of nine theses published in the year 2016, followed by eight theses published in the year 2014. Similarly, in year 2013 and 2014 the four theses were published. In the year 2017, only two theses were published.

Table 2: Year-Wise Distribution

Year	No. of thesis
2013	4
2014	8
2015	4
2016	9
2017	2
Total	27

To Identify Most Predominant Subject Areas in the Field of Zoology

Table 3 shows that Limnology is the most favourite subject of researcher in Zoology, with a share of 9 (34.61%); followed by Entomology as the second

Table: 3 Major Core Subject Areas

Subject	Frequency	Percentage
Limnology	9	34.61
Entomology	7	26.92
Fisheries	6	23.07
Vermicology	3	11.53
Apiculture	1	3.84
Total	26	100.00

most favourite subject, with a share of 7 (26.92%). Similarly, Fisheries is third favourite subject, with a share of 6 (23.07%) and Vermicology and Apiculture is the least favourite subject, with a share of 3 (11.53%) and 1 (3.84%).

To Identify Core Journals Cited by the Ph.D. Research Scholars

Table 4 cited journal's list of zoology depicts, faculty members of zoology prefer *Hydrobiologia* and *Journal of Himalayan Journal of Environmental Zoology* for their references as the share of their citation is 129 and 60 times, respectively. Similarly, *Journal of Environmental Biology* and *Current Science Journals* are also preferred by them for their references with a share of 41 and 34 times, respectively. *Journal of Entomology and Zoology Studies* (29 times), *Entomon* (27 times) and *Behavioral Brain Research* (27 times), *Journal of Inland Fisheries Society of India* (25 times) and *Pedobiologia* (25 times), *Zoological Survey of India* (23 times), *Limnology and Oceanography* (22 times), and *Indian Journal of Ecology* (21 times) are journals which are mostly cited by them for their references.

Table 5 cited journal list of zoology depicts, faculty members of zoology prefer *Hydrobiologia* and *Freshwater Biology* for their references as the share of their citation is 129 and 98 times, respectively. Similarly, *Journal of Water Research* and *Journal of Entomology and Zoology Studies* journals are also preferred by them for their references with a share of 78 and 29 times, respectively. *Journal of Soil Biology*

Table 4: Core Print Journal Cited by Faculty Members

Print Journal	Frequency
Hydrobiologia	129
Himalayan Journal of environmental Zoology	66
Journal of Environmental Biology	41
Current Science	34
Journal of Entomology and Zoology Studies	29
Entomon	27
Behavioral Brain Research	27
Journal of Inland Fisheries Society of India	25
Pedobiologia	25
Zoological Survey of India	23
Limnology and Oceanography	22
Indian Journal of Ecology	21
Journal of Fish Biology	21
Archiv fur Hydrobiologie	17
Endocrinology	16
Tropical Ecology	15
Nature	14
Biology and Fertility of Soil Journal	13
Zoos' Print Journal	12
Brain Research	11
Journal of Insect Science	11
Canadian Journal of Zoology	10
Oecologia	10
Water Air and Soil pollution	9
Pollution Research	8
Uttar Pradesh Journal of Zoology	8
The Journal of Experimental Biology	7
Uttar Pradesh Journal of Zoology.	7
PLoS One	6
Water Research	5
Zoological Research	4
Aquatic Ecology	3
African Journal of Ecology	3
Bangladesh Journal of Entomology	2
Australian Journal Zoology	2
Zebrafish	2
World Journal Fish Marine Sciences	1
Weed Biology and Management Journal	1
Water Quality Research Journal of Canada	1
Urban Ecosystems	1

Table 5: Core Electronic Journal Cited by Faculty Members

E-Journal	Frequency
Hydrobiologia	129
Freshwater Biology	98
Water Research	78
Journal of Entomology and Zoology Studies	29
Soil Biology and biochemistry	28
Pedobiologia	27
Limnology and Oceanography	23
Canadian Journal of Fisheries Aquatic Sciences	22
Aquaculture	17
Endocrinology	16
Ecology	16
Biology and Fertility of Soil Journal	14
Ecological Entomology	14
Science	14
Lake and Reservoir Management	13
Limnology	13
Oikos	12
Tropical Ecology Journal	12
Neuroscience and Biobehavioral Reviews	11
Nature	11
Zoos' Print Journal	10
Environmental Science & Technology	9
Behaviour	9
Animal Behaviour	8
Biosciences	8
Environment Conservation journal	7
Indian Journal of Experimental Biology	6
Journal of Orthoptera Research	6
Indian Journal of Scientific Research	5
Journal of Plan (29 times) *kton Research*	5
Journal of Pest Science	5
Journal of Fisheries and Aquatic Sciences	5
The Journal of Comparative Neurology	4
Risk Analysis	4
The Journal of Experimental Biology	3
The Journal of Biological Science	3
Zoomorphology	2
Water Resources Research	2
Zoological Research	1
Zoologica	1
Zebrafish	1
Xenobiotica	1
World Journal of Science and Technology	1

and B*iochemistry* (28 times), *Pedobiologia* (27 times) and *Limnology and Oceanography* (23 times), *Canadian Journal of Fisheries Aquatic Sciences* (22 times), *Aquaculture* (17 times), *Endocrinology* (16 times) and *Ecology* (16 times), *Biology and Fertility of Soil Journal* (14 times) are journals, which are mostly cited by them for their references.

To Identify the Geographical Distribution of Periodicals

Table 6 reveals the geographical distribution pattern of cited journal in the field of zoology. The highest contributions come from the United State and India with a share of 198 and 175 journals, respectively. United Kingdom and Germany are in third and fourth place in terms of journal publications with a share of 98 and 80 journals, respectively. Similarly, Netherland (57 journals), USA (23 journals), Canada (18 journals), England (17 journals), Pakistan (17 journals) and Japan (13 journals), China (10) are also contributing to publication world.

Maximum thirty (32) countries are selected for the identification of geographical distribution of periodicals. The purpose is to predict the pattern of journal's publication country-wise and identify the trend of national and international publications.

To Identify Cited Documents by the Ph.D. Research Scholars

Table 7 shows that the Ph.D. research scholars cited their works mostly from journals with the share of 2200 (64.61%), followed by books with the share of 655 (19.23%), theses with the share of 340 (9.98%) and other documents with the share of 210 (6.61%).

FINDINGS

- Dr B.R. Kaushal has guided the highest research scholars with a share of six theses followed by Dr Pramod Kumar (guided four research scholars),

Table 6: Geographical Distribution of Cited Print Journal

Place	Frequency
USA	442
India	297
UK	194
Germany	171
Netherlands	129
USA	53
England	34
Canada	30
Japan	21
China	18
Pakistan	17
Egypt	13
Poland	11
Turkey	9
Australia	9
Kenya	9
Spain	8
Bangladesh	8
Nigeria	6
Finland	5
France	4
Iran	4
Sweden	3
Nepal	2
Iraq	2
Israel	1
Italy	1
Jordon	1
Korea	1
Prague	1
Saudi Arabia	1
Singapore	1

Table 7: Cited Document

Name of document	Frequency	Percentage
Books	655	19.23
Journals	2200	64.61
Theses	340	9.98
Others	210	6.16

Dr S.N. Rao (guided three research scholars) and Dr P.K. Gupta, Dr Deepika Goswami, Dr H.C.S. Bisht, Dr Rakesh Kumar and Dr Manoj Kumar Arya guided two research scholars each. However, Dr Lila Tewari was only guide who guided only one research scholar.

- The highest number of theses (9) was published in the year 2016, followed by eight theses in the year 2014. Similarly, in the year 2013 and 2014 four theses were published. However, in the year 2017, only two theses were published, which was minimum number during the said period.
- Limnology is the most interested subject amongst researcher in Zoology with a share of 9 (34.61%). However, Entomology is the second most favourite subject, with a share of 7 (26.92%) followed by Fisheries with a share of 6 (23.07%) and Vermicology. The researchers are least interested in Apiculture with a share of 3 (11.53%) and 1 (3.84%).
- *Hydrobiologia* and *Journal of Himalayan Journal of Environmental Zoology* are most favourite cited print journals of research scholars with a share of their citation is 129 and 60 times, respectively. Similarly, *Journal of Environmental Biology and Current Science* journals are also preferred by them for their references with a share of 41 and 34 times, respectively.
- *Hydrobiologia* and *Freshwater Biology* are most favourite cited electronic journals of research scholars with a share of their citation is 129 and 98 times, respectively. Similarly, *Journal of Water Research* and *Journal of Entomology and Zoology Studies* journals are also preferred by them for their references with a share of 78 and 29 times, respectively.
- The highest contributions come from the United State and India with a share of 442 and 297

journals, respectively. United Kingdom and Germany are in third and fourth place in terms of journal publications with a share of 194 and 171 journals, respectively.

- The Ph.D. research scholars cited their works mostly from journals with a share of 2200 (64.61%) followed by books with a share of 655 (19.23%), theses with the share of 340 (9.98%) and other documents with the share of 210 (6.61%).

CONCLUSION

From the above findings following conclusions are drawn:

- Dr B.R. Kaushal has guided the highest research scholars.
- The highest number of theses was published in the year 2016.
- Limnology, Entomology, Fisheries and Vermicology are the most interested areas where research scholars are doing their Ph.D.
- *Hydrobiologia*, *Journal of Himalayan Journal of Environmental Zoology*, *Journal of Environmental Biology*, *Current Science Journals*, *Journal of Entomology and Zoology Studies* are most cited print journals by the Ph.D. research scholars.
- *Hydrobiologia*, *Freshwater Biology*, *Journal of Water Research*, *Journal of Entomology*, *Zoology Studies*, *Journal of Soil Biology*, *Biochemistry*, *Pedobiologia*, *Limnology*, *Oceanography* and *Canadian Journal of Fisheries Aquatic Sciences* are mostly cited by the Ph.D. research scholars for their references.
- The highest journals published from the United States and India.
- The Ph.D. research scholars cited their works mostly from journals.

REFERENCES

Balasubramani R and Parameswaran R, 2014. Mapping the research output of Banaras Hindu University: a scientometric study. *Journal of Theoretical and Applied Information Technology*, Vol. 59, No. 2, pp. 367–361.

Kumar S and Pandey, SK, 2018. Research output in the field of chemistry: a scientometric study of Kumaun University. *Journal of Information Management*, Vol. 4, No. 1, pp. 119–130.

Mandhirasalam M, 2016. Research output of PSG College of Technology, Coimbatore: a scientometric study. *SRELS Journal of Information Management*, Vol. 53, No. 3, pp. 229–235.

Raan AV, 1998. The influence of international collaboration on the impact of research results: some simple mathematical considerations concerning the role of self-citations. *Scientometrics*, Vol. 42, No. 3, pp. 423–428.

Vivekanandhan S and Sivasamy K, 2017. Uncited publications in pollution control research literature: a scientometric study. *International Journal of Digital Library Services*, Vol. 7, No. 1, pp. 14–27.

How to cite this article: Suchetan Kumar, Sunita Tewari and Karnika Shah, 2018. Publication Productivity of Kumaun University: A Scientometric Study of Zoology Subject. *JIM - Journal of Information Management,* Vol. 5, No. 2, pp. 89-95.