

Publication Pattern of Faculty Members of Shivaji University, Kolhapur: A Study through Indian Research Information Network System (IRINS)

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ABSTRACT

The proposed study explores the analysis of the publishing pattern of faculty members in Shivaji University, Kolhapur, department-wise over five years from 2015 to 2019. Collected data from the Indian Research Information Network System (IRINS) dashboard. The core objectives of the study are to analyze the publication pattern of faculty members, department, and their scholarly publications with citations. As for research output within the studied period, Research articles in journals top the list while conference proceedings publications study and miscellaneous category followed respectively.

KEYWORDS: Publication Pattern, Publication Productivity, IRINS, Research Publication Trends, Research Information Management, and Google Scholar Citation Analysis.

INTRODUCTION

Indian Research Information Network System (IRINS) is web-based Research Information Management (RIM) emerging library service offered by the Information and Library Network (INFLIBNET) Centre, Gandhinagar, and Central University of Punjab, Bathinda, to interconnect scholarly communication activities in India. IRINS project was initiated by the National Mission on Education through ICT (NME-ICT) under the Ministry of Education. The Indian Research Information Network System portal dashboard facilitates the academic, Research, and Development organizations and faculty members, scientists to gather, curate and showcase scholarly communication activities and provide an opportunity to create the academic network. The IRINS is functional as free software-as-service (Cloud Computing Service module on-demand software i.e., SaaS) to the Academic and Research & Development organizations in India.

IRINS supports the faculty members and researchers in showcasing their research contribution to the peer group and providing significant exposure for their research productivity. IRINS serves as a tool to know the various research

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projects of faculty members or scientists' information on different bibliometric parameters. In the admin dashboard, institutions can import data from CSV and bibliographic import citations like Bibtext formats and individual data. It integrates academic identities such as Scopus ID, Researcher ID, Google Scholar ID, Microsoft Academic ID, and ORCID ID for showcasing publications and metrics. It also allows updating publications and citations from Scopus and updating the Solr-based faceted indexing for updating the search engine. The data on Publications, Faculty can be exported into an excel datasheet. IRINS Increased visibility of research output in terms of publications, citations and H-index at individual, department, school and institute levels. Further, based on the journals, the data analytics generates a productivity graph for the department with the h-index, CrossRef citations. The Scholarly Resources are organized in the various categorization of publications according to their publishing venue like closed access, Open Access such as Green, Bronze and Gold and the publishing pattern like Journal articles, conference proceedings, Chapters in Book, Books, patents, Reviews, Erratum and others.

2. IMPORTANCE AND NEED OF PUBLISHING PATTERN IN RESEARCH

Academic institutions are involved in the create new ideas. Educational institutes can share new ideas through publications like Journal articles, conference proceedings, Reviews, Books, etc. The quality and quantity of faculty member publications provide a crucial measure of their research output and a research institution.

Shivaji University, Kolhapur is one such Institution that has been re-accredited by National Assessment and Accreditation Council (NAAC) Bangalore, with an "A++" Grade with CGPA-3.52 (4th Cycle-March, 2021). Thus, this study attempts to analyze, using the data from the IRINS dashboard, the publication pattern of faculty members at Shivaji University, Kolhapur.

3. LITERATURE REVIEW

There are many studies available on various domains of publication patterns. A brief review of literature alphabetically is undertaken for the present study mentioned, and it is mentioned below:

Balasubramani, Anbalagan and Palavesam (2019) analyzed the faculty members-based Scopus publications with citations from Scopus and Cros Ref and resource impact from the various databases and different types of publication forms. The collected data through the Indian Research Information Network System (IRINS) of 15 institutions. The study found that the Indian Institute of Science (28.51%) has the highest number of Scopus publications, but The Indian Institute of Technology, Madras (26.28%), received the highest Scopus citation. The study finds that IRINS is useful for up-to-date research and the faculty profile of the institute.

Kannan, Kimidi and Arora (2018) focused an overview of the Indian Research Information Network System (IRINS) and outlined their web-based Research Profile Management platform for Researchers in India. The study shows that IRINS plays a vital role as a research hub connecting the research landscape. It is beneficial for research scholars, faculty, scientists and research administrators of various aspects. They elaborated that IRINS is useful for benchmarking and measuring research productivity.

Okpe, Simisaye and Otuza (2013) questionnaire-based survey highlighted the Pattern of research publication among the Faculty of Babcock University, Nigeria. The study result shows a statistical difference in the publication pattern across gender; male faculty prefer textbooks and edited work while female preference in the journal article. The survey of Babcock University recommended should encourage faculty members in the context of research and publications.

Sahoo, Mohanty and Dash (2018) explored the Publication Pattern scholarly research article and Impact of Top Research Papers of journal of Information Processing and Management in the context of bibliometric parameters. The study found that academic article published in the journal is the hottest form of publication pattern.

Tamizhchelvan and Anbalagan (2020) analyzed the faculty profiles. They highlighted department-wise publications, top ten faculty members' publications and forms of publication at the Gandhigram Rural Institute-Deemed to be University from IRINS website. The Science departments faculty members are most interested in research publication and citation. The study indicates that the research article is the leading publication resource. The study recommended that academics and R & D institutions implement IRINS for research visibility across the globe.

Conducted an analytical study by **Uma and Varatharajan (2019)** to know the publishing pattern of faculty at the University of Hyderabad. The authors used data collection from the annual report of the University of Hyderabad for conducted the study. The results indicate that the faculty members are interested in research activities apart from their academic lectures. This study shows that the highest average percentage of publications, i.e., 15.26%, is recorded from Life Sciences, followed by Physics with 14.51%. Their study found that research papers are the most common publication form of faculty members, followed by Book Reviews/Proceedings publications/Mimeographs, books lastly, patents.

4. OBJECTIVES

The core objective of the study is to find out the publishing pattern among the faculty members of Shivaji University, Kolhapur (2015-2019). In particular, the study aims to find:

1. To find the gender-wise distribution of publications.
2. To find the Top ten most productive departments based on the number of publications.
3. To identify the form-wise distribution of prolific departments.
4. To determine the form-wise distribution of publications of prolific authors.
5. To find the Top ten prolific faculty members based on Citations.

5. RESEARCH METHODOLOGY

The study collected the data from Shivaji University, Kolhapur faculty research profiles: a library initiative(<https://unishivaji.irins.org/>), 218 faculty members from 36 departments have published 5195 scholarly publications with high impact available in Shivaji University, Kolhapur faculty research profile as of 26th September 2021. The study analyzes Department wise Publication, Top ten faculty publications, Scopus/ CrossRef citations, and various forms of publication. The study applied MS-Excel Pivot table techniques to analyze the data interpretation.

6. SCOPE & LIMITATION OF THE STUDY

Restricted the scope is to the publication patterns of faculty members of Shivaji University, Kolhapur: Through IRINS Profile. The study focused only on the publishing pattern of faculty members publications for five years from 2015 to 2019. The restricted research was to the Top ten prolific faculty members based on the Scopus and CrossRef Citations.

7. DATA ANALYSIS AND INTERPRETATION

7.1 Gender-wise distribution of publications:

Table 1: Gender-wise distribution of publications

Sr. No.	Category	No. of Faculty Members	Percentage (%)	Publication	Percentage (%)
1	Male	164	75.22	3439	86.13
2	Female	54	24.77	554	13.87
	Total	218	99.99	3993	100

Table 1 shows that the number of gender-wise Faculty members who have IRNIS Profiles indicates that 164(75.22%) with 3439 (86.13%) publications are male faculty members while 54(27.77%) are female with contributions of 554(13.87%). It reveals that most of the respondents are male. The female faculty members must take the advice from male faculty members to improve the research output, recommendations for guidance, research, and collaboration with foreign collaborators in publications. Female faculty members should also be encouraged to increase their journal publications.

7.2 Prolific departments based on the number of Publications:

Table 2: Top 10 Productive departments based on the number of Publications

Rank	Department	Number of publications in the year 2015 to 2019							
		Books	Research Article	Conference Proceedings	Chapter in Book	Patents	Miscellaneous	Total	Percentage (%)
1	Physics	1	764	20	2	5	13	805	20.16
2	Chemistry		672	6	1		28	707	17.71
3	Technology	2	343	43	3	4	6	401	10.04
4	Botany	1	297	13			23	334	8.36
5	Biochemistry		217	3	1		21	242	6.06
6	School of Nanoscience and Technology		229	1		1	3	234	5.86
7	Zoology	1	161	5	5		17	189	4.73
8	Economics	18	108	22	5		24	177	4.43
9	YCSR	2	83	25	2		2	114	2.86
10	Geography	6	80	6	3		10	105	2.63
Other Department (26)		33	509	68	33		42	685	17.16
Total		64	3463	212	55	10	189	3993	100
Percentage (%)		1.60	86.73	5.31	1.38	0.25	4.73		100

(Source: Data collected from IRINS portal of Shivaji University, Kolhapur)

Table 2 shows the various types of publications in the top ten prolific departments based on publications. As for scholarly resources within the studied period, journal articles top the list while conference proceedings, miscellaneous forms followed, respectively. The Physics department has 805 (20.16%) scholarly publications,

including the highest number of journal articles followed by conference proceedings, miscellaneous, patents, chapters in books, and Books. Department of Chemistry has published 707 (17.71%) publications, with 672 Journal articles taking the second publication. The ranks are assigned based on the total number of publications. Other 26 departments have 685 publications in the reported period. The table also shows Research articles published in the journal is form document type publishing pattern (86.73%), followed by conference paper (5.31%). The patent is a less used publication pattern in the Shivaji University, Kolhapur. Overall, as for research output within the studied period, Research articles in journals top the list, while conference proceeding publications study and miscellaneous category (reviews, Erratum, reports etc.) followed. This study supports authors Okpe, I.J., Simisaye, A.O., and Otuza, C.E. (2013). The above table reveals that the Science and Technology departments have more research publications than Arts and Commerce departments.

7.3 Publication Pattern of Top 10 Faculty members:

Table 3: Research document type Contribution of Top 10 Faculty members

Rank	Name of Faculty	Department	Number of Publications (%)	Scopus Citations		Crossref Citations	
				Score	Percentage (%)	Score	Percentage (%)
1	Dr. Pramod S. Patil	Physics	503 (24.63)	17041	27.32	11526	28.57
2	Dr. Sanjay P. Govindwar	Biochemistry	244 (11.95)	10472	16.79	5977	14.81
3	Dr. K. Y. Rajapure	Physics	230 (11.26)	7120	11.41	6130	15.19
4	Dr. Annasaheb Moholkar	Physics	139 (6.81)	5709	9.15	4102	10.17
5	Dr. Jyoti Jadhav	Biochemistry	136 (6.66)	4454	7.14	2569	6.37
6	Dr. Sambhaji Shinde	Geography	123 (6.02)	4330	6.94	2341	5.80
7	Dr. Devanand Shinde	Chemistry	203 (9.94)	4146	6.65	2045	5.07
8	Dr. Kalyanrao M. Garadkar	Chemistry	154 (7.54)	3465	5.55	2014	4.99
9	Dr. Sanjay Kolekar	Chemistry	97 (4.75)	2914	4.67	1822	4.52
10	Dr. Vijay Fulari	Physics	213 (10.43)	2735	4.38	1819	4.51
Total			2042 (100)	62386	100	40345	100

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Table 3 shows the Prolific Author in the number of publications

Rank	Name of Faculty	Department	Number of publications in the year 2015 to 2019						
			Books	Research Article	Conference Proceedings	Chapter in Book	Patents	Miscellaneous	Total
1	Dr. Pramod S. Patil	Physics	1	415	10	2	4	7	439
2	Dr. Shirang R. Yadav	Botany		144	6				150
3	Dr. Vijay Fulari	Physics		103			1		104
4	Dr. Devanand Shinde	Chemistry		97	1			2	100
5	Dr. Prakash S. Kamble	Economics	16	57	5	1		18	97
6	Dr. Sanjay P. Govindwar	Biochemistry		80				14	94
7	Dr. Govind B. Kolekar	Chemistry		76				4	80
8	Dr. Tukaram Dongale	School of Nanoscience and Technology		68	1		1	3	73
9	Dr. K. Y. Rajapure	Physics		64					64
10	Dr. Prashant Anbhule	Chemistry		54				4	58
Total			17	1158	23	3	6	52	1259
Percentage (%)			1.35	91.98	1.82	0.24	0.48	4.13	100

Considering the contributions publications forms of prolific authors, most of the journal articles followed by miscellaneous forms, conference proceedings publications. Dr. P.S. Patil (Pro. Vice-Chancellor, Shivaji University, Kolhapur) contributed to research publications. He contributed 415 research articles published in the Journals with first rank followed by Dr. Shirang R. Yadav (Botany), has published 150 publications and placed second rank. Dr. Prakash S. Kamble has most of the 16 books publications. Overall, the Top 10 Faculty members have contributed 1259 (31.53%) out of 3993 faculty publications in the reported period. The table indicates that nine faculty members belong to the faculty of science and technology; the only faculty of Humanities (Economics) belong to the top ten faculty members' publications. It showed that; faculty of science and technology had contributed significantly to publications, and faculty of science and Technology faculties working in universities are more active in research work.

7.4 Top ten faculty members based on Citations:

Table 4: Top 10 Productive Faculty based on number of Citations

(Source: Data collected from IRINS Dashboard Shivaji University, Kolhapur)

(Value shown in the parenthesis is a percentage)

Table 4 indicates the top ten prolific authors of Shivaji University, Kolhapur, based on Scholarly publications and citations. Dr. Pramod S. Patil has published 503 (24.63%) publications that have received the highest 17041 (27.32%) citations from Scopus and 11526 (28.57 %) citations from Cross Ref. with rank 1. Dr. Jyoti Jadhav (Biochemistry) only female faculty in the top 10 prolific faculty based on citations with 4454 (7.14%) Scopus Citations and 2569 (6.37%) citations from CrossRef and takes 5th place.

Nine Professors from the Shivaji University, Kolhapur, have made it to the list of the top 2% scientists present across the globe released by renowned Stanford University, America. Stanford University a database of research papers, through which the top 2% of the scientist are selected. Stanford University evaluates the professors who have contributed to the research since 1960. Dr. P.S. Patil, Dr. K.Y. Rajpure, Dr. A.V. Rao, Dr. C.H. Bhosale (Physics) and Dr. Jyoti Jadhav (Biochemistry). Stanford University also released a second list based on single-year impact (2020), which has four scientists from Shivaji University with including Dr Annasaheb Moholkar (Physics) and Dr. Kalyanrao Garadkar (Chemistry). (Source: Times of India Newspaper dated 3rd November 2021). AD Scientific index 2021, University of Michigan: Shivaji University has 48 Scientists and researchers worldwide. (Source: Maharashtra Times Newspaper dated 1st November 2021.).

8. SUGGESTIONS AND RECOMMENDATIONS

- Faculty Members should use the publishing pattern, journal articles, books, conference proceedings, reviews, etc., to express the ideas of the research activity.
- Arrange Special workshops on IRINS training Programme for the faculty members to create profiles, upload academic identity links, and fill form-wise publication details for the research visibility.
- All faculty members should keep their IRINS profiles up to date.
- The study recommended that all higher learning institutions, academics, and R & D institutions implement IRINS for Institution's research visibility across the globe.

CONCLUSION

Research Information System (RIM) is the essential emerging library tool to showcase individual and institutional research and profile management across the globe. Shivaji University, Kolhapur, has implemented IRINS Profile Management System to show their research productivity. An Analysis of Faculty Profiles of Shivaji University, Kolhapur: 218 activities. The Department of Physics, Chemistry, Biochemistry, and Botany has contributed more publications and the Department of Hindi, Marathi, History, Microbiology, Environmental science, and Commerce and management have contributed less. Hence it is recommended that the more minor contributed departments concentrate more to improve their research publication activity. In addition, this study suggests that all academic institutions should implement IRINS for Institution research visibility across the globe.

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