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# Indian Journal of Library and Information Science

May - August 2021  
Volume 15 Number 2

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# Scientometric study of Academic Publications on Artificial Intelligence

K Praveena<sup>1</sup>, Veerakumar<sup>2</sup>, S Rajeswari<sup>3</sup>

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## Abstract

The present research paper pertains to the scientometric analysis of research literature on Artificial Intelligence from the year 1999 to 2019. The main objectives of this research work is to explore the academic research/review publication contributed by the Scientists and Subject experts from the Engineering background. The data/information used in this study has been collected from the online database “Web of Science”. The following terms are used as keywords to retrieve the data from the “Web of Science” are (ALL = Artificial Intelligence, Time span = 1999–2019). This study discusses the major parameters like yearly publication, citation pattern, a bibliographic form of publication, highly contributed authors, top-ranking authors etc. The foremost results of the study have found that during the study period 21643 research publications has been contributed by the authors in the Engineering discipline.

**Keywords:** Scientometrics; Artificial Intelligence; Web of Science Database; Degree of Collaboration.

## Introduction

Scientometric analysis of scientific publications has become an important aspect of information science research. This is due to the fact that bibliometric studies help to identify patterns of publication, authorship, citations, and secondary journal coverage. The variables provide information about the dynamics of the area under consideration. As a result of this insight, information resources are better organised, which is necessary for systematic use of available information. 'Scientometrics,' a branch of science that describes output traits in terms of organisational research structure, resource inputs and outputs, creates benchmarks to assess the quality of information output. Scientometric studies use growth patterns and other attributes to characterise disciplines. These studies have the potential to be particularly useful in assessing emerging disciplines. In the current study, a

scientometric analysis of research performance on Artificial Intelligence, a rapidly growing area in the knowledge-driven world, is conducted.

John McCarthy is introduced the concept of artificial intelligence. He started researching on this subject since 1956, suggesting that each aspect of learning and other domains of intelligence can be described precisely enough for a machine to simulate. Artificial intelligence describes machine work processes that, if performed by humans, would require intelligence. The term ‘artificial intelligence means investigating intelligent problem-solving behavior and creating intelligent computer systems’. AI systems, depending on their sophistication, can perform actions similar to human beings such as perception, interpretation, reasoning, learning, communication, and decision making to arrive at a solution to a given problem. Artificial neurons, like neurons in the human brain,

serve as information-processing units in artificial neural networks (Haykin, 2005). Neural networks learn through experience; that is, they generalise from previous experiences to new ones and make decisions based on those experiences. A neural network is made up of a group of neural nodes that are linked to some weighted nodes. Each node represents a brain neuron, and the connections between them are analogous to the synapses that connect brain neurons.

Since its inception, AI systems have undergone numerous developments that have broadened their applications, including pattern recognition, automation, computer vision, virtual reality, diagnosis, image processing, nonlinear control, robotics, automated reasoning, data mining, process planning, intelligent agent and control, manufacturing, and so on. Currently, most AI applications are limited, in that they can only carry out specific tasks or solve pre-defined problems. AI operates in a variety of ways, drawing on principles and tools from a variety of disciplines, including math, logic, and biology. Modern AI technologies are increasingly capable of making sense of diverse and unstructured types of data, such as natural language text and images. Machine learning has been the most successful type of AI in recent years, and it is the underlying approach in many of the applications that are currently in use. Machine learning, rather than following pre-programmed instructions, enables systems to discover patterns and derive their own rules when presented with new data and experiences.

A select few studies that were undertaken in the past focused on quantitative analysis of global output on artificial intelligence research covering different study periods and different aspects of the subject in their research analysis. Among such studies, Artificial Intelligence study carried out a multi-angle of research productivity in the area of artificial research (AI) by subject category, journal, author, country, institution and keywords covering the period during 1990 to 2014 (Niu, 2016).

It's examined global artificial intelligence research output (10795 papers) published during 1981-2010, and reported growth characteristics, continent-wise and country-wise distribution, identification of prolific authors and journals, collaborative patterns, etc. (Gunasekaran and Shanmugam, 2016).

They were analyzed global artificial intelligence research output covering the period during 2000-2011, and reported article distribution by publication year, languages, countries/regions,

authors, journals etc. (Cheng and Wang, 2012).

It's studied the artificial intelligence research in Indian context which analysed data from Scopus database published during 1968 to 2014. The study reported growth characteristics, citation per paper, keywords, national and international collaboration, and organization-wise distributions, etc. Besides, there were a few other bibliometric studies carried out in India, which assessed the overall computer science research output (including artificial intelligence) in India and covered different study aspects and periods. (Shrivastava, Rishab & Mahajan, Preeti; 2016, Gupta, B.M. & Dhawan, S.M.; 2017).

Bibliometric analysis of digital literacy research output in J-gate analyzed the pattern of growth of the research output published in the pattern of authorship, author productivity and subjects covered in the papers over the period 2009-2018. It found that 1601 papers were published during the period of study 2009-2018. The Doubling Time has shown an increasing trend and RGR has been decreased from 0.23 to 0.20. (Praveena, 2019)

### Objectives of the study

The main objective of the present study is to analyze the research performance of artificial intelligence research from 1999 to 2019, based on the publications output as indexed in Web of Science database. In particular, the study focuses on the following objectives:

- To study the research output of artificial intelligence, its growth, and citation impact.
- To examine the distribution of document wise and language wise distribution of literature in artificial intelligence.
- To identify the distribution of subject areas, Publisher and Funding Agencies for research in artificial intelligence.
- To study the share of international collaborative publication in Artificial Intelligence.
- To Calculate the Collaborative Coefficient and Degree of Collaboration of Authorship Pattern in Artificial Intelligence.

### Methodology

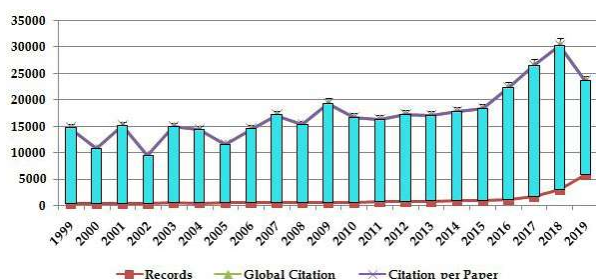
The data set has been retrieved from the science citation index database Web of Science Core Collection to analyze the research output of the Artificial Intelligence. The authors formulated searched strategy by using a search query as ALL=

("Artificial Intelligence") with a period of 1999 to 2019. A scientometric statistical analysis method was applied to the resultant data. They are discussed in this study: types of documents published, year-wise distribution of publications, language, funding Agencies, subject-wise, Publisher, institution and Country. The Histcite and Bibexcel tools were used in this study for data analysis.

## Result and Discussion

**Table 1:** Year-wise distribution of Research Publication.

S.No	Years	Publication	Global Citation	Citation per Paper
1	1999	385	14254	37.02
2	2000	370	10391	28.08
3	2001	412	14658	35.57
4	2002	389	9087	23.35
5	2003	465	14451	31.07
6	2004	463	13855	29.92
7	2005	490	11045	22.54
8	2006	564	13912	24.66
9	2007	493	16620	33.71
10	2008	526	14806	28.15
11	2009	599	18720	31.25
12	2010	596	16068	26.96
13	2011	669	15609	23.33
14	2012	751	16447	21.90
15	2013	830	16217	19.54
16	2014	941	16844	17.90
17	2015	989	17301	17.49
18	2016	1155	21126	18.29
19	2017	1676	24818	14.81
20	2018	3027	27285	9.01
21	2019	5853	17733	3.03
Total		21643	341247	15.77



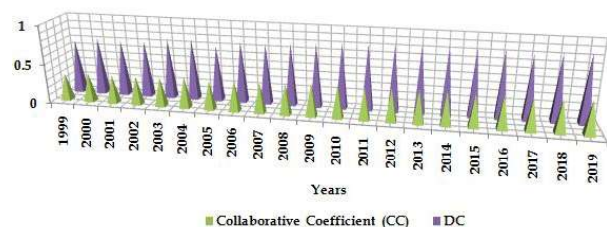
**Fig. 1:** Year-wise distribution of publications and citations.

Table-1 shows the year-wise distribution and total citations in Artificial Intelligence research during the period of 21 years i.e. (1999-2019) in which a total of 21643 publications are retrieved, Indian Journal of Library and Information Science / Volume 15 Number 2 / May-August 2021

a maximum 5853 research papers were published in the year 2019, followed by 3027 publications in the year 2018 and a total 341247 citations was found in publications in which a highest 27285 citations were found in 3027 records in 2018. The research contribution is in increasing trend during the study period. The overall data of the year-wise distribution of publications, citations and citation per paper are shown in table- 1 and figure- 1. The annual growth rate is a useful method to evaluate the yearly trends in research productivity (Kumar & Kaliyaperumal, 2015).

**Table 2:** Collaborative Coefficient and Degree of Collaboration of Authorship Pattern.

Year	Single Author	Multiple Authors	Total	Collaborative Coefficient (CC)	DC
1999	119	266	385	0.34	0.69
2000	101	269	370	0.36	0.73
2001	120	292	412	0.35	0.71
2002	109	280	389	0.36	0.72
2003	121	344	465	0.37	0.76
2004	100	363	463	0.39	0.78
2005	140	350	490	0.36	0.71
2006	124	440	564	0.39	0.78
2007	113	380	493	0.38	0.77
2008	110	416	526	0.39	0.79
2009	113	486	599	0.41	0.81
2010	104	492	596	0.41	0.83
2011	116	553	669	0.41	0.83
2012	110	641	751	0.42	0.85
2013	101	729	830	0.43	0.88
2014	125	816	941	0.43	0.87
2015	147	842	989	0.42	0.85
2016	156	999	1155	0.43	0.86
2017	310	1366	1676	0.41	0.82
2018	451	2576	3027	0.42	0.85
2019	768	5085	5853	0.43	0.87
3658		17985	21643	0.42	0.83



**Fig. 2:** Collaborative Coefficient and Degree of Collaboration of Authorship Pattern.

Table 2 illustrates the degree of author's

collaboration in Artificial Intelligence research in India from (1999-2019). The highest 17985 of publications were published by multiple authors while the rest 3658 of publications were contributed by a single author. The average degree of collaboration was (0.83) recorded during the period of study. It is also observed that the degree of author's collaboration has been shown in the fluctuating trend. The overall data of the author's collaboration was shown in below table 2. The degree of author collaboration was clearly shown its dominance on multiple author contributions. (K. Subramanyam, 1983) is given the DC formula to determine the degree of author collaboration in quantitative terms. The following formula used to analyse the degree of authors collaborations.

$$DC = Nm/Nm + Ns$$

It is also observed that the average collaboration coefficient was (0.42) recorded while the maximum (0.43) were records in the year 2013,2014,2016,2019.

(Ajiferuke, Burrell and Tague, 1988) suggested collaborative coefficient and it is used by (Karki and Garg, 1997).

The collaboration coefficient (CC) counted by the following formula:

$$CC = 1 - \sum_{j=1}^A (1/j) f_j / N$$

Where, j = the number authors in an article i.e. 1, 2, 3, more than 3.

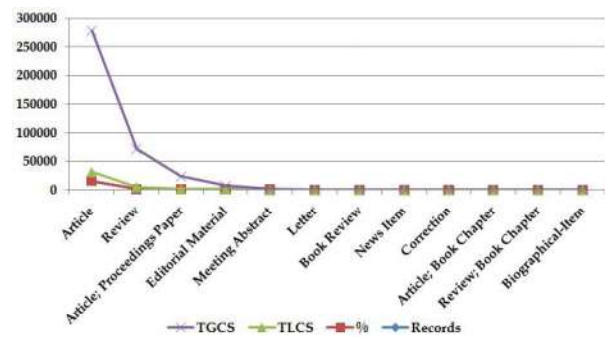
f<sub>j</sub> = the number of j authored articles

N = the total number of articles published, and

A = the total number of authors per articles.

**Table 3:** Document types distributions of publications.

S. No	Document wise	Records	%	TLCS	TGCS
1	Article	16227	75.0	15517	247122
2	Review	1795	8.2	3412	66134
3	Article; Proceedings Paper	1378	6.4	835	21495
4	Editorial Material	1182	5.5	840	5289
5	Meeting Abstract	682	3.1	21	92
6	Letter	123	0.6	47	379
7	Book Review	101	0.5	5	64
8	News Item	68	0.3	30	104
9	Correction	37	0.2	4	38
10	Article; Book Chapter	29	0.1	28	400
11	Review; Book Chapter	11	0.1	2	120
12	Biographical-Item	10	0.0	2	10
	Total	21643	100	20743	341247



**Fig. 3:** Document types- distribution of publications.

## Document types

Table-3 and figure-3 reveals the document wise distribution of Artificial Intelligence research during (1999-2019). The maximum 16227 (75%) of records were published in form of Articles, followed by 1795 (8.25%) of review, 1378 (6.4%) of Proceedings Paper, 1182 (5.5%) of Editorial Material, 682 (3.1%) of Meeting Abstract and below 1% records were found on Letter, Book Review, News Item, Correction, Article; Book Chapter, Review; Book Chapter and Biographical-Item.

**Table 4:** Language wise Distributions of publications.

S. No	Language wise	Records	%	TLCS	TGCS
1	English	21139	97.8	20669	340381
2	German	127	0.6	9	116
3	Spanish	120	0.6	6	236
4	French	60	0.3	7	46
5	Portuguese	52	0.2	37	233
6	Polish	24	0.1	3	36
7	Russian	23	0.1	0	16
8	Chinese	18	0.1	4	59
9	Croatian	14	0.1	3	18
10	Hungarian	12	0.1	1	2
11	Turkish	10	0.0	1	35
12	Czech	9	0.0	1	29
13	Japanese	8	0.0	0	2
14	Italian	4	0.0	0	3
15	Slovak	4	0.0	0	2
16	Slovene	4	0.0	2	19
17	Dutch	3	0.0	0	0
18	Korean	3	0.0	0	3
19	Icelandic	5	0.0	0	10
20	Finnish	1	0.0	0	0
21	Lithuanian	1	0.0	0	0
22	Swedish	1	0.0	0	1
23	Ukrainian	1	0.0	0	0
		21643	100	20743	341247

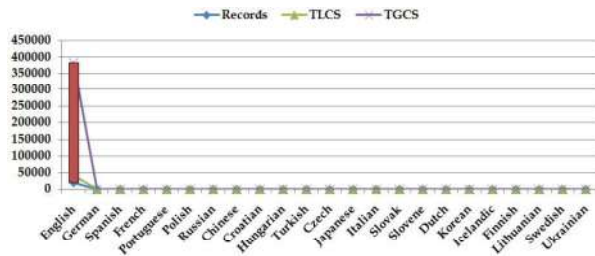


Fig. 4: Language wise Distributions of publications.

## Language

Table-4 and Figure-4 reveals the fact that the literature on Artificial Intelligences from 1999 to 2017 are published in 23 languages A total 21643 documents were published. The highest contribution was made in English language 21139 (97.8%) and below (1%) languages were followed by German, Spanish, French, Portuguese, Polish, Russian, Chinese, Croatian, Hungarian, Turkish, Czech, Japanese, Italian, Slovak, Slovene, Dutch, Korean, Icelandic, Finnish, Lithuanian, Swedish and Ukrainian.

Table 5: Authors H-index.

S. No.	Authors	h-index	Citation sum within h-core	Citations	Articles
1	Raja MAZ	23	914	1171	40
2	Kisi O	22	1529	1756	48
3	Chau KW	20	1609	1727	39
4	Bui DT	20	916	1098	37
5	Shahabi H	20	916	970	24
6	Pham BT	18	697	805	28
7	Shirzadi A	18	820	871	23
8	Zhang J	17	617	768	65
9	El-Shafie A	17	828	929	31
10	Cheng MY	17	559	691	39
11	Chen W	16	762	822	27
12	Wang Y	15	740	893	48
13	Shamshirband S	15	670	758	29
14	Li X	14	563	666	41
15	Wang ZL	14	925	993	26

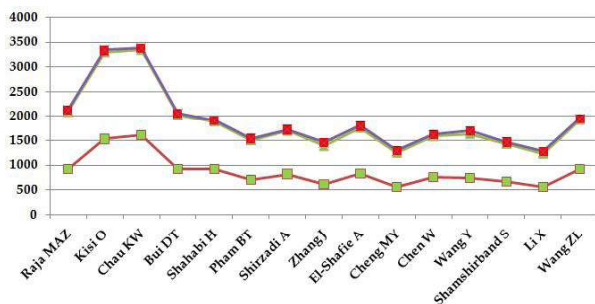


Fig. 5: Authors H-index.

## Productive Authors, h-index, and total Citations

Table - 5 and Figure - 5 depicts the top Fifteen most productive authors, h-index and total citation. The maximum 40 of research papers; 23 h-index; 1171 citations were contributed by Raja MAZ, followed by Kisi O with 48 publications; 22 h-index; 1756 citations, and Chau KW contributed 39 research papers; 20 h-index; and 1727 citations while Bui DT with 37 contributions; 20 h-index; and 1098 citations. Shahabi H contributed 24 research papers; 20 h-index; and 970 citations and other authors contribution were below 20 h-index and below 900 citations.

Table 6: Subject-wise contribution of Artificial intelligence research.

Subject wise	Records
Computer Science	7834
Engineering	6376
Science & Technology	1202
Chemistry	929
Operations Research & Management Science	882
Materials Science	873
Telecommunications	872
Energy & Fuels	732
Environmental Sciences & Ecology	726
Physics	722
Automation & Control Systems	721
Mathematics	705
Business & Economics	655
Neurosciences & Neurology	566
Radiology, Nuclear Medicine & Medical Imaging	504

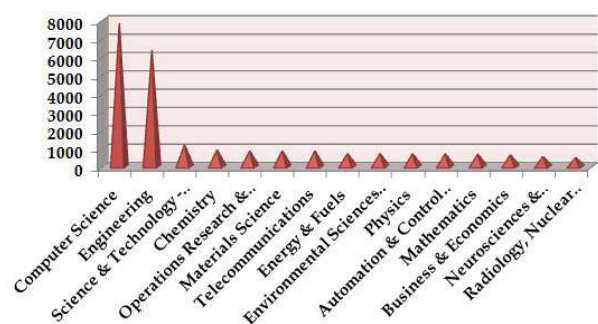


Fig. 6: Subject wise contribution of artificial intelligence research.

## Subject wise

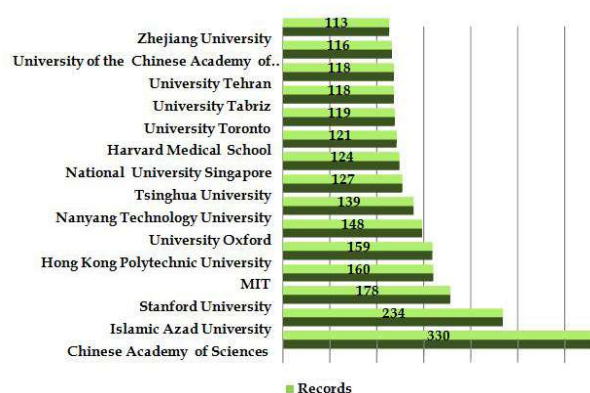
Table- 6 illustrates the subject-wise distribution of publications in Artificial Intelligence research from (1999-2019). The maximum 7834 of publications



is from computer science subject area, followed by Engineering with 6376 publications while in Science & Technology - Other Topics subject a total of 1202 publications and below 1000 records were on other subjects. The overall data of the subject-wise distribution of publications are shown in table -6.

**Table 7:** Institution wise contribution of Artificial intelligence research.

Institution	Records	TLCS	TGCS
Chinese Academy of Sciences	330	299	6183
Islamic Azad University	234	332	3651
Stanford University	178	645	7111
MIT	160	306	5197
Hong Kong Polytechnic University	159	267	4266
University Oxford	148	295	2472
Nanyang Technology University	139	145	2868
Tsinghua University	127	98	2310
National University Singapore	124	133	2122
Harvard Medical School	121	307	1766
University Toronto	119	132	5251
University Tabriz	118	576	2643
University Tehran	118	166	2320
University of the Chinese Academy of Sciences	116	55	1678
Zhejiang University	113	79	950



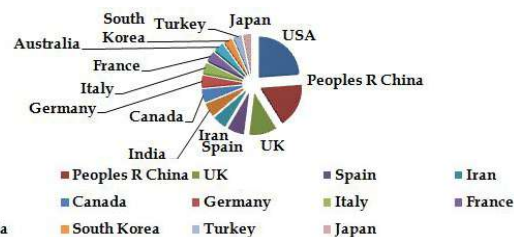
**Fig. 7:** Institution wise contribution of Artificial intelligence research.

The contributors from Artificial Intelligence research field with many institutions/universities of India as well other foreign countries. The list of top 15 institutions collaborating with in the period of 1999-2019 is shown on the Table- 7 and in Figure- 7 It is clear from the table that Chinese Academy of Sciences (330 papers), Islamic Azad University (234 papers), Stanford University (178

papers), MIT (160 papers), Hong Kong Polytechnic University (159 papers) and other institutions were below contribution of 150 papers.

**Table 8:** Country contribution of Artificial intelligence.

Country	Records	TLCS	TGCS
USA	4748	5959	98831
Peoples R China	3456	2324	42202
UK	2143	2730	45365
Spain	1301	900	16156
Iran	1038	1693	15418
India	1009	971	13529
Canada	947	956	17888
Germany	879	640	10124
Italy	837	621	14346
France	814	591	12520
Australia	804	749	11835
South Korea	660	489	7513
Turkey	654	2160	19397
Japan	629	526	7167

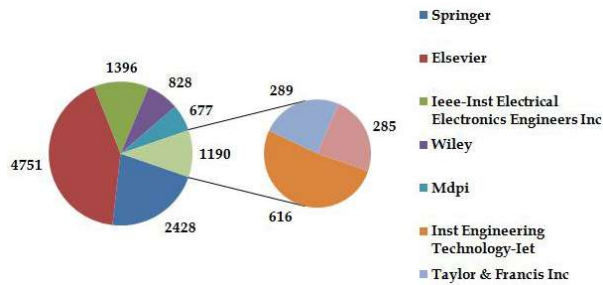


**Fig. 8:** Country wise contribution of Artificial intelligence research.

Top 15 Most Productive Countries in Artificial Intelligence Research. Artificial intelligence research is spread 138 countries as seen from publications data during 1999-2019. USA accounted for the largest global publication 4748, followed by China (3456), India and U.K. (2143), Spain (1301), Iran(1038) and India (1009) during 1999-2019 as shown in Table 8 and Figure 8.

**Table 9:** Publisher contribution of Artificial intelligence research.

Publisher	Records
Springer	2428
Elsevier	4751
Ieee-Inst Electrical Electronics Engineers Inc	1396
Wiley	828
Mdpi	677
Inst Engineering Technology-Iet	616
Taylor & Francis Inc	289
Sage Publications Ltd	285



**Graph 9:** Publisher distribution of Artificial intelligence research.

Table-9 and Figure-9 illustrates the Publisher contribution of publications in Artificial Intelligence research during the study period 1999 to 2019. The maximum 2428 of publications came in the Springer publisher, followed by Elsevier with 4751 publications while in Ieee-Inst Electrical Electronics Engineers Inc publisher a total of 1396 publications, Wiley 828 publications, Mdpi 677 publications, Inst Engineering Technology-Iet 616 publications, Taylor & Francis Inc 289 publications and Sage Publications Ltd 285 Publications.

**Table 10:** Funding Agencies sponsoring research on Artificial intelligence.

Funding Agencies	Records
National Council for Scientific and Technological Development	43
CAPES	41
Fundamental Research Funds for the Central Universities	28
Natural Sciences and Engineering Research Council of Canada	27
Consejo Nacional de Ciencia y Tecnologia	26
European Union (EU)	23
European Commission Joint Research Centre	19
Natural Sciences and Engineering Research Council of Canada	17
National Science Foundation (NSF)	16
National Institutes of Health United States Department of Health & Human Services National Institutes of Health (NIH) - USA	15
European Social Fund	15
China Scholarship Council	13
FAPEMIG Minas Gerais State Research Foundation	13
National Program for Support of Top-Notch Young Professionals	12

## Funding Agencies

Table-10 reveals the Funding Agencies that Indian Journal of Library and Information Science / Volume 15 Number 2 / May-August 2021

supports the research on Artificial Intelligence during (1999-2019). The National Council for Scientific and Technological Development Funding Agencies have sponsored the maximum ie for 43 researches, followed by 41 by CAPES, 28 of Fundamental Research Funds for the Central Universities, 27 of Natural Sciences and Engineering Research Council of Canada, 26 of Consejo Nacional de Ciencia y Tecnologia and the other Funding Agencies have supported less than 25 researches.

## Conclusion

The purpose of this study is to conduct a scientometric analysis of artificial intelligence research in order to understand the growth of literature in the discipline, the pattern of publications, and the impact of research. Using publications data from Web of Science database, this study provides a quantitative and qualitative description of artificial intelligence research covering a period of 21 years. India stands sixth highest in the world ranking in artificial intelligence research. If India is to become competitive with the world leaders in artificial intelligence research, academic and research organizations in the country will have to give still better performance in future. Hence, it is important that stakeholders pay special attention to academic and research organizations in the country encouraging them to undertake more and more new research projects, programmes in collaboration with international hubs in artificial intelligence research.

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## Electronic Resources in Library of ICAR-Indian Institute of Soil Science (ICAR-IISS), Bhopal, Madhya Pradesh: A User's Survey

Mahendra Kumar

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### Abstract

An effort has made to know the "level of services obtained by users from library for operating electronic resources level of satisfaction of users pertaining to the use of e-resources, attitude of readers to library staff, user's opinion regarding features of e-resources as a source for their academic work in ICAR-Indian Institute of Soil Science (ICAR-IISS), Bhopal (M.P.)". The questionnaires (100) were circulated to random sample of users. The results of the survey are tabulated, graphically presented and discussed in this study.

**Keywords:** Electronic Resources; E-Books; E-Journals; E-databases; and OPAC.

### Introduction

Electronic resources play a vital role in information collection, storage and dissemination. All the electronic resources like CD, E-books, E-Journals, E-databases, Internet, and OPAC etc are slowly replacing the importance and usages of print media.

This study belongs to ICAR-Indian Institute of Soil Science (ICAR-IISS), Bhopal (M.P.). It is a pioneer research institute in soil science research in India. It's established on 16<sup>th</sup> April 1988 at Bhopal with a mandate of "Enhancing Soil Productivity with minimum Environmental Degradation". To accomplish the mandate of the institute, it has given the priority to soil health related issues faced by farmers and other stakeholders. ICAR-IISS has emerged as a leader in basic and strategic research on soils in the country. It has achieved significant success in the areas of integrated nutrient management, impact on soil under long term cropping, technology for preparation of enriched composts; soil test based nutrient prescriptions for municipal solid waste composts etc. It has own rich named Library, Information and Documentation

Services. It has updated own databases for library services.

### Scope and Limitations

Its main plan to know level of services obtained by users from library for operating electronic resources, level of satisfaction of users pertaining to the use of e-resources, attitude of readers to library staff, user's opinion regarding features of e-resources as a source for their academic work by agricultural scientists, research scholars and students.

### Objective

- To know the level of services obtained by users from library for operating Electronic resources.
- To study the level of satisfaction of users pertaining to the use of e-resources.
- To know the attitude of readers to library staff.
- To study the user's opinion regarding features of e-resources as a sources for their academic work.

## Methodology

A questionnaire is prepared for data collection from the agricultural scientists, research scholars, and students of ICAR-IISS, Bhopal (M.P.). 100 users were responded.

Then the data were analyzed and interpreted for the outcome and presented in the following paragraphs.

## Data Analysis and Interpretation

**Table 1:** Type of training obtained by users from library for operating electronic resources.

S.No.	Services by Library staff (response)	No. of responses	Percentage (%)
1	Good	52	52.00
2	Very Good	28	28.00
3	Excellent	14	14.00
	Poor	6	6.00
	<b>Total</b>	<b>100</b>	<b>100.00</b>

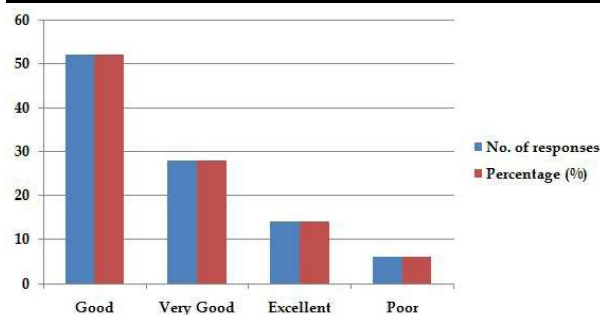
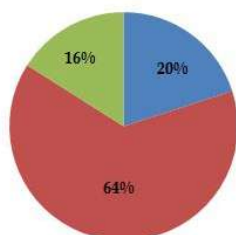


Table 1 shows that 52.00% users responses is good for training obtained by users from library for operating electronic resources, 28.00% very good, 14.00% excellent, 6.00% poor.

**Table 2:** Satisfaction of users pertaining to the use of e-resources.

S.No.	Satisfaction Level	No. of responses	Percentage (%)
1.	Fully satisfied	20	20.00
2.	Partially satisfied	64	64.00
3.	Not satisfied	16	16.00
	<b>Total</b>	<b>100</b>	<b>100.00</b>

■ Fully satisfied ■ Partially satisfied

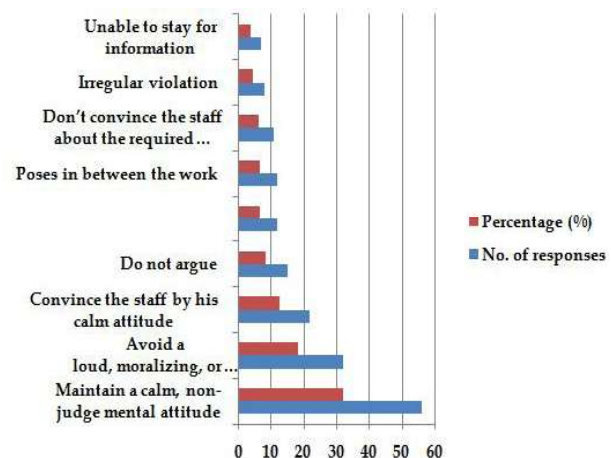


**Graph 1:** Satisfaction Level.

It is evident from table 2 that 64.00% partially satisfied, 20.00% fully satisfied, 16.00% not satisfied.

**Table 3:** Attitude of Readers to Library Staff.

S. No.	Readers Attitude	No. of responses	Percentage (%)
1	Maintain a calm, non-judge mental attitude	56	32.00
2	Avoid a loud, moralizing, or condescending of voice or phrases	32	18.28
3	Convince the staff by his calm attitude	22	12.57
4	Do not argue	15	8.57
5	Listen carefully and access the situation before reaching	12	6.85
6	Poses in between the work	12	6.85
7	Don't convince the staff about the required subject properly	11	6.28
8	Irregular violation	8	4.57
9	Unable to stay for information	7	4.00
	<b>Total</b>	<b>175</b>	<b>100.00</b>



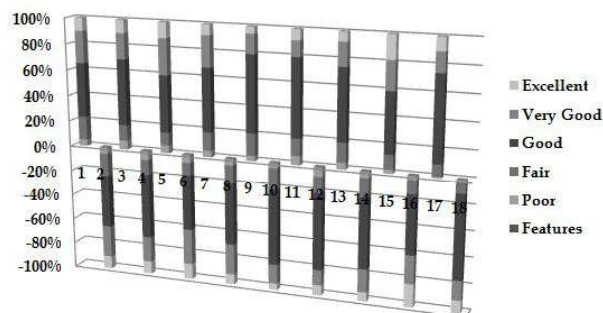
**Graph 2:**

\*Responses are 175 because multiple-choice questionnaire used.

Table 3 shows that a attitude of readers to library staff, 32.00% maintain a calm, non-judge mental attitude, 18.28% avoid a loud, moralizing, or condescending of voice or phrases, 12.57% convince the staff by his calm attitude, 6.85% poses in between the work.

**Table 4:** User's opinion regarding features of e-resources as a source for their academic work.

S. No.	Readers Attitude	No. of responses	Percentage (%)
1	Maintain a calm, non-judge mental attitude	56	32.00
2	Avoid a loud, moralizing, or condescending of voice or phrases	32	18.28
3	Convince the staff by his calm attitude	22	12.57
4	Do not argue	15	8.57
5	Listen carefully and access the situation before reaching	12	6.85
6	Poses in between the work	12	6.85
7	Don't convince the staff about the required subject properly	11	6.28
8	Irregular violation	8	4.57
9	Unable to stay for information	7	4.00
<b>Total</b>		<b>175</b>	<b>100.00</b>



**Graph 3:** User's opinion

Table 4 shows that user's opinion regarding features of e-resources as a source for their academic work % wise.

### Findings

1. Majority (52.00%) is good for training obtained by users from library for operating electronic resources, 28.00% very good, 14.00% excellent, and 6.00% poor.
2. About 64.00% partially satisfied, 20.00% fully satisfied, and 16.00% not satisfied.
3. Majority (32.00%) is maintain a calm, non-judge mental attitude of readers to library staff, 18.28% avoid a loud, moralizing, or condescending of voice or phrases, 12.57% convince the staff by his calm attitude, 6.85% poses in between the work etc.

4. It is shown that user's opinion regarding features of e-resources as a source for their academic work.

### Suggestions

E-resources has virtually unlimited potential for variety of useful application in libraries. It has become an integral part of all library information resources, operations and services. Libraries use e-resources to increase the efficiency, productivity and effectiveness of their operations and services. So libraries should organized library orientation programmes, improved awareness level of users, increased computer terminals & Internet ease of use, increased financial plan for electronic resources in library and try search users desires.

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## Importance of Reading Habits

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**Abstract**

Reading plays a key task in a man's life. Reading opens the doors of information riches. It's an effective way to introduce the baby to the surrounding world. It is the very foundation on which to build the child's edifice. Reading is one of our language's most important components and is a vital tool for lifelong reading for all students. To face the twenty-first century, reading must prepare these learners to respond to profound social and technological changes. Under these circumstances, education depends to a large extent on language competence. In this context, reading in general is a tool for continuing education, acquiring new knowledge and skills, gaining information through media, especially newspapers, books, radio, television, and computers.

**Keywords:** Reading habits; Importance of Reading Habits; Parts of Reading Habits; ICT etc.

### Introduction

Reading is typically an activity that is individual. It is one of the ways data can be obtained. "Reading is the bulwark of a man against solitude, his portal of freedom, his eternal delight. This puts in here yesterday and tomorrow. Reading offers insight through which individuals can broaden their knowledge horizons, recognize, expand and deepen their curiosity, and develop a deeper understanding of themselves, other human beings, and the environment. In a highly educated culture, Reading has come to hold the most important place in education as a means of communication. Book is still a major part of the lives of people in our modern society, and given the advent of the new audio-visual devices, the book is still the most important means of communication ever invented in its normal traditional form. Consequently, achieving quality basic education includes cultivating good reading habits for both youth and adult learners. Reading is a gateway to a wealth of experience that connects people far beyond time or distance. To students in general, reading is important in order to cope with new knowledge in a changing world—the

technological age. The ability to read is at the core of lifelong reading and self-education. Reading is a very important issue that is not just about fun, but a necessity; the essential reading resource. Reading is a way to understand one's own experiences better, and it can be an exciting journey of self-discovery. It is the art of reading printed and written words, the most powerful method of conscious reading that affects the degree and reliability of data, as well as readers' attitudes, values, convictions, decisions and behavior.<sup>1</sup>

### Reading Habits

Reading activity is considered a habit when repeatedly performed. Reading habits are often viewed in quantitative terms in terms of the quantity of materials being read, the rate of reading as well as the average time spent reading, and this habit can be developed. Reading, which is a long-term habit beginning with the very early ages, is the prominent gateway to the information space. It can be interpreted as a method that helps individuals acquire imagination and improve their capacity

for critical thinking. In this context, reading habit is an important tool for individuals' personality development and mental capacity development. Reading is an access to social, economic and civic life in addition to personal and mental developments. In addition, all reading habits in terms of emotional response increase individuals' emotional satisfaction. Reading interests also apply to the selection of topics or desires for reading a genre of literature. Therefore, it is often assimilated that a person has formed a reading habit and interest when such practice is willingly carried out for leisure time. Assumed that it was possible at an early age to cultivate this habit and value. There would, of course, be disparities of interest between individuals of different age, sex and highly affected by internal parts such as home, motivation, and behavior, as well as external parts such as peers, universities, educators, and individuals' library facilities.<sup>2</sup>

Reading habit refers to the behavior expressing the likeness of reading of different types of reading and reading tastes. It's a pattern that organizes an individual's reading. Over the past decade, scholars have focused their efforts on studying the students' reading habits. Such researchers have discovered through their efforts that reading patterns are related to the race, age, educational background, academic performance, and professional growth of students. Attempts have been made for reader groups. The "dormant readers" were those who enjoyed reading and considered themselves readers but did not take the time to read or refresh their information on a regular basis. We were not negative in reading, but prioritized other things such as sports, social life, and work at school. During convenient times such as during school breaks or after major projects were finished, they could read. The uncommitted and unmotivated readers were the second and third classes. Those in both groups have a negative attitude towards reading and have not liked reading. The unengaged readers have been open to suggestions for future reading and have positive attitudes towards other readers. The unmotivated readers have not been open to suggestions for future reading and have been dismissive for those who do read. In a more recent study,<sup>4</sup> classified reading levels of 108 children aged 11 to 12 into four groups; heavy readers (reading 24 or more books a year or 2 books a month); medium readers (reading 7 to 23 books a year or 1 book a month); uncommon readers (reading 1 to 6 books a month (1 book every 2 months) and non-readers. The last two classes make up a large percentage of children aged 9-10, suggesting that the reading patterns were

not well established. An analysis of differences in reading habits from nation to nation reveals that the place of books in the scale of values of those responsible for their promotion is of paramount importance: every State, community and school authority, educator, parent and pedagogue must be seriously persuaded of the consequence of reading and books for human, social and cultural life if they are concerned. The very infrequent in ancient times before the invention of printing, and even after the Age of Humanism it was only accessible to an educated elite and economic development made continuous demands on the intellectual cooperation of a majority of people, has raised the question of how the "freedom to learn" for all can become a fact of science, has thrown new light on the sense of reading. The "right to read" also means the right to improve one's intellectual and spiritual skills, the right to learn and progress. Reading was once appreciated purely as a means of receiving an important message, but today reading research has defined the act of reading itself as a multi-level mental action that greatly contributes to the intellect's development. The process of translating graphic images into abstract constructs creates great demands on the brain; an infinite number of brain cells are stimulated during the reading processing process. Psychological studies have shown that enhancing the ability to read also leads to increasing the ability to learn as a whole, far beyond mere reception. Good reading is a critical confrontation with the author's material and ideas. At a higher level and with longer texts, it becomes more important to understand relationships, construction and structure, and interpret the meaning. If the new material is linked to existing concepts, critical reading is likely to evolve into innovative reading, a transformation that results in completely new outcomes. Systematic language and personality development.<sup>5</sup>

### Consequence of Reading Habits

Reading is one of the three things a child starts his education with. Yes, his academic life's success and failure depends largely on his ability to read. Reading can be considered a basic skill to be learned by any learner, and therefore every effort should be geared towards their early childhood development. Studies have shown that schools and teachers are not as powerful as parents and friends do on children. The people with whom children spend most of their time are those who control their life's thoughts and directions. It's always a good thing for a kid to be around people who promote reading and reading. There are many benefits to picking up

these reading habits, particularly when it comes to issues related to the cognitive development of the infant. A child may grow up with some difficulties without a reading habit, particularly if in a line of work involving reading at any stage.<sup>14</sup> Found that boys, while reading for pleasure, strengthened their language skills involuntarily and unconsciously. [3] claimed that reading habits have strengthened the reading abilities of children. The problem of reading whether it is for education or leisure is also relevant because it helps to expand the perspectives and awareness of young people.<sup>8</sup>

For a healthy intellectual growth, a good reading habit is important and plays a very crucial task in enabling an individual to achieve functional performance. In addition, the desires of a person are significantly determined by the amount he will read and the frequency with which he will follow his reading operation. One gets confirmation or rejection of one's own ideas by reading books, which makes one think about right and wrong in society more critically. Reading gives people a sense of values that allows them to progressively develop the greatest of all virtues, that is, the ability to understand rather than condemn. Books can also be very soothing, particularly when you have questions about yourself and your beliefs. Pleasure reading fosters the growth of reading as a life-long practice that strengthens both language skills and fluency while reading for pleasure.<sup>6</sup> Stated that reading frequency inside and outside the school has a major impact on the development of pace and fluency in reading, vocabulary, overall verbal ability and academic achievement.

### **Affected Parts of Reading Habits**

Children's reading habits have been of great interest to teachers, families, publishers of librarians and other stakeholders for a long time. Knowing children's reading habits and interests will help educators take the necessary steps to improve children's reading. It is widely recognized that at the early stage it is best to inculcate and nurture the lifelong habit of reading. Nevertheless, it is a general observation that more emphasis is placed on study reading than on recreational or voluntary reading among children.<sup>7</sup> Noted that while students in Singapore will not hesitate to read materials related to education, it remains an uphill task to get them to become lifelong readers and read for pleasure. There are numerous parts that inspire children to read. An international survey showed that almost half of the UK students involved in the study said they were reading for relaxation while

most children from twelve developing countries reported that they were reading for passing exams. A survey of teenagers in Britain between the ages of 11 and 18 found peer pressure to be the most significant reason to read books. A study of 431 pre-kindergarten students through grade eight in the United States showed that 71% of students who regarded themselves to be strong readers had a positive attitude towards reading, while none of the students who considered they to be bad readers enjoyed reading. A 6<sup>th</sup>-form student study in Malaysia<sup>11</sup> found that the most important motivating factor was self-interest or personal interest, and this favorable attitude was well formulated among girls and those in the stream of the Arts. The National Library and Documentation Service Board (NLDB) conducted a survey in Sri Lanka in 2002 and found the following situations; students 'reading habits were poor, school libraries' condition was not encouraging as book collections were old, and most students read "light" materials such as magazines, novels, comic books and newspapers.<sup>9</sup> Researched reading issues in secondary schools in Sri Lanka and identified three major obstacles in encouraging reading habits. These include; preference for speaking and listening to the radio; insufficient reading materials to be accessed in school libraries and preference for watching television. Most of the reading was for review purposes specifically. A survey conducted in Britain of 8,000 children aged 10, 12, and 14 found that children had very varied reading. A similar survey of children, aged between nine and twelve years, conducted in Denmark, noted many variations in the reading preferences of children. It was found that the kids read a total of 1598 fiction and non-fiction books written by over 700 writers over a period of one month. Adventure stories were the most popular among the children in Singapore, followed by mystery stories. Primary school students in Australia liked reading action adventure as much as science fiction and fantasy while fantasy fiction was at the top in Britain, followed by books of satire, horror and scare. A study investigating the favorite past time activities of primary and middle school students in China reported that the most popular recreational activity was "watching TV," followed by reading books. A similar survey of primary 1 to secondary 5 students in Hong Kong found that the two most favored after school leisure activities are watching TV and playing computer games. Another research in Britain found that young people between the ages of 11 and 18 were more likely than reading books to watch television or use the internet. The literature review indicates that several parts,

especially technological changes, are likely to affected children's reading habits.

### **Task of ICT In Reading Habits**

The day students can swap their 30-pound book bags for lightweight portable reading devices don't seem far away in the future anymore. Several manufacturers are now selling devices that can be adapted for use in education and some of their print titles are cautiously translated into e-book formats by textbook publishers. Electronic books are expected to gain widespread use as an educational tool for several years, but this has not necessarily come to fruition. It seems that all the necessary elements are in place for the first time: affordable yet highly functional portable reading devices, an increasing number of book titles available, and a technologically literate population of students hungry for new media. Thus, the stage seems to be set for the most widely used tool in education history, the printed textbook. The classroom is an obvious target for introducing e-books because students typically embrace new technology to buy a high volume of costly, bulky and quickly discarded books. No studies have yet been carried out to determine the impact that would have on students' reading habits to substitute traditional textbooks with e-books. Similar to their predecessors, information and communication technologies (ICTs) give readers different opportunities. ICTs have made it possible for libraries to become digital libraries. Digital library is simply a collection of electronically stored information. For example, African Digital library's capacity has shown that people in the African region are able to access information on the Web. The emergence of the World Wide Web (WWW) is perhaps the greatest symbol of the shift through reading in scholarly communication.<sup>12</sup> The possibility of searching multiple resources at a time is provided by digital tools-a task achieved more quickly than when using written equivalents. It is possible to print online tools and save searches so that they can be replicated at a later date. More often than not, digital services are upgraded than written devices. One major advantage-particularly for distance learners or those with limited time to access the library-is access from outside the library through dial-up facilities. Therefore, it is easy to use online services because readers may access information from the library; from internet cafes; from their offices; and - at times-from the comfort of their own homes at any time of day. The evolving position of ICT's, and in particular the use of e-resources, imparts the structure of people's reading habits

and dramatically changes it. The world is going the electronic route which affects how people use library services and/or read them. For example, the digital book definition (more widely known as e-book) is changing readers' habits. In general, the Internet plays a crucial task in accessing the tools of information. Information sources and other Internet opportunities are growing exponentially. In an effort to search for knowledge, the steady increase in Internet use for education and research and the development of search tools have affected the reading habits. The library is made up of various electronic resources in terms of digital format, such as electronic books, electronic journals and electronic reports. These e-resources are available in CD-ROM format, online, and those publications that were originally published in print or other formats that were converted into digital formats to be accessed on the Web. Many web browsers include Internet explorer, MSN, Netscape, and a range of search engines including Yahoo, Google, Hot Bot, MSN, Alta Vista. In addition, e-resources may include the entire collection of manuscripts, over-used printed document, large archival value printed material, photographic collections, oral history recordings, and other scattered but useful audio-visual collections that are converted for preservation purposes into digital format. Whelan in 2004 explains the findings of an Ohio study conducted by over 13,000 grade 3 to 2 students who claimed that their school libraries enabled them to become better learners by supplying them with tools for their research assignments and enabling them to do better homework. In general, the students appreciate the task of their library in IT guidance, providing data literacy skills, searching the Internet, reviewing websites, using power points, verbs, excel, and other apps.<sup>13</sup>

### **Conclusion**

Reading contributes to understanding the literature and promotes excellence in one's world experience. Most of the studies conducted worldwide and in the Indian context often emphasize that rapid urbanization and technological developments affected the reading habits of individuals in developing countries. Recent research suggests independent reading habits, or students who choose to read on their own time are strong indicators of success in school and reading. Scholars also find that in middle school years, recreational reading decreases significantly. Increasing numbers of studies concentrate on crucial issues related to middle school years student motivation and reading habits.<sup>10</sup> Such research



showed that students who obtained high scores in reading evaluations, among other measures of literacy reading, tended to have strong intrinsic enthusiasm for reading, and also chose to read outside of school on a regular basis. In his study of independent reading literature, [10] writes: "The correlation between the recorded free voluntary reading and the growth of literacy is not broad in all studies, but remarkably consistent." Nearly every study that has examined this relationship has found a positive correlation, and it is present even when different tests, different reading habits methods, and different free reading definitions are used. Considering the complex relationships between independent reading habits, reading literacy, and school achievement, more research is needed throughout adolescence on independent reading activities and reading motivation.

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## Preservation of Rare Books, Manuscripts and Other Library Collections

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### Abstract

Preservation must be a major concern of the entire library and special collections populations, with special collections management addressing it to the best of their abilities within their institutional context, in a world where theft of special collections materials is a daily possibility. The "Guidelines for the Protection of Rare Books, Manuscripts, and Other Special Collections," published here by the ACRL/Rare Books and Manuscripts Section (RBMS) Preservation Committee is the primary ACRL document dealing with the preservation of library materials. These guidelines outline key issues that all collection administrators should consider when establishing adequate collection protection. While the subjects are geared toward rare books, special collections, and manuscripts, they can also be applied to common collections. The RBMS Security Committee strongly recommends that these recommendations be followed, including the labeling of items with unique identifiers and the appointment of a Library Security Officer (LSO).

**Keywords:** Preservation manager of library; Protection plan; Collections storage; Library workers; Common stock; Duties; etc.

### Introduction:

These guidelines outline key issues that collection administrators should consider when establishing adequate collection protection. While the topics are geared toward special collections, they can also be applied to common collections. Rare book, manuscript, and special collections administrators must keep their collections safe and protected from theft and harm. Since administrators' attempts to improve the use and knowledge of collections under their care will result in a greater public awareness of their importance, increasing the risk of theft, collection protection is now more critical than ever. Preservation arrangements differ from one agency to the next, and are based on manpower, physical location, and use. Thieves may sell stolen materials for sale to rare book and manuscript dealers, so they must be concerned about stock

protection. Librarians should make every effort to familiarize such dealers with the methods used by organizations to protect and classify their products, and to assist them in using this information to reduce the likelihood of someone profiting from theft. The hiring of a library security manager and the creation of a preservation plan will help ensure that employees are mindful of their valid and ritual obligations when it comes to implementing preservation measures.<sup>1</sup>

### Preservation Manager of Library

A library security officer should be appointed by each institution that is concerned about the preservation of rare books, manuscripts, or other special collections materials (LSO). The LSO should be appointed by the library director, have primary authority and responsibility for implementing the

preservation Programme, and be well-versed in all repository preservation requirements, especially those pertaining to special stocks. The LSO should not be mistaken for the library's general security manager, while he or she should serve in that capacity. The identity of the LSO should be widely known, especially among the repository's other administrative officers. The LSO's primary duty should be to prepare and implement a protection Programme, which should include a study of the institution's stocks, assessments of the physical layout, and staff training. He or she should obtain the guidance and assistance of qualified staff, such as institutional managers, general counsel, life protection managers, the LSO mail lists, and/or outside experts from law enforcement agencies and insurance firms.<sup>2</sup>

### **The Protection Plan**

The LSO should establish a written plan for collection protection. The LSO should consult with administrators and employees, valid authorities, and other competent individuals while designing the plan. A standard operating procedure for dealing with fraud or other preservation issues should be included in the plan. The document "Guidelines on Thefts in Libraries," published by the ACRL/RBMS Security Committee, outlines the steps to take in developing appropriate policies for dealing with thefts. The protection plan should be kept up to date with existing institutional and law enforcement contacts' names and phone numbers. The organization should also revisit the strategy on a regular basis to ensure that operational needs are still being met. Since common library security measures can affect the security of special collections materials, the LSO should collaborate with and be involved in their production and implementation. Any library emergency and disaster preparation should also include the LSO.<sup>3</sup>

### **Particular Collections Storage**

There should be as few access points as possible in the special collections building or field, with a single entry and exit point for both researchers and staff. Normal access should not be allowed by fire and emergency exits, which should be tightly managed and equipped with alarms. The public should only have access to public areas inside the building, not to work areas or stack rooms. Researchers should be greeted in a separate reception area, which should include a coatroom and lockers for their personal belongings and outerwear. The only environment in which material

can be used should be a safe reading room where researchers can be constantly monitored at all times by staff trained in surveillance. A security guard can inspect researchers' research materials both before and after they reach the secure area. Keys and their equivalents, such as keycards, are particularly vulnerable items; as a result, all keys should be checked out in a regulated manner. Staff should only be given access to protected areas when required, and master keys should be kept secure to prevent unauthorized access. Vault combinations should also have a restricted distribution which should be adjusted if a spot of access to the vault changes hands. Installing patented keyways in locks in the special collections field should be seriously considered.<sup>4</sup>

### **Library Workers**

The strongest protection against employee theft is a culture of confidence and concern for the collections. Nonetheless, constant and fair monitoring is needed. Workers, including students and volunteers, should be carefully selected, with all possible options included in the recruiting process. Personnel control is a constant requirement. Disgruntled employees who seek revenge by fraud, degradation, or deliberate mishandling of collections are a weak point in maintaining a security system. Employees who work in special collections should be considered for bonding. The LSO should make security training a top priority for its employees. Staff should be aware of their valid and ritual obligations in relation to protection, as well as their own and the researchers' valid rights when dealing with potential issues, through such training.<sup>5</sup>

### **Researchers**

The particular collections administrator must strike a careful balance between the need to make materials accessible to researchers and the need to keep the materials safe. By maintaining adequate, signed checkout logs, which should be kept indefinitely, staff should be able to distinguish who has used which materials. Each researcher who uses special collections materials should be required to register, including their name, address, signature, institutional affiliation (if applicable), and photo identification or some type of positive identification to prove their physical identity. These registry documents should be kept for the rest of your life. Researchers should be allowed to provide a rational justification for their use of the materials. Each researcher should be given an

introduction to the collections requested as well as the rules that govern their use. Researchers should not be allowed to bring any personal items into the reading rooms. This includes journals, briefcases, outerwear, books, and large amounts of paper. Before using a personal computer in the reading room, it must be removed from its case. Any objects not allowed in the reading room should be stored in lockers or some other safe location. Staff should keep a close eye on researchers at all times and not let them work unnoticed behind bookcases, book vans, piles of books, or any other obstructions that block their view.<sup>6</sup>

At any given time, researchers should only have access to the books, manuscripts, or other materials needed to complete the research project. Before giving an object to a researcher, staff should inspect it for condition, material, and completeness, as well as when returning it after use. This double-checking of returned materials is particularly important for archival and manuscript collections, which often contain several loose, one-of-a-kind items. Even if they intend to return later to continue their study, researchers should be allowed to return all library materials before leaving the reading room. Researchers should not be able to swap materials or have access to materials brought into the room for another researcher's use.<sup>6</sup>

## Stock

Special collection administrators must be able to positively identify the materials in their collections in order to determine loss and substantiate evidence of recovered stolen goods. Maintaining proper accession records, comprehensive cataloguing records and lists in finding aids, recording copy relevant information, and holding condition reports and records are all examples of this. Lists created to meet the needs of insurance policies should also be kept up to date. Additionally, the products themselves should be labeled. This can be done by labeling valuable objects according to the RBMS "Guidelines for Marking," adding other special markings, and maintaining photographic or microform copies of them.<sup>7</sup>

## Shift From Common Stock

Many institutions keep materials in open stack areas where anyone can access them. These open stacks areas can contain unidentified and unregulated rare materials. The materials in open stack areas are the most vulnerable to security breaches. Rather than attempting to penetrate special collections areas or outwit the security

measures introduced in supervised reading areas, many criminals check open stacks areas for materials deemed rare. The ACRL/RBMS "Guidelines on the Selection of General Collection Materials for Shift to Special Collections" can be used to help classify rare materials on open shelves that need to be protected.<sup>7</sup>

## Duties: Valid & Ritual:

The administrators of special collections and the LSO must be aware of the laws governing library theft in their state and must share this knowledge with their employees. Staff members must be mindful of their valid rights in preventing thefts while still respecting the rights of the person accused of stealing.

The administrator of special collections and the LSO are responsible for reporting rare material thefts to relevant law enforcement agencies and for seeking valid action. When materials are stolen, they must be identified as soon as possible to help avoid unintentional shifts of the objects and to enable their recovery. State, institutional, and state law enforcement agencies, as well as the Federal Bureau of Investigation, are appropriate agencies to report to.<sup>8</sup>

## Conclusion

More knowledge is accessible through technical literature, professional associations and consultants in the rare book, manuscript, and special collections sector, as well as in the law enforcement and insurance professions, so the recommendations given here are necessarily brief. The combined efforts of the entire team, with final responsibility vested in one senior staff member, in collaboration with law enforcement, would result in more secure collections where materials are stored and made available to those who wish to use them. In larger organizations, a Preservation Planning Group may be required to assist the LSO in identifying problem areas and recommending solutions. Institutions with insufficient personnel resources may want to hire a preservation consultant to help them develop a plan and identify any significant threats to the collection. When hiring a preservation contractor, the organization or LSO should proceed with caution when assessing the consultant's competence or capacity to complete the job. The organization should thoroughly examine the history and references of the preservation consultant. The LSO and special collections administrator should ensure that all staff are aware of these guidelines as well as their institution's

preservation policies and how they can relate to them. Background checks and team bonding should be considered where necessary and compatible with institutional policies. The LSO or special collections administrator should be familiar with the institution's personnel plan and should raise preservation issues with the human resources department. When establishing researcher policies, the LSO or special collections administrator may obtain valid advice from the institution's valid counsel or another competent valid authority to ensure proper valid redress if researchers breach the use agreement. All researchers should be required to read and sign an agreement to follow the institution's policies. This contract should be extended every year.

LSOs and/or special collections administrators should play an active role in raising awareness of the serious nature of materials theft among other institutional officials, such as institutional valid managers, public safety managers, the library director, and others, and urge the institution to actively seek the resolution of security threats and breaches, as well as the harshest punishment possible. A staff member may perform this role in organizations where it is not possible to employ an additional security guard. Installation of a video surveillance device should also be considered. Keys and locks to protected areas should be changed on a regular basis as a precautionary measure. The LSO and the special collections administrator should ensure that all security requirements are met in the design and planning when an institution decides to remodel or renovate space or construct a new facility in which special collections materials will be stored.

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2. Association for Library Collections & Technical Services. 2007. Definitions of Digital Preservation. [online] Available at: <http://www.ala.org/alcts/resources/preserv/defdigpres0408>. [Accessed 11 November 2016].
3. Bansode, S., (2008). Creation of digital library of manuscripts at Shivaji University, India. Library Hi Tech News, 25(1), pp.13-15.
4. Gaur, R.C. and Chakraborty, M., (2009). Preservation and access to Indian manuscripts: A knowledge base of Indian cultural heritage resources for academic libraries. In International Conference on Academic Libraries (ICAL. University of Delhi (North Campus), 5-8 October. Delhi: University of Delhi. pp.90-98.
5. Kumar, S. and Shah, L. (2004). Digital Preservation of Manuscripts: A Case Study. In 2nd Convention PLANNER - 2004. Manipur University, 4-5 November. Imphal: Manipur University. pp.27-36.
6. Mazumdar, N.R., (2009). Digital Preservation of Rare Manuscripts in Assam. In 7th International CALIBER-2009. Pondicherry University, Puducherry, 25-27 February. Ahmedabad: INFLIBNET Centre. pp.14-19.
7. Singh, A. (2012) „Digital preservation of cultural heritage resources and manuscripts: An Indian government initiative“, IFLA Journal, 38(4), pp. 289-296. doi: 10.1177/0340035212463139.
8. Singh, S N, (2006). Digitization Initiatives and University Libraries in India. In 4th Convention PLANNER -2006. Mizoram University, Aizawl, 09-10 November. Aizawl: Mizoram University., pp.202-209.

# Guidelines for Authors

Manuscripts must be prepared in accordance with "Uniform requirements for Manuscripts submitted to Biomedical Journal" developed by international committee of medical Journal Editors

## Types of Manuscripts and Limits

Original articles: Up to 3000 words excluding references and abstract and up to 10 references.

Review articles: Up to 2500 words excluding references and abstract and up to 10 references.

Case reports: Up to 1000 words excluding references and abstract and up to 10 references.

## Online Submission of the Manuscripts

Articles can also be submitted online from [http://rfppl.co.in/customer\\_index.php](http://rfppl.co.in/customer_index.php).

1) First Page File: Prepare the title page, covering letter, acknowledgement, etc. using a word processor program. All information which can reveal your identity should be here. use text/rtf/doc/PDF files. Do not zip the files.

2) Article file: The main text of the article, beginning from Abstract till References (including tables) should be in this file. Do not include any information (such as acknowledgement, your name in page headers, etc.) in this file. Use text/rtf/doc/PDF files. Do not zip the files. Limit the file size to 400 Kb. Do not incorporate images in the file. If file size is large, graphs can be submitted as images separately without incorporating them in the article file to reduce the size of the file.

3) Images: Submit good quality color images. Each image should be less than 100 Kb in size. Size of the image can be reduced by decreasing the actual height and width of the images (keep up to 400 pixels or 3 inches). All image formats (jpeg, tiff, gif, bmp, png, eps etc.) are acceptable; jpeg is most suitable.

Legends: Legends for the figures/images should be included at the end of the article file.

If the manuscript is submitted online, the contributors' form and copyright transfer form has to be submitted in original with the signatures of all the contributors within two weeks from submission. Hard copies of the images (3 sets), for articles submitted online, should be sent to the journal office at the time of submission of a revised manuscript. Editorial office: Red Flower Publication Pvt. Ltd., 48/41-42, DSIDC, Pocket-II, Mayur Vihar Phase-I, Delhi - 110 091, India, Phone: 91-11-22754205, 45796900, 22756995. E-mail: [author@rfppl.co.in](mailto:author@rfppl.co.in). Submission page: [http://rfppl.co.in/article\\_submission\\_system.php?mid=5](http://rfppl.co.in/article_submission_system.php?mid=5).

## Preparation of the Manuscript

The text of observational and experimental articles should be divided into sections with the headings: Introduction, Methods, Results, Discussion, References, Tables, Figures, Figure legends, and Acknowledgment. Do not make subheadings in these sections.

## Title Page

The title page should carry

- 1) Type of manuscript (e.g. Original article, Review article, Case Report)
- 2) The title of the article, should be concise and informative;
- 3) Running title or short title not more than 50 characters;
- 4) The name by which each contributor is known (Last name, First name and initials of middle name), with his or her highest academic degree(s) and institutional affiliation;
- 5) The name of the department(s) and institution(s) to which the work should be attributed;
- 6) The name, address, phone numbers, facsimile numbers and e-mail address of the contributor responsible for correspondence about the manuscript; should be mentioned.
- 7) The total number of pages, total number of photographs and word counts separately for abstract and for the text (excluding the references and abstract);
- 8) Source(s) of support in the form of grants, equipment, drugs, or all of these;
- 9) Acknowledgement, if any; and
- 10) If the manuscript was presented as part at a meeting, the organization, place, and exact date on which it was read.

## Abstract Page

The second page should carry the full title of the manuscript and an abstract (of no more than 150 words for case reports, brief reports and 250 words for original articles). The abstract should be structured and state the Context (Background), Aims, Settings and Design, Methods and Materials, Statistical analysis used, Results and Conclusions. Below the abstract should provide 3 to 10 keywords.

## Introduction

State the background of the study and purpose of the study and summarize the rationale for the study or observation.

## Methods

The methods section should include only information that was available at the time the plan or protocol for the study was written such as study approach, design, type of sample, sample size, sampling technique, setting of the study, description of data collection tools and methods; all information obtained during the conduct of the study belongs in the Results section.

Reports of randomized clinical trials should be based on the CONSORT Statement (<http://www.consort-statement.org>). When reporting experiments on human subjects, indicate whether the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional or regional) and with the Helsinki Declaration of 1975, as revised in 2000 (available at [http://www.wma.net/e/policy/17-c\\_e.html](http://www.wma.net/e/policy/17-c_e.html)).

## Results

Present your results in logical sequence in the text, tables, and illustrations, giving the main or most important findings first. Do not repeat in the text all the data in the tables or illustrations; emphasize or summarize only important observations. Extra or supplementary materials and technical details can be placed in an appendix where it will be accessible but will not interrupt the flow of the text; alternatively, it can be published only in the electronic version of the journal.

## Discussion

Include summary of key findings (primary outcome measures, secondary outcome measures, results as they relate to a prior hypothesis); Strengths and limitations of the study (study question, study design, data collection, analysis and interpretation); Interpretation and implications in the context of the totality of evidence (is there a systematic review to refer to, if not, could one be reasonably done here and now?, What this study adds to the available evidence, effects on patient care and health policy, possible mechanisms)? Controversies raised by this study; and Future research directions (for this particular research collaboration, underlying mechanisms, clinical research). Do not repeat in detail data or other

material given in the Introduction or the Results section.

## References

List references in alphabetical order. Each listed reference should be cited in text (not in alphabetic order), and each text citation should be listed in the References section. Identify references in text, tables, and legends by Arabic numerals in square bracket (e.g. [10]). Please refer to ICMJE Guidelines ([http://www.nlm.nih.gov/bsd/uniform\\_requirements.html](http://www.nlm.nih.gov/bsd/uniform_requirements.html)) for more examples.

### Standard journal article

[1] Flink H, Tegelberg Å, Thörn M, Lagerlöf F. Effect of oral iron supplementation on unstimulated salivary flow rate: A randomized, double-blind, placebo-controlled trial. *J Oral Pathol Med* 2006; 35: 540-7.

[2] Twetman S, Axelsson S, Dahlgren H, Holm AK, Källestål C, Lagerlöf F, et al. Caries-preventive effect of fluoride toothpaste: A systematic review. *Acta Odontol Scand* 2003; 61: 347-55.

### Article in supplement or special issue

[3] Fleischer W, Reimer K. Povidone iodine antiseptics. State of the art. *Dermatology* 1997; 195 Suppl 2: 3-9.

### Corporate (collective) author

[4] American Academy of Periodontology. Sonic and ultrasonic scalers in periodontics. *J Periodontol* 2000; 71: 1792-801.

### Unpublished article

[5] Garoushi S, Lassila LV, Tezvergil A, Vallittu PK. Static and fatigue compression test for particulate filler composite resin with fiber-reinforced composite substructure. *Dent Mater* 2006.

### Personal author(s)

[6] Hosmer D, Lemeshow S. Applied logistic regression, 2nd edn. New York: Wiley-Interscience; 2000.

### Chapter in book

[7] Nauntofte B, Tenovou J, Lagerlöf F. Secretion and composition of saliva. In: Fejerskov O,



Kidd EAM, editors. Dental caries: The disease and its clinical management. Oxford: Blackwell Munksgaard; 2003. p. 7-27.

### No author given

[8] World Health Organization. Oral health surveys - basic methods, 4th edn. Geneva: World Health Organization; 1997.

### Reference from electronic media

[9] National Statistics Online – Trends in suicide by method in England and Wales, 1979-2001. [www.statistics.gov.uk/downloads/theme\\_health/HSQ20.pdf](http://www.statistics.gov.uk/downloads/theme_health/HSQ20.pdf) (accessed Jan 24, 2005): 7-18. Only verified references against the original documents should be cited. Authors are responsible for the accuracy and completeness of their references and for correct text citation. The number of reference should be kept limited to 20 in case of major communications and 10 for short communications.

More information about other reference types is available at [www.nlm.nih.gov/bsd/uniform\\_requirements.html](http://www.nlm.nih.gov/bsd/uniform_requirements.html), but observes some minor deviations (no full stop after journal title, no issue or date after volume, etc).

### Tables

Tables should be self-explanatory and should not duplicate textual material.

Tables with more than 10 columns and 25 rows are not acceptable.

Table numbers should be in Arabic numerals, consecutively in the order of their first citation in the text and supply a brief title for each.

Explain in footnotes all non-standard abbreviations that are used in each table.

For footnotes use the following symbols, in this sequence: \*, †, ‡, §§,

### Illustrations (Figures)

Graphics files are welcome if supplied as Tiff, EPS, or PowerPoint files of minimum 1200x1600 pixel size. The minimum line weight for line art is 0.5 point for optimal printing.

When possible, please place symbol legends below the figure instead of to the side.

Original color figures can be printed in color at the editor's and publisher's discretion provided the author agrees to pay.

Type or print out legends (maximum 40 words, excluding the credit line) for illustrations using double spacing, with Arabic numerals corresponding to the illustrations.

### Sending a revised manuscript

While submitting a revised manuscript, contributors are requested to include, along with single copy of the final revised manuscript, a photocopy of the revised manuscript with the changes underlined in red and copy of the comments with the point to point clarification to each comment. The manuscript number should be written on each of these documents. If the manuscript is submitted online, the contributors' form and copyright transfer form has to be submitted in original with the signatures of all the contributors within two weeks of submission. Hard copies of images should be sent to the office of the journal. There is no need to send printed manuscript for articles submitted online.

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### Approval of Ethics Committee

We need the Ethics committee approval letter from an Institutional ethical committee (IEC) or an institutional review board (IRB) to publish your Research article or author should submit a statement that the study does not require ethics approval along with evidence. The evidence could either be consent from patients is available and there are no ethics issues in the paper or a letter from an IRB stating that the study in question does not require ethics approval.

### Abbreviations

Standard abbreviations should be used and be spelt out when first used in the text. Abbreviations should not be used in the title or abstract.

### Checklist

- Manuscript Title
- Covering letter: Signed by all contributors
- Previous publication/ presentations mentioned, Source of funding mentioned
- Conflicts of interest disclosed

### Authors

- Middle name initials provided.
- Author for correspondence, with e-mail address provided.
- Number of contributors restricted as per the instructions.
- Identity not revealed in paper except title page (e.g.name of the institute in Methods, citing previous study as 'our study')

### Presentation and Format

- Double spacing
- Margins 2.5 cm from all four sides
- Title page contains all the desired information. Running title provided (not more than 50 characters)
- Abstract page contains the full title of the manuscript
- Abstract provided: Structured abstract provided for an original article.
- Key words provided (three or more)
- Introduction of 75-100 words
- Headings in title case (not ALL CAPITALS).

### References cited in square brackets

- References according to the journal's instructions

### Language and grammar

- Uniformly American English
- Abbreviations spelt out in full for the first time. Numerals from 1 to 10 spelt out
- Numerals at the beginning of the sentence spelt out

### Tables and figures

- No repetition of data in tables and graphs and in text.
- Actual numbers from which graphs drawn, provided.
- Figures necessary and of good quality (color)
- Table and figure numbers in Arabic letters (not Roman).
- Labels pasted on back of the photographs (no names written)
- Figure legends provided (not more than 40 words)
- Patients' privacy maintained, (if not permission taken)
- Credit note for borrowed figures/tables provided
- Manuscript provided on a CDROM (with double spacing)

### Submitting the Manuscript

- Is the journal editor's contact information current?
- Is the cover letter included with the manuscript? Does the letter:
  1. Include the author's postal address, e-mail address, telephone number, and fax number for future correspondence?
  2. State that the manuscript is original, not previously published, and not under concurrent consideration elsewhere?
  3. Inform the journal editor of the existence of any similar published manuscripts written by the author?
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