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LIBRARY AND INFORMATION SCIENCE FACULTY PROFILE ON INDIAN RESEARCH INFORMATION NETWORK SYSTEM (IRINS): AN ANALYSIS

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ABSTRACT

The Indian Research Information Network System (IRINS) evolves as a new paradigm to manage the research information effectively and efficiently. The IRINS showcases the research information in the public domain and allows individuals to access the research information at a single point. The present study tries to access the participation of Library and Information Science (LIS) faculty members on IRINS. This study also contributes to access research productivity of LIS faculty members at different spheres. The data have been collected from IRINS by visiting individual faculty profiles. The collected data have been analyzed and the major findings are - maximum faculties are registered on IRINS are from Annamalai University, maximum publications are contributed by Professors and maximum citations are received by Professors. The publications by faculties of the International Institute of Information Technology are more preferred than other institutions. The present study concluded on the fact that the inclusion of LIS faculties on IRINS was low. Thus this study suggests organizational level and individual level inclusion on IRINS indeed satisfy the objective behind IRINS.

Keywords: IRINS, RIM, LIS Faculty, Research productivity, Assistant Professor, Associate Professor, Professor

INTRODUCTION

Research as a core intellectual output at the organizational level and individual level acts as a main driving force to get a competitive advantage. The proliferation of research activities has been creating a new challenge for library professionals to maintain the research information efficiently. The huge research data have ignited the notion of a research information management system. The IRINS as a by-product of RIM, assist the library

professionals to manage such huge data. The Indian Research Information Network System (IRINS) as an indigenous developed Research Information Management (RIM) system facilitates individuals and organizations to manage their research information. The present study tries to access the usability of IRINS among teaching faculties of the Library and information science (LIS) domain in Indian institutions.

BACKGROUND OF THE STUDY

The IRINS is the cooperative endeavour of the INFLIBNET Centre and the Central University of Punjab. The IRINS was released as open-source software for research information management in 2019. The IRINS facilitates an individual to get information about researchers or faculties of any domain. It gives the information at 3 different spheres such as information at the personal level, information at the departmental level, and information at the organizational level (P & Kimidi, 2019). The website facilitates individual researchers and faculty members to create their profiles and manages their information by logging into their accounts. The IRINS facilitates its users through an easy admin dashboard that can import data in CSV and Bibtext format. It can import data from a range of research identities such as Google Scholar ID, Scopus ID, Microsoft academic id, Orcid ID (Chaman Sab et al., 2019). The IRINS shows the scores of individual researchers through Scopus Citation, H-index, CrossRef citations. It also fetches the metrics data from Google scholar and other altmetrics data.

SCOPE AND LIMITATION OF THE STUDY

The IRINS includes several faculty and researcher profiles from various organizations but the present study only tries to cover the teaching faculties of the library and information science (LIS) domain. The data collection is only limited to three teaching positions of each university such as Professors, Assistant Professor, and Associate Professors in the library and information science domain.

REVIEW OF LITERATURE

The following works of literature have been reviewed for the present study:

The changing research scenario has bolstered the fundamental role of Library professionals. The library professionals have to cope up with the current research information system environment while maintaining the institutional repositories at the local or global level (Joint, 2008). RIMS is distinguished from other scholarly websites as it collects the data from authentic sources, uses different metric tools for assessment and the foremost fact is it uses a common format that can be used easily by users to maintain their personal information (Givens, 2015)⁴. IRINS as an Indian RIM, facilitate the individual to access the research activities of any organization or individual with its faceted search options. It gives the access to individuals to locate the quality research through its metrics tools. The graphical

representation of research data facilitates individuals to map the authorship network and productivity of individuals or organizations (IRINS, n.d.).

(Jeyapragash et al., 2019) Conducted a study to analyze 15 academic and research organizations to know the research productivity of organizations and found that KL University Guntur has the maximum number of faculties registered on the IRINS and the IIT Madras have the maximum number of Scopus and CrossRef citations. (Anbalagan & Balasubramani, 2021) Analysed 17 NIRF ranked IITs to know their research productivity at the organizational level and individual level and found that IIT Bombay had the maximum number of Scopus citations and CrossRef citations. (Tyagi, 2020) Studied on 9 R & D organizations intending to find the top departments and top researchers in R&D organizations and found that maximum members are registered from CSIR-NAL, CSIR-NIIST had the maximum number of scholarly resources followed by CSIR-NAL, CSIR-NIIST had the maximum Scopus and CrossRef citations.

(Tamizhchelvan & Anbalagan, 2020) Analyzed the profile of Gandhigram rural institute to know the most productive department and faculty of that institute and found that the department of chemistry had the maximum publications and had the maximum citations, Dr P. Balasubramaniam had the most publications and had maximum citations. (Balasubramani & Anbalagan, 2019) Studied on scholar profiles on the central university of Tamilnadu to know the publication and citation patterns of scholars and found that Prof Aditya Prasad Dash had the maximum number of publications and citations.

OBJECTIVE OF THE STUDY

The present study tries to analyze the library and information science faculty profiles through the IRINS. Each faculty profile is analyzed to get the following objectives -

1. To know the faculty inclusion on IRINS.
2. To find institution-wise faculty publications.
3. To compare the publications by 3 faculty positions(Assistant Professor, Associate Professor & Professor)
4. To evaluate citations received by 3 faculty profiles of participating institutions
5. To compare the citations received by 3 faculty positions

Methodology

The data, for the present study, have been collected from the IRINS website as of 30th May 2021, by using various filter options. The data were collected by selecting the entire library and information science terms from the expertise filter tab, then the category of faculties are selected from the designation filter by selecting the three teaching faculty positions such as Assistant Professor, Associate Professor, and Professor. All the positions, related to above mentioned 3 positions, such as Assistant Professor Grade 1, Professor and head e.t.c.,

have been selected from the filter option. After applying the above 2 filter options, the individual faculty profiles have been accessed for the necessary data for the present study. All the necessary data such as faculty name, affiliated institutions, designations, publications, citations, co-author data e.t.c. have been retrieved. Microsoft Excel has been used for data collection. The data have been manipulated through Microsoft Excel to get the required objectives. This study fetches 2 types of citations from IRINS i.e. Scopus and CrossRef.

Faculty inclusion on IRINS - The following table is the representation of the number of the faculty member of each faculty category. The table below shows the institution-wise faculty information from the organizations, which are registered on IRINS.

Table 1 (Institution wise faculty profiles)

Sl. No.	Institutes	Assistant Professor	Associate Professor	Professor	Total	%
1	Indian Institute of Management, Kashipur	0	0	1	1	1%
2	Gulbarga University	0	0	2	2	1%
3	Aligarh Muslim University	0	2	1	3	2%
4	Alagappa University	0	1	1	2	1%
5	Assam University	2	1	0	3	2%
6	Annamalai University	16	3	4	23	15%
7	Banaras Hindu University	5	1	4	10	6%
8	Bangalore University	1	1	3	5	3%
9	Bharathidasan University	1	1	1	3	2%
10	Calcutta University	5	2	3	10	6%
11	Central University of Gujarat	3	0	0	3	2%
12	Central University of Haryana	1	0	0	1	1%
13	Central University of Himachal Pradesh	2	2	1	5	3%
14	Central University of Punjab	2	0	0	2	1%
15	Central University of Tamil Nadu	4	0	1	5	3%
16	Dr. Babasaheb Ambedkar Open University, Ahmedabad	4	1	0	5	3%
17	Dr. Harisingh Gour Vishwavidyalaya, Sagar	2	0	1	3	2%
18	Gujarat University	1	2	0	3	2%
19	Gujarat Vidyapith	0	1	0	1	1%
20	Indian Statistical Institute	0	2	1	3	2%
21	International Institute of Information Technology, Bangalore	1	0	0	1	1%
22	Jadavpur University	1	0	4	5	3%
23	Kuvempu University	1	1	2	4	3%
24	Mangalore University	1	0	1	2	1%

25	Mizoram University	2	1	4	7	4%
26	Mysore University	0	1	5	6	4%
27	North-Eastern Hill University	3	1	2	6	4%
28	Panjab University, Chandigarh	2	0	1	3	2%
29	Periyar University	4	0	2	6	4%
30	Pondicherry University	3	1	0	4	3%
31	Sambalpur University	3	0	1	4	3%
32	Shivaji University	1	0	1	2	1%
33	Tripura University	2	1	0	3	2%
34	University of Delhi	0	2	2	4	3%
35	University of Jammu	2	0	1	3	2%
36	University of Madras	2	0	1	3	2%
37	Vijayanagara Sri Krishnadevaraya University	1	0	0	1	1%
38	Yenepoya (Deemed to be University)	1	0	0	1	1%
	Total	79	28	51	158	100%

The analysis of Table 1 shows there is a total of 158 faculty members are registered on IRINS from 38 institutions. It is clear from the above representation that there is a total of 79 Assistant Professors, 28 Associate Professors and 51 Professors profiles are registered on IRINS. A maximum 16 number of Assistant Professors are registered from Annamalai University, a Maximum 3 number of associate Professors are registered from Annamalai University and maximum 6 numbers of Professors are registered from Mysore University.

Institution-wise faculty publications - Table 2 represents the numbers of publications of each faculty category from registered institutions. The individual faculty publications of each institution are summed up to get the total categorical faculty publications of each institute. Each faculty publication includes all types of publications.

Table 2 (Institution wise faculty publications)

Sl. No.	Institutes	Assistant Professor	Associate Professor	Professor	Total	%
1	Alagappa University	0	77	128	205	6%
2	Aligarh Muslim University	0	53	17	70	2%
3	Annamalai University	131	161	171	463	13%
4	Assam University	0	1	0	1	0%
5	Banaras Hindu University	54	4	78	136	4%
6	Bangalore University	0	0	101	101	3%
7	Bharathidasan University	9	93	10	112	3%
8	Calcutta University	15	69	7	91	2%

9	Central University of Gujarat	87	0	0	87	2%
10	Central University of Haryana	0	0	0	0	0%
11	Central University of Himachal Pradesh	0	2	134	136	4%
12	Central University of Punjab	57	0	0	57	2%
13	Central University of Tamil Nadu	40	0	1	41	1%
14	Dr. Babasaheb Ambedkar Open University, Ahmedabad	16	79	0	95	3%
15	Dr. Harisingh Gour Vishwavidyalaya, Sagar	71	0	4	75	2%
16	Gujarat University	13	31	0	44	1%
17	Gujarat Vidyapith	0	107	0	107	3%
18	Gulbarga University	0	0	5	5	0%
19	Indian Institute of Management, Kashipur	0	0	0	0	0%
20	Indian Statistical Institute	0	167	44	211	6%
21	International Institute of Information Technology, Bangalore	30	0	0	30	1%
22	Jadavpur University	0	0	1	1	0%
23	Kuvempu University	61	21	270	352	10%
24	Mangalore University	83	0	50	133	4%
25	Mizoram University	0	191	5	196	5%
26	Mysore University	0	3	165	168	5%
27	North-Eastern Hill University	24	6	5	35	1%
28	Panjab University, Chandigarh	51	0	56	107	3%
29	Periyar University	67	0	100	167	5%
30	Pondicherry University	34	2	0	36	1%
31	Sambalpur University	6	0	18	24	1%
32	Shivaji University	14	0	52	66	2%
33	Tripura University	0	6	0	6	0%
34	University of Delhi	0	0	282	282	8%
35	University of Jammu	15	0	4	19	1%
36	University of Madras	0	0	0	0	0%
37	Vijayanagara Sri Krishnadevaraya University	2	0	0	2	0%
38	Yenepoya (Deemed to be University)	16	0	0	16	0%
	Total	896	1073	1708	3677	100%

The analysis of Table 2 shows there is a total of 3677 publications by all the three categories of faculty members of above mentioned 38 institutions. From the above table, it is clear that a maximum of 131 publications is published by all the Assistant Professors of Annamalai University, similarly, a maximum of 191 publications are published by Associate Professors of Mizoram University and a maximum of 282 publications are contributed by Professor Positions of the University of Delhi.

Average categorical faculty publications - The average faculty publication is the publications by each faculty member of each category of faculty. The average faculty publication is found by dividing the total number of publications of each category faculty by several faculty members on the concern category. The categorical faculty publications include all types of publications published by each faculty member of each category.

The total average faculty publications are found by dividing the total number of publications by all the categories of faculties by a total number of faculty members in all categories.

The average number of publications by each category of the faculty member has been represented in figure 1.

$$\text{Average faculty publications (categorical)} = \frac{\text{Total number of publications by each category}}{\text{total number of faculty members in that category}}$$

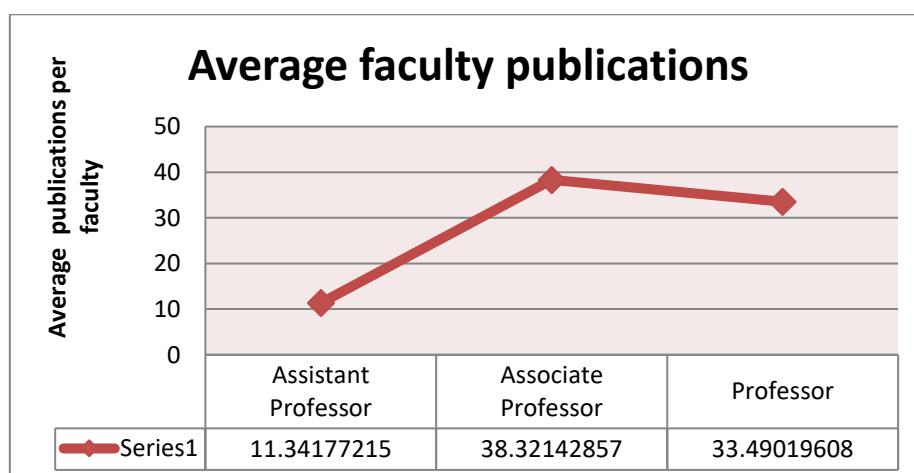
$$\text{Average faculty publications (Total)} = \frac{\text{Total number of publications by all category}}{\text{total number of faculty members in all category}}$$

Total number of faculties in all category = 158 (Table 1)

Total number of publications by all category = 3677 (Table 2)

$$\text{Average faculty publication (Total)} = \frac{3677}{158} = 23.27$$

Figure 1 (Average faculty Publications)



The analysis of figure 1 shows the average number of publications for Assistant Professor is 11.34, the average number of publications by associate Professor is 38.32 and the average number of publications by Professor is 33.49. The categorical average publication value is highest for associate Professors followed by Professors. The above calculation also shows the total average publications by all the 3 categories of faculties is 23.27. Thus it is clear that Assistant Professors publish a below-average number of publications when all the 3 categories of faculty publications concern. The associate Professors and Professors publish an above-average number of publications when all the 3 categories of faculty publications concern.

Categorical faculty citations - The faculty profiles on IRINS give different types of citation information for their research outputs. The IRINS shows the citation information from CrossRef and Scopus. It also shows the citation information from Google Scholar.

The Scopus citation and CrossRef citation information of each faculty member have been collected for the present study. The CrossRef citations and Scopus citations of each category of faculty members are derived by adding individual citations of the concern category. The total citation for each category is the representation of the summation of all the citations received by the faculty of concern category.

Citations received by each category =
 \sum citations received by each faculty of that category

Total citations received by each category =
 \sum Citations received from CrossRef and Scopus by that category

Table 3 (Total Citations)

Faculty position	Scopus Citation	%	CrossRef Citations	%	Total citations	%
Assistant Professor	383	18%	150	13%	533	16%
Associate Professor	527	24%	282	25%	809	24%
Professor	1264	58%	699	62%	1963	59%
Total	2174	100%	1131	100%	3305	100%

The value of Scopus citation is highest for Professor position i.e. 1264, followed by citations received by Associate Professors i.e. 527, and Assistant Professors received the least

number of total citations i.e. 383. Similarly, the CrossRef citations value is highest for Professors, followed by associate Professors. Professors received 59% of the total citation, which is the highest among the three categories. The associate Professors received 24% of the total citation, followed by Assistant Professors i.e. 16% of total citations.

Institution-wise faculty publications & citations - Table 4 represents the number of publications and a total number of citations received by each institution. The total number of publications for each institution is the summation of publications by all the concerned 3 categories of faculties in that institution. The total citations received per institution is the summation of citations (CrossRef & Scopus) received by all the concern categories of faculty members. **The institutions which have 0 citations or 0 publication information have been excluded from the list of Table 4.**

Table 4 (Total Publications & citations received by institutions)

Sl.No	Organization	Total Publications	Total Citations	Citations/Publication
1	International Institute of Information Technology, Bangalore	30	152	5.066667
2	Gulbarga University	5	24	4.8
3	Sambalpur University	24	85	3.541667
4	Banaras Hindu University	136	426	3.132353
5	Indian Statistical Institute	211	628	2.976303
6	Panjab University, Chandigarh	107	318	2.971963
7	Mysore University	168	492	2.928571
8	Central University of Punjab	57	150	2.631579
9	North-Eastern Hill University	35	79	2.257143
10	Aligarh Muslim University	70	144	2.057143
11	Tripura University	6	11	1.833333
12	University of Jammu	19	31	1.631579
13	Alagappa University	205	282	1.37561
14	Pondicherry University	36	46	1.277778
15	Central University of Himachal Pradesh	136	93	0.683824
16	Shivaji University	66	37	0.560606
17	Gujarat University	44	22	0.5
18	Bangalore University	101	46	0.455446
19	Calcutta University	91	32	0.351648
20	Bharathidasan University	112	24	0.214286
21	Periyar University	167	35	0.209581
22	Dr. Harisingh Gour Vishwavidyalaya, Sagar	75	13	0.173333
23	Kuvempu University	352	60	0.170455
24	University of Delhi	282	35	0.124113

25	Central University of Gujarat	87	8	0.091954
26	Mizoram University	196	15	0.076531
27	Dr. Babasaheb Ambedkar Open University, Ahmedabad	95	3	0.031579
28	Mangalore University	133	4	0.030075
29	Central University of Tamil Nadu	41	1	0.02439
30	Annamalai University	463	9	0.019438

The analysis of Table 4 shows that though the highest number of publications were published by Annamalai University i.e. 463 publications but the highest citations were received by the Indian Statistical Institute i.e. a total of 628 citations. The citations received per publication are highest for the International Institute of Information Technology, Bangalore, followed by citations per publication received by Gulbarga University i.e. 4.8 citations per publication.

Average categorical faculty citations - The average categorical citations received by each faculty member have been represented in figure 2. The categorical citations are obtained by dividing the total citations received by each faculty category by the number of faculty in that category.

$$\text{Average categorical citation} = \frac{\text{Total Citations received by a category}}{\text{Number of faculties in that category}}$$

The average categorical citation is represented in Figure 2.

$$\text{Average total citations} = \frac{\text{Total citations received by all category}}{\text{total number of faculties in all category}}$$

Total citations received by all category = 3305

Total number of faculties in all category = 158

$$\text{Average total citation} = \frac{3305}{158} = 20.91$$

Figure 2 (Average categorical citation)

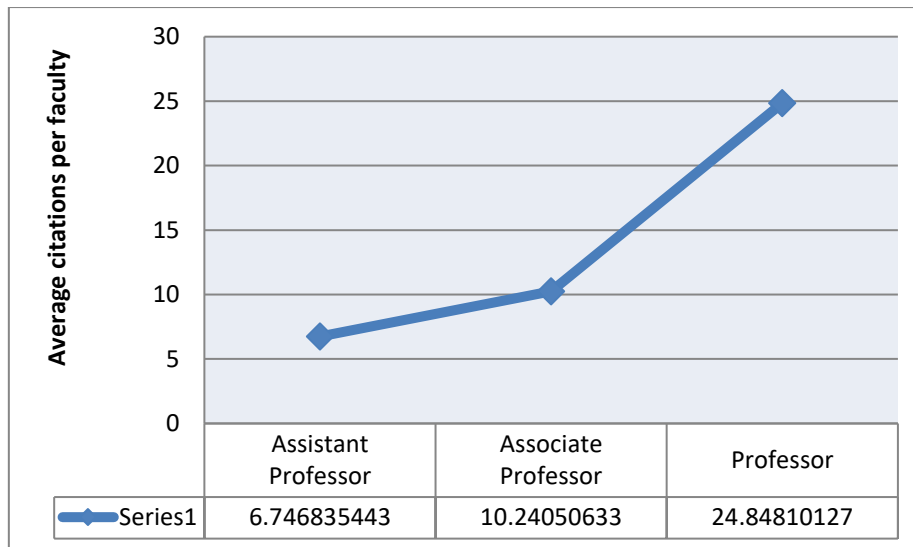


Figure 2 shows that the average categorical citation is highest for Professors i.e. 24.84, followed by average categorical citation for Associate Professor. The Assistant Professor category received the lowest number of average categorical citations among the three categories i.e 6.74. The average total citation value is found as 20.91 citations per faculty of all the 3 categories. It was observed that the categorical citation value for Professors is greater than the total average citations.

Average categorical citations per publication - Figure 3 represents average categorical citations per publication. The average categorical citation is found by dividing the total number of citations received by each category with the total number of publications by that category. The total numbers of publications by each category are found in Table 2 of the present study and the total numbers of citations received by each category are found in Table 3 of the present study.

$$\text{Average categorical citation} = \frac{\text{Total number of citations received by each category}}{\text{total number of publications by that category}}$$

The average categorical citation per publication has been represented in Figure 3.

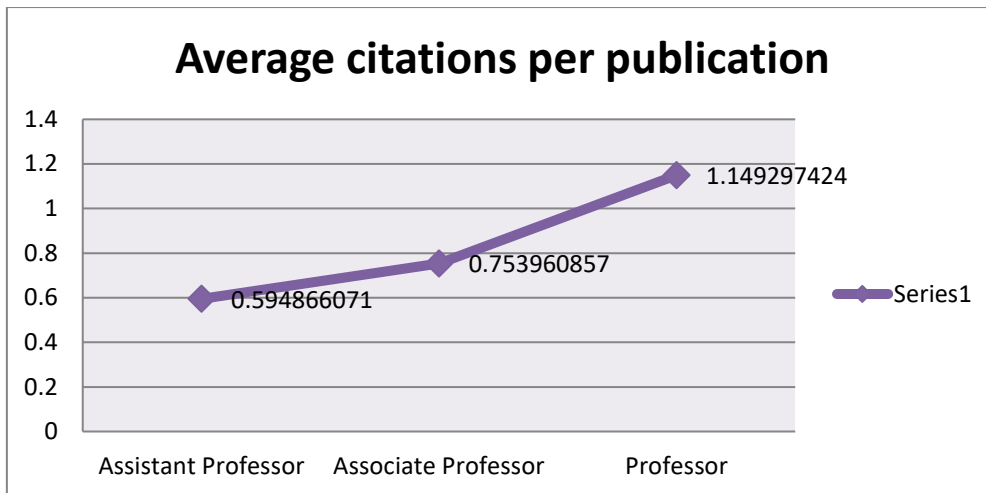
$$\text{Average total citation} = \frac{\text{Total number of citations received by all category}}{\text{Total number of publications by all category}}$$

Total number of citations received by all category = 3305

Total number of publications by all category = 3677

$$\text{Average total citations} = \frac{3305}{3677} = 0.899$$

Figure 3 (Average citations per publication)



The analysis of figure 3 shows that the average citations received per publications value are highest for Professors i.e. 1.15 (approx) citations per publications, followed by average citations per publications received by associate Professors i.e. 0.75 (approx) citations received per publications. The Assistant Professors received the lowest average citations per publication i.e. 0.60 (approx) citations per publication. The above calculation shows the average total citations per publication value is 0.899 citations per publication. Only the average citation per publication value of Professors is more than the average total citations. The Assistant Professor and Associate Professor category receive fewer average citations compared to average total citations.

INFERENCE

The data were collected for three categories of faculty members of the LIS domain. The concern 3 categories of faculty members were from 38 institutions of pan India. The following inferences can be drawn from the above data analysis

1. Many universities and colleges are providing different levels of LIS education in India. According to (Jain et al., 2011) "Library and Information Science (LIS) education is imparted through more than 118 universities and institutions" but the above data shows only 38 such institutions are registered on IRINS which shows low LIS faculty registrations on IRINS.
2. Bibliometrics review shows LIS faculties are publishing several publications per year but the data in Table 2 show a few publications are updated by faculty members.
3. Institution-wise publications and citations show, though the Annamalai University leads the list of publications and Indian Statistical Institute leads the list of citations but the Citations per publication value is highest for the International Institute of Information Technology. Therefore the publications by faculties of the International Institute of Information Technology, Bangalore is more preferred than others.

4. The total publications by Professors lead the list but the average publication per faculty member is highest for Associate Professor Category.
5. The average citations per faculty are highest for the Professor category though the average publication is highest for the associate category. This shows the publications published by the Professor category are more preferred than the other two categories.

CONCLUSION

The quality of any educational organization is directly linked to the research productivity of the individual of that organization. The proliferation of present research activities results in the generation of a huge amount of research information. The IRINS is a repository of research information showcasing the research output of researchers in the public domain. The present study tries to access the research productivity of LIS faculties and their inclusion on IRINS. The present study concluded with the fact that there is low inclusion of LIS faculties on IRINS. The present study may give an impetus for further research on IRINS. This study will also create awareness among the LIS community to actively maintain their profile on IRINS. The full-fledged participation of the research community on IRINS will satisfy the motto of IRINS.

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