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## **Scientometrics study of the research publication on information literacy (2015-2019)**

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**Abstract**

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This research work attempts to analyze quantitatively the growth and development of information literacy research in global in terms of publication output as reflected in web of science database (SCI) for the period of 2015 to 2019. The researcher has published a total of 4388 papers on information literacy during this period. The study reveals that information literacy research in global is still in its infancy.

**Keywords:** Scientometrics, Information literacy

### **Introduction**

The scientometric studies have shown that all the pieces of published information do not have equal importance. Present study focuses attention on the growth of literature, authorship pattern, journal coverage, institutions involved in active research etc. Citation studies are recognized as an indicator of influence of published work on the scientific community. This study attempts to analyse the performance of information literacy research output in terms of its content and coverage, growth rates, areas of research concentration, and author productivity, journals and articles and other means of assisting the peer review procedure. Performance of research institutions in promotion of information literacy research is also given due emphasis.

### **Scientometrics**

Scientometrics is “the study of the measurement of scientific and technological progress” (Garfield, 1979). Its origin is in the quantitative study of science policy research, or the science of science, which focuses on a wide variety of quantitative measurements, or indicators, of science at large.

### **Scope of the study**

The present study attempts to find out the publication pattern of researchers of information literacy. This study is based on the references and aims to analyze quantitatively the growth and development of information literacy in global in terms of publication output as reflected in web of science database during 2015-2019. Web of Science is the largest abstract and citation database of research literature and quality web-only journals. It is designed to enable not only the researchers for accessing scientific information but also provide the information scientists to study the literature for different information analyses purposes, quick,

easy, and comprehensive. Web of science provides superior support of the literature research process.

### **Objective of the study**

1. To identify the Year wise distribution of publication
2. To identify the Document wise distribution of Publication output
3. To analyse the ranking of Author wise distribution of article
4. To analyses the Language wise distribution of publication output
5. To assess the Institution wise research concentration
6. To analyses the Country wise distribution of Publication
7. To identify the Word wise distribution of Publication

### **Methodology**

A Scientometric study is a case study encompassing records output of Web of Science Database. The growth rate of output in terms of both at absolute level and relative level are analysed from 2015 -2019. The authorship pattern and author productivity are examined to identify the pattern of research contribution in the field of information literacy. Further, an attempt is made to measure the performance of researchers and their research concentration in the field of information literacy. The study is mainly exploratory in nature in identifying research output on information literacy

### **Data collection**

The basic publication data used in this study is derived from the Expanded version of Science Citation Index (SCI) database, available in Web of Science. The raw publications data along with their citations has been downloaded from the Web of Science. Publications data for 5 year from 2015-2019 were used for analyzing the growth and impact of information literacy.

### **Data Analysis**

**Table -1 Year wise Distribution of Publication and Citation Scores**

<b>S.No</b>	<b>Publication Year</b>	<b>No.of papers</b>	<b>TLCS</b>	<b>TGCS</b>
1	2015	825	1103	7578
2	2016	929	744	5470
3	2017	963	578	3462
4	2018	1108	173	1327
5	2019	563	9	121
	<b>Total</b>	<b>4388</b>	<b>2607</b>	<b>17958</b>

Table- 1 shows that distribution of research articles published in information literacy during the period of 2015-2019. The total of 4388 articles was published. The highest number of articles were published in the year 2018 with 1108 articles followed by the 2017 (963) articles, 2016 (929), 2015 (825) and the lowest number of articles were published in the year of 2019 with 563 articles.

**Table -2 Document wise Distribution of Publication**

<b>S.No</b>	<b>Document Type</b>	<b>Records</b>	<b>TLCS</b>	<b>TGCS</b>
1	Article	3856	2359	15531
2	Review	252	193	2071
3	Article; Proceedings Paper	81	33	163
4	Editorial Material	70	15	135
5	Book Review	48	1	2
6	Meeting Abstract	43	0	0
7	Article; Early Access	20	0	0
8	Article; Book Chapter	5	2	48
9	Letter	4	3	5
10	Correction	3	0	0
11	Reprint	3	1	3
12	Biographical-Item	1	0	0
13	News Item	1	0	0
14	Review; Early Access	1	0	0
	<b>Total</b>	<b>4388</b>	<b>2607</b>	<b>17958</b>

Table 2 indicates the document wise distribution of research output in information literacy. This study has observed a total of 4388 publications in information literacy during the period of five years from 2015 -2019. Out of various sources of publication in information literacy, journal articles that appeared in the journals have shown a predominant contribution 3856 with Golobal citation score is 15531 and this source occupies the first position. The source of review comes second in order (252) of sharing total research output in information literacy during the period of analysis. The source of proceeding paper comes in the third position 81 with respect to total output in information literacy research during the study period.

**Table-3 Ranking of Authors Productivity (Top 10)**

S.No	Author	Records	Percent
1	Wolf MS	28	0.6
2	Osborne RH	24	0.5
3	Pinto M	20	0.5
4	Lee BT	18	0.4
5	Garcia-Retamero R	17	0.4
6	Agarwal N	14	0.3
7	Hansberry DR	14	0.3
8	Smith SG	13	0.3
9	Smith SK	13	0.3
10	Beauchamp A	12	0.3

Table – 3 indicates ranking of authors by number of publication. Authors “Wolf MS” published highest number of articles for the study period with 28 records; next consecutive authors Osborne are published next highest number of articles for the study period with 24 records and its followed by author Pinto M published 20 records in this research period.

**Table -4 Language wise Distribution of Publication**

S.No	Language	Records	TLCS	TGCS
1	English	4232	2588	17760
2	Spanish	61	4	91
3	German	36	10	68
4	Portuguese	28	2	18
5	Hungarian	8	3	7
6	French	7	0	9
7	Afrikaans	3	0	1
8	Czech	3	0	2
9	Japanese	3	0	0
10	Polish	2	0	0
11	Croatian	1	0	0
12	Lithuanian	1	0	0
13	Russian	1	0	0
14	Slovak	1	0	2
15	Turkish	1	0	
	<b>Total</b>	<b>4388</b>	<b>2607</b>	<b>17958</b>

Table 4 shows that Language wise Distribution of Publication. Out of 4388 total publication 4232 of them English language has first position and 61 records comes under the second position in Spanish language.

**Table -5 Institution wise Distribution of Publication (Top 10)**

S.No	Institution	Records	Percent	TLCS	TGCS
1	University of Sydney	85	1.9	40	521
2	Monash University	59	1.3	41	345
3	Northwestern University	55	1.3	93	503
4	University of Illinois	50	1.1	48	227
5	University of Michigan	49	1.1	53	334
6	Deakin University	48	1.1	65	459
7	University of Calif San Francisco	48	1.1	33	321
8	University of Maryland	48	1.1	47	229
9	University of N Carolina	48	1.1	43	219
10	University of Toronto	48	1.1	21	275

Table 5 shows that Institution wise distribution of publication. It is noted that University of Sydney institution contributed the highest number of research publications 85 at the same time it ranks first in terms of Global Citation Score 521 and its followed by Monash University institution contributed the second position 59 records.

**Table -6 Country wise Distribution of Publication**

S.No	Country	Records	Percent	TLCS	TGCS
1	USA	2007	45.7	1486	9032
2	Australia	425	9.7	230	2066
3	UK	393	9	260	2135
4	Canada	229	5.2	130	1229
5	Germany	226	5.2	170	1326
6	Spain	185	4.2	129	995
7	Netherlands	164	3.7	180	1354
8	Peoples R China	160	3.6	34	495
9	Sweden	98	2.2	61	314
10	Taiwan	77	1.8	31	275

Table 6 indicates that the country wise number of publications. Highest number of records has published in USA 2007 at the same time it ranks first of Global citation scores 9032, followed by Australia have above 425 articles related this subject productivity.

## Conclusion

This paper has highlighted quantitatively the contributions made by the Global Information Literacy research during 2015-2019 as reflected in the Web of Science database. During the five years period (2015-2019) global contributions in terms of number of publications is significant. A comparison of global output in relation to the world output may help in understanding the contribution in a better angle. It is found in the study that the highest number of documents were published in the year 2018 i.e., 1108 and lowest number of documents 563 was published in the year 2019. Document wise analysis of record shows that journal articles appeared in the first position, regarding to author publication “Wolf MS” published highest number of articles for the study period with 28 records. Majority of the records has published in English language. It is noted that University of Sydney contributed the highest number of research publications and USA published more number of records for the study period with 2007 records. It is concluded that the information literacy is a newly emerged area in the field of library and information science.

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