
Author Productivity and Citation of Rural Education Research Output

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Abstract

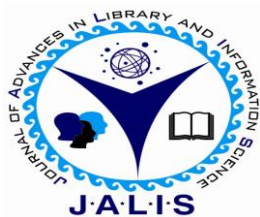
The study reveals Author Productivity and Citation of Rural Education Publication indexed in the Web of Science database. "Rural Education" as a search term in the all field tag fetched 18860 records and the period of coverage from 2000 to 2019. It is also observed that the most productive author is Rozelle S with 81 papers dealing with rural education research (.4%), TLCS 293, TGCS 1203, TLCR 290 of all papers published in this research domain. Three authored contribution (15.86%) is found to be most prime, The average degree of collaboration is impressive 0.8787911. From 2000 - 2003 a total of 1357 publications were published in the field of rural education research with 259 single-authored papers (CAI 157.47), 277 two authored papers (CAI 129.28) and 821 more than two authored articles.

Keywords

Scientometrics; Rural Education; Lotk's Law;
Author Productivity

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Introduction

In the 1960s, particularly in Eastern Europe, the term "scientometrics" was used to denote the "measurement of informatics process". The term informatics was then widely used to mean "documentation/information handling activities". In 1969 Vassily V. Nalimov & Z.M. Mulchenko coined the Russian equivalent of the term scientometrics. It refers to 'the application of quantitative methods which are dealing with the analysis of science viewed as an information process'. This term had achieved extensive acknowledgment by the foundation in 1978 of the journal *Scientometrics* by Tibor Braun in Hungary. According to its subtitle, *Scientometrics* includes all quantitative aspects of the science of science communication in science, and science policy. The objectives and scope of the *scientometrics* domain were also crystallized in some early papers by Nalimov which helped to nurture the then-nascent discipline. This study Author Productivity and Citation of Rural Education Publication: A Global Perspective using publications indexed in the Web of Science database. "Rural Education" as a search term in the all field tag fetched 18860 records and the period of coverage from 2000 to 2019.

Review of Literature

Timothy O.Olawumi and Daniel W.M.Cha (2018) studied 2096 bibliographic records from the Web of Science database during 1991-2016. The techniques used such as co-author, co-word, co-citation, clusters, and geospatial analyses. They identified Salient and emerging sustainability research trends and clusters. The findings revealed that most significant contributions in sustainability research have originated primarily from the United States, China, United Kingdom, and Canada. The study generated 21 co-citation clusters. Balasubramani and Parameswaran (2014) tried to analyze the research performance of authors of Banaras Hindu University. Aims of their study were to ascertain the growth of literature, source of publication identification of authorship pattern, collaborative efforts by the researcher of Banaras Hindu University for the period of 2000-211. The data for the study were taken from the Web of Science database published by the Institute of Scientific Information. The ranking of the author based on their publications show that Sunder S in the first with 210 records and 4148 citation scores from the Institute of Medical Sciences. Isabella Mary and Dhanavandan (2014)1 considered the usage and

awareness of public library and its services to know the purpose for which women visit the library, to identify their feeling about services, facilities, and purpose of reading, library collection, and assistance from the library staff in the use of resources and services to meet necessary help to users their information requirements. The study identified that rural libraries create reading habits, and it is a beautiful activity among rural women being in the world. Dwivedi (2016) analyzed the study of Global Allergy Research 1994-2013. For this study Science Citation Index Expanded (SCI-E), a Thomson Reuters product was used for world allergy research. During this period. Thirty-four thousand seven hundred eighty-three papers were published in allergy research. The highest number of publications were published in the year 2013. The USA was the highest publication country; it is one-fourth of the total publication. Journal of Allergy and Clinical Immunology was the highly cited published journal; out of 20 highly cited papers, 16 papers were published in this journal. Citation Per Paper (CPP) and Relative Citation Impact(RCI) were using two relative indicators for examining the scientific impact of the leading countries. Yu, Z.-L., Hu, X.-Y., Wang, Y.-N., and Ma, Z. (2017). The examined the published papers in global ophthalmology during the period of ten years from 2007 to 2016. The data retrieved from the science citation index and web of science. As a regional distribution, the highest number of papers and citations came from the USA. The three Asian countries in the top 10 were China, Japan, and South Korea. Singapore was the 10th rank position in a highly cited paper in Ophthalmology. The highest contribution in journal publication was the USA with 31 journals. The only journal published in China was the International Journal of Ophthalmology.

Objectives

Table 1. Showing Prolific authors according to their highest research productivity on Rural Education (55,903)

S. No	Author	Record	Percent	TLCS	TLCS/t	TLCSx	TGCS	TGCS/t	TLCR	TLCSb	TLCSe
1	Rozelle S	81	0.4	293	48.90	128	1203	173.50	290	52	61
2	Zhang LX	62	0.3	257	41.94	104	751	108.80	158	53	58
3	Li J	51	0.3	41	4.93	22	579	78.28	65	9	0
4	Zhang Y	50	0.3	21	4.05	11	439	80.41	62	3	0
5	Wang Y	49	0.3	47	8.42	35	583	97.89	74	12	0
6	Zhang J	48	0.3	55	8.88	32	637	79.21	86	5	0
7	Shi YJ	47	0.3	172	28.00	64	446	68.82	205	33	17
8	Zhang L	43	0.2	41	5.00	30	522	79.95	23	11	0
9	Li Y	38	0.2	31	4.86	24	548	85.11	24	7	0
10	Wang J	38	0.2	28	4.61	12	462	69.29	54	7	0

- To identify & map the prolific authors of research papers in rural education output
- To know the author’s dominance factor on rural education research
- To test the Lotka’s Law of author productivity in rural education
- To examine the authorship patterns of the publication and author productivity
- To identify the Degree of collaboration of single and multi-authors
- To measure the Co-Authorship Index on Rural education Research
- To Know the Co-Authorship Visualization for County-Network

Methodology

The necessary data were collected from the WoS database for this study by using the below search terms. Topic: Education and Social Science, Refined by: “Rural Education”. Timespan: 2000-2019. Indexes: Social Science Citation Index (SSCI), Arts and Humanities Citation Index (AHCI), SCI-EXPANDED. The search results of 18138 bibliographic records were taken into consideration of the study. The retrieved records were exported to Histcite to obtain a large list of 18138 publications, cited references along with their local and global citation scores (LCS and GCS). The American Psychological Association (APA) style of the referencing method has been used in this study.

Result and Discussion

In order to collect the essential data, a researcher has to conduct some research investigations. While using secondary data for research studies the data are properly analyzed and interpreted in need of the research requirements.

19	19	7	1.252147e-04
20	20	5	8.943904e-05
21	21	8	1.431025e-04
22	22	3	5.366342e-05
23	23	5	8.943904e-05
24	24	4	7.155123e-05
25	25	4	7.155123e-05
26	26	6	1.073268e-04
27	28	1	1.788781e-05
28	29	1	1.788781e-05
29	30	1	1.788781e-05
30	31	1	1.788781e-05
31	32	1	1.788781e-05
32	34	1	1.788781e-05
33	35	1	1.788781e-05
34	37	1	1.788781e-05
35	38	2	3.577562e-05
36	43	1	1.788781e-05
37	47	1	1.788781e-05
38	48	1	1.788781e-05
39	49	1	1.788781e-05
40	50	1	1.788781e-05
41	51	1	1.788781e-05
42	62	1	1.788781e-05
43	81	1	1.788781e-05

> L\$C
 [1] 0.6692376
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 [1] 0.9543486
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 [1] 8.674082e-08

The above table notified that a total of 55,903 authors produced to the area of rural education. 43, 835 authors contributed as first-authored articles of the rural education research and the frequency is 7.841120e-01. It highlights the fact that the number of publications by a researcher in any field requires a high degree of inquisitiveness, competency, efficiency, insistence, and exposure to literature. 7037 authors contributed as two authored articles of the rural education research and the frequency is 1.258765e-01 and 2332 authors contributed as three authored communications of the rural education research and the frequency is 4.171437e-02. Table 4.29 indicates the use of Lotka's Law with respect to author productivity of rural education research output. It is seen clearly from the table among the proportion of all contributions made a single contribution reigns high. It means that a single paper contributed by authors remain at

73.17 percent of the total authors taken for this analysis.

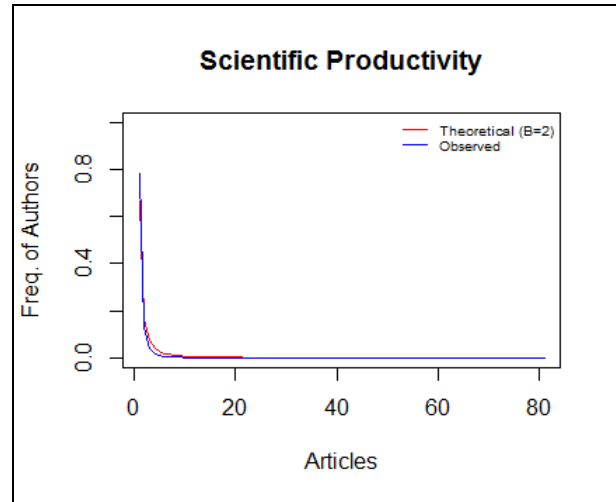


Table 4. Showing Authorship Pattern in the Area of Rural Education Research

S. No	Authors	No of Record	Cumulative	Percentage
1	Single	2286	2286	12.12
2	Two	2978	5264	15.79
3	Three	2992	8256	15.86
4	Four	2628	10884	13.93
5	Five	2079	12963	11.02
6	Six	1601	14564	8.49
7	Seven	1801	16365	9.55
8	Eight	734	17099	3.89
9	Nine	540	17639	2.86
10	Ten	362	18001	1.92
11	More than Ten	859	18860	4.55
-	-	18860	-	100.00

Table 4. Districted that three authored contribution (15.86%) is found to be most prime, followed by two authored communications (15.79), four authored publications (13.93%), single-authored records (12.12%), five authored contributions (11.02%), seven authored papers (9.55%), six authored communications (8.49%), more than ten authored publications (4.55%), eight authored contributions (3.89%). However, ten authored contributions were occupied as the least position (1.92%).

Table 5. Shows Authorship Pattern of Degree of collaboration

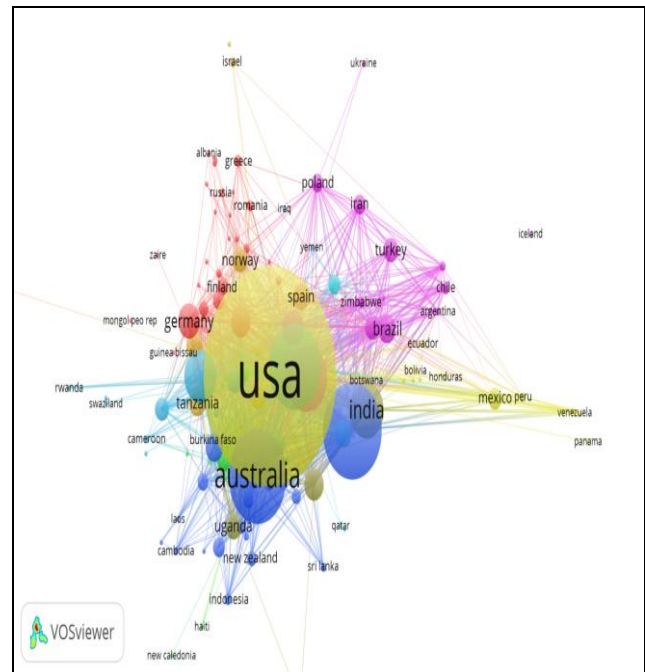
S. No	Authors	Contribution
1	Single authors	2286
2	Multi authors	16574
Degree of Collaboration		0.8787911

Table 5 identified that collaboration scenario of the contributors of the rural education research output 2000 to 2019. Out of a total of 18860 publications, about 87.87% collaborated by multiple – authors ranging from two to ten plus co-authored contributions and rests were non – collaborative. The table also shows that the degree of collaboration of the rural education research output from 2000 to 2019. The average degree of collaboration is impressive 0.8787911.

Table 6 Shows Co-Authorship Index on Rural education Research

S. No	Block Year	Single	CAI	Two	CAI	More than Two	Total
1	2000-2003	259	157.47	277	129.28	821	1357
2	2004-2007	333	141.83	352	115.09	1252	1937
3	2008-2011	545	125.74	647	114.58	2384	3576
4	2012-2015	569	92.12	795	98.80	3732	5096
5	2016-2019	532	72.73	878	92.14	4625	6035
6	others (Without Year)	48	46.10	29	21.38	782	859
-	-	2286	-	2978	-	13596	18860

The above table describes that from 2000 - 2003 a total of 1357 publications were published in the field of rural education research with 259 single-authored papers (CAI 157.47), 277 two authored papers (CAI 129.28) and 821 more than two authored articles. During 2004 - 2007 a total of 1937 publications were published in rural education research with 333 single-authored papers (CAI 141.83), 352 two authored papers (CAI 115.09) and 1252 more than two authored articles. During 2008 - 2011 a total of 3576 publications were published in the aspect of rural education research with 545 single-authored papers (CAI 125.74), 647 two authored papers (CAI 114.58) and 2384. During 2012 - 2015 a total of 5096 publications were published in the aspect of rural education research with 569 single-authored papers (CAI 92.12), 795 two authored papers (CAI 98.80) and 3732. During 2016 - 2019 a total of 6035 publications were published in the aspect of rural education research with 532 single-authored papers (CAI 72.73), 878 two authored papers (CAI 92.14) and 4625 more than two authored articles and unknown year for remaining 859 papers.



Co-Authorship – Country Network Visualization

Conclusion

The study has acknowledged 18860 records were published during the study period of 2000 to 2019. The most productive author is Rozelle S with 81 papers dealing with rural education research (.4%), TLCS 293, TGCS 1203, TLCR 290 of all papers published in this research., It is confirmed that ZHANG L appears as the first rank with 6219 Dominance Factor for multi-authored communications. 55,903 authors produced to the area of rural education. 43, 835 authors contributed as first-authored articles of the rural education research and the frequency is 7.841120e-01. It highlights the fact that the number of publications by a researcher in any field requires a high degree of inquisitiveness. The average degree of collaboration is impressive 0.8787911. 2000 - 2003 a total of 1357 publications were published in the field of rural education research with 259 single-authored papers (CAI 157.47), 277 two authored papers (CAI 129.28) and 821 more than two authored articles.

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