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## Digital Literacy Research Output in J-Gate : A Bibliometric Study

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### Abstract

*In this study an analysis regarding the research output on “Digital Literacy” from J-Gate database from the period of 2009-2018 (10 Years). This paper analyses the study of Source of journals, Year wise distribution, Country wise distribution, Subject wise distribution, Related growth rate and Doubling time. The highest output 261(16.30%) during the year 2018. Maximum subject wise contribution is 849(53.03%) Arts & Humanities.*

### Keywords

Bibliometrics, Digital Literacy, J-gate, Related growth rate and Doubling time.

### Electronic access

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## Introduction

The bibliometrics and scientometrics study is synonymously used and most interested topics in Library and Information Science research. All significant compilations of science indicators to the target extent rely on publication and citation statistics and other bibliometric techniques. Many extensive Bibliometric studies of important science fields have appeared during the last two decades. Alan Pritchard(1969) who first used the word “Bibliometrics” described as “the application of mathematical and statistical methods to books and other media of Communication”. Nalimov (1971) has coined the term “Scientometrics” to develop “The quantitative methods of the research on the development of science in an information process”. It will help to study the quantitative aspects of science and technology as a process of communication. Scientometrics is the study of measuring and analyzing science, technology and innovation.

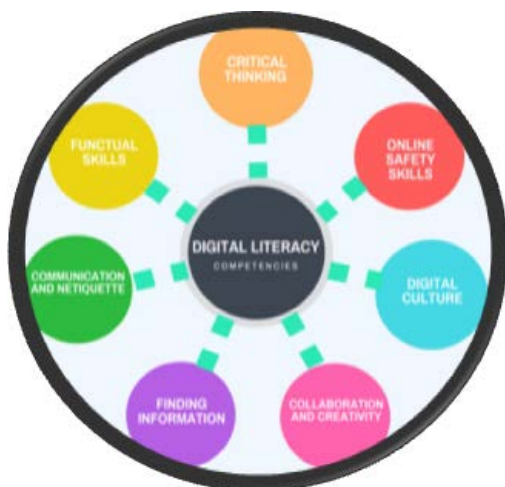
## Concept of Digital Literacy

“Digital Literacy” technology started in 21<sup>st</sup> Century. [Cornell University](http://www.cornell.edu) defines digital literacy as “the ability to find, evaluate, utilize, share, and create content using information technologies and the Internet.” Digital Literacy refers to the ability to actively and competently express within a network of connected digital technologies. Digital literacy is the ability to use digital technology, communication tools or networks to locate, evaluate use and create information. It is the person’s ability to perform tasks effectively in a digital environment which includes the ability to read and interpret media, to reproduce data and images through digital manipulation, and to evaluate and apply new knowledge gained from digital environments. Digital Literacy should be understood to mean the basic skill or ability to use office software such as word processors, email and presentation software, the ability to create and edit images, audio and video and the ability to use a web browser and internet search engines. Digital Literacy has three distinct components: Consuming, Creating and Communicating.

Locating and consuming digital content: Having the mental models to locate, comprehend and consume digital content will help the user to easily navigate the Web . Effective use of the Web involves strategically searching for information and evaluating its accuracy and relevancy. There is consensus that

effective Web search skills must be developed for educational success in a digital society, and instruments such as The Teaching Internet Comprehension to Adolescents (TICA) checklist can ensure that students have the necessary prerequisite Web search skills (Leu et al., 2008). The domain knowledge, i.e the working knowledge of how to use search engines, basic literacy skills, and a general knowledge of resources available on the Web (Moraveji et al., 2011).

According to Barbara R.Jones kavalier and suzanne L.Flannigan: “a person’s ability to perform tasks effectively in a digital environment includes the ability to read and interpret media, to reproduce data and images through digital manipulation and to evaluate and apply new knowledge gained from digital environments”.



**J-Gate**

J-Gate is an electronic gateway to global e-journal literature. Launched in 2001 by informatics India limited. J-Gate acts as an electronic gateway to global e-journal literature with a customization functionality to search one’s own subscribed journals through one single search box. The J-Gate platform is fronted by a simple, intuitive and easy-to-use interface, and also gives users complete control over search filters. By allowing users to access content from a wide variety of publishers on a single platform, J-Gate exponentially increases journal usage. J-Gate provides seamless to millions of journal articles available online offered by 12,214 publishers. They are 52,060 e-journals available in the J-Gate. All journals are available in a uniform brows able format. Journals are accessing full text (both open-access and subscription) and author

address, e-mail, basic bibliographic data with abstracts.

**Objectives**

- The following are the main objectives of the study
1. The study analyses the growth of Digital Literacy research during 2009-2018.
  2. To identify and analyse the country wise contribution of research output in the field of Digital Literacy.
  3. To identify the Related Growth Rate and Chronological growth of literature on Digital Literacy.
  4. To identify the Subject wise contribution on Digital Literacy.
  5. To identify the primary source on Digital literacy publication.

**Data Collection**

The study is based on the 10 year publication data from 2009 to 2018 on digital literacy research collected from J-Gate Database. A total of 1601 records were identified in the field of “Digital Literacy”

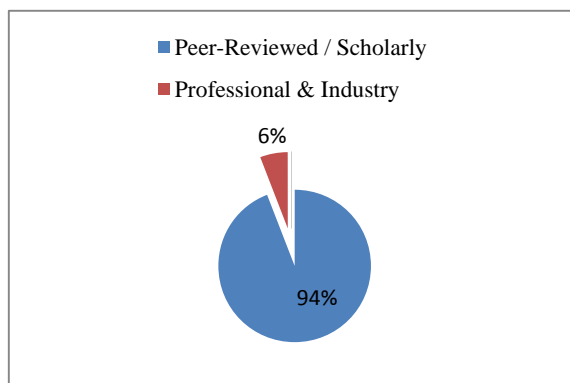
**Data Analysis**

**Table 1:** Source of Journals

S.No	Source of Journals	Publications	%	Cumulative	%
1.	Peer-Reviewed / Scholarly	1507	94.13	1507	94.13
2.	Professional & Industry	94	5.87	1601	100
	Total	1601	100		

Source of Journals has been shown in Table 1 Out of 1601 Digital Literacy research publication, 1507(94.13%) were from peer-reviewed/scholarly and 94(5.87%) were from professional and industry.

**Figure 1:** Source of Journal

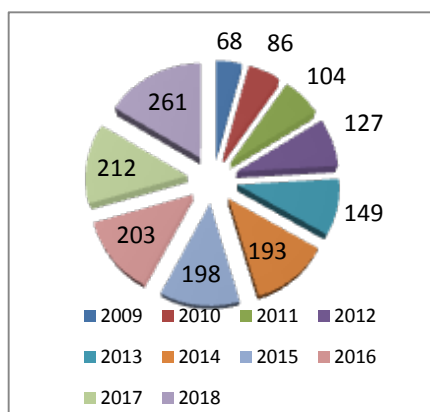


**Table 2: Year wise Distribution of Digital Literacy Publications**

S.No	Years	Publications	%	Cumulative	%
1	2009	68	4.25	68	4.25
2	2010	86	5.37	154	9.62
3	2011	104	6.50	258	16.12
4	2012	127	7.93	385	24.05
5	2013	149	9.31	534	33.36
6	2014	193	12.05	727	45.41
7	2015	198	12.37	925	57.78
8	2016	203	12.68	1128	70.46
9	2017	212	13.24	1340	83.70
10	2018	261	16.30	1601	100
	Total	1601	100		

It has been observed from table 2 that 1601 articles are published from 2009-2018. It shows that 261(16.30%) maximum number of articles published in the year 2018 and minimum number of article 68(4.25%) in the year 2009. It reveals that articles publication rate is in continuous increase from 2009 to 2018 .

**Figure 2: Year wise Publication**

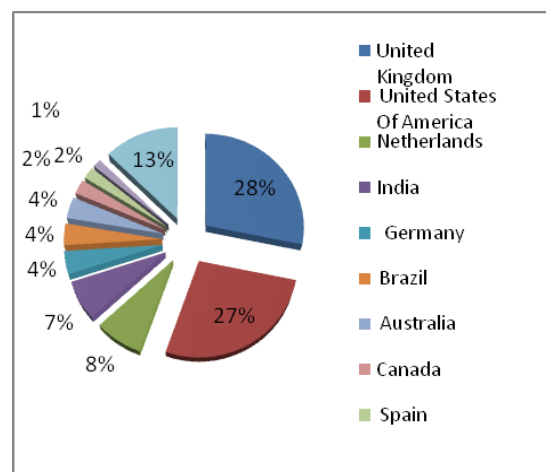


**Table 3 : Country wise Distribution of Digital Literacy Publications**

S. No	Countries	Publications	%	Cumulative	%
1	United Kingdom	452	28.23	452	28.23
2	United States Of America	435	27.17	887	55.40
3	Netherlands	124	7.75	1011	63.15
4	India	109	6.81	1120	69.96
5	Germany	64	4.00	1184	73.96
6	Brazil	60	3.75	1244	77.71
7	Australia	59	3.69	1303	81.40
8	Canada	40	2.50	1343	83.90
9	Spain	33	2.06	1376	85.96
10	Switzerland	23	1.44	1399	87.40
11	Others below 20	202	12.60	1601	100
	Total	1601	100		

Table 3 shows the Country wise distributions of the Digital literacy publication, Maximum number of publications were from United Kingdom 452(28.23%). It is followed by United States of America 435(27.17%), Netherlands 124(7.75%), India 109(6.81%) and is in fourth position , followed by Germany 64(4%), Brazil 60(3.75%), Australia 59(3.69%), Canada 40(2.50%), Spain 33(2.06%) and Switzerland 23(1.44%).

**Figure 3: Country wise Publication**



**Table 4:** Subject Wise Distribution of Digital Literacy Publications

S. No	Subject Wise	Publications	%	Cumulative	%
1	Agricultural& Biological Science	9	0.56	9	0.56
2	Arts & Humanities	849	53.03	858	53.59
3	Basic Science	28	1.75	886	55.34
4	Biomedical Science	89	5.56	975	60.90
5	Engineering & Technology	279	17.43	1254	78.33
6	Social & Management Science	347	21.67	1601	100
	Total	1601	100		

Table 4 shows the Subject wise distributions of the Digital literacy publication, Out of 1601 articles 849(53.03%) article related to digital literacy are published in Arts & Humanities. It is followed by Social and Management science 347(21.67%), Engineering and Technology 279(17.43%), Biomedical science 89(5.56%), Basic science 28(1.75%) and Agricultural and Biological science 9(0.56%).

**Table 5 :** RGR and Doubling time

S. No	Years	Publications	%	W1	W2	RGR	Dt
1	2009	68	4.25		4.2195	--	--
2	2010	86	5.37	4.2195	4.4543	0.2348	2.951
3	2011	104	6.50	4.4543	4.6443	0.1900	3.647
4	2012	127	7.93	4.6443	4.8441	0.1998	3.468
5	2013	149	9.31	4.8441	5.0039	0.1598	4.336
6	2014	193	12.05	5.0039	5.2626	0.2587	2.678
7	2015	198	12.37	5.2626	5.2882	0.0256	27.070
8	2016	203	12.68	5.2882	5.3132	0.0250	27.720
9	2017	212	13.24	5.3132	5.3565	0.0433	16.004
10	2018	261	16.30	5.3565	5.5645	0.2080	3.331
	Total	1601	100				

It is observe from Table 5 that RGR has been decreasing from 0.23 to 0.20. On the other hand, the doubling time (Dt) has shown an increasing trend. It is reveals that doubling time has increased from 2.95 to 3.33.

### Findings

1. The study reveals that there is continuous increase in the number of publications related to digital literacy from 2009 - 2018.
2. The Arts and Humanities had 849(53.03%) publications which dominated the subject wise distribution of digital literacy, when compared to other subjects.
3. The maximum number of publication is from United Kingdom 452(28.23%).
4. The Doubling time has shown an increasing trend and RGR has been decreasing from 0.23 to 0.20.
5. The maximum number of contribution 1507(94.13%) were from peer reviewed/Scholarly.

### Conclusion

Based on the above results the present study reveals that the year wise growth of publication is in increasing trend. Relative Growth Rate of the published articles is decreasing mode and the doubling time values are increasing trend during the study period. It is essential to conduct an exploratory study with the aim to gain a better understanding of expertise in the digital Literacy.

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