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Open Access of E - Journals in Technology and Engineering to Doaj: a Scientometric Study

Dr.N.Amsaveni	Asst. Prof., DLIS, BDU, Trichy-24
R.Vasanthi	Ph.D Research Scholar, DLIS, BDU, Trichy-24
K.Sivasekaran	Ph.D Research Scholar, DLIS, BDU, Trichy-24

ABSTRACT

The DOAJ provides open access to scientific and scholarly journals, that meet high quality standard by exercising peer review and is free to all from time of publication based on the open access initiative. In this paper authors made an effort to study the total full text and abstract online journals were accessed through DOAJ and analyzed based on subject headings, publication countries, started year, and their accessibility of archives of online journals in technology and engineering.

KEYWORDS: Open Journals, E-Journals, Engineering, Technology, Doaj

1. INTRODUCTION

The propagation free access to online journals, the development of subject specific print and e-print archives and collections of learning objects provides a very valuable supplement of scientific knowledge to the existing types of published scientific information i.e., journals, books databases etc. Though these valuable collections are difficult to access is because of high cost in subscription and assimilate in the library and information services provided by libraries for their user community. Open access journals that use a funding model that does not charge readers or their institution for access. Open access journals are one of the two general methods for providing open access. The other one is self-archiving in a repository. The publisher of an open access journal is known as an "open access publisher".

2. OBJECTIVES

- To know the number free e-journals offered by DOAJ on sub categories of Technology and Enginering.
- To know the number of sub - categories and number of journals under the main subject of Technology and Engineering
- To know that country wise publication of e-journals
- To know the accssibility of archives of e-journals
- To know the usefulness and applicapility of Technology and Engineering e-journals to other disciplines

3. METHODOLOGY

Directoryof Open Acce Journals website (http://www.doaj.org) is browsed for the present paper. Technology and Engineeing e journals were searched out of 970 were found on DOAJ. These 970 journals were analyzed based on subject headings, country wise publishers and accessibility of archives of e journals.

4. DIRECTORY OF OPEN ACCESS JOURNALS (DOAJ): AN OVERVIEW

Open access journals as journals that use a funding model that does not charge readers or their institutions for access. From the DOAJ definition of "open access" we take the right of users to "read, download, copy, distribute, print, search, or link to the full texts of these articles" as mandatory for a journal to be included in the directory.

The aim of the Directory of Open Access Journals is to increase the visibility and ease of use of open access scientific and scholarly journals thereby promoting their increased usage and impact. The Directory aims to be comprehensive and cover all open access scientific and scholarly journals that use a quality control system to guarantee the content. In short a one stop shop for users to Open Access Journals. Journals can be browsed by title or by broad subject area from DOAJ. Articles are searchable by article author or title, ISSN, journal title, abstract, or key words. Full-text is not searchable but is fully accessible.

4.1 Home page of DOAJ: http://www.doaj.org/

4.2 Browse by Subject

http://www.doaj.org/doaj?func=browse&uiLanguage=en

5. ANALYSIS AND INTEPRETATIONS

Total 974 technology and engineering e journals were analyzed and presented in the form of tables about histograms.

5.1 Subject wise

Table 1 indicates the subjectwise distribution of journals in technology and engineering. The subject of Computer Sciences is the highest publications 358 (36.76) percent, General and Civil Engineering 176 (18.07) percent and Technology 109 (11.19) percent.

Table1: Subjectwise distribution of Journals

S. No	Subject	No. of Journals	%	S. No	Subject	No. of journals	%
1	Chemical Technology	35	3.59	9	Industrial Engineering	24	2.46

2	Computer Science	358	36.76	10	Manufactures	12	1.23
3	Construction	19	1.95	11	Materials	45	4.62
4	Electrical & Nuclear Engg.	66	6.78	12	Mechanical Engg.	45	4.62
5	Environmental Engg.	12	1.23	13	Military Science	10	1.03
6	Environmental Technology	10	1.03	14	Mining and Metallurgy	18	1.85
7	General and Civil Engg.	176	18.07	15	Technology (General)	109	11.19
8	Hydraulic Engg.	4	0.41	16	Transportation	31	3.18
	Grand Total 974						100

5.2 Country wise Distribution of Journals

Table 2 clearly depicts that the United States148 (15.19) percent published more and more open access journals for the society benefits followed by India 93 (9.54) percent and Egypt 77 (7.90) percent in the field of technology and engineering.

Table 2: Countrywise distribution of Journals

S. No	Countries	No. of Journals	%	S. No	Countries	No. of Journals	%
1	United States	148	15.19	39	Lithuania	5	0.51
2	India	93	9.54	40	Portugal	5	0.51
3	Egypt	77	7.90	41	Slovenia	5	0.51
4	Brazil	47	4.82	42	Sweden	5	0.51
5	Romania	46	4.72	43	Thailand	5	0.51
6	Germany	34	3.49	44	Ukraine	5	0.51
7	Poland	31	3.18	45	Austria	4	0.41
8	Spain	31	2.46	46	China	4	0.41
9	United Kingdom	24	2.25	47	Greece	4	0.41
10	Malaysia	22	2.15	48	Morocco	4	0.41
11	Indonesia	21	2.15	49	New Zealand	4	0.41
12	Serbia	21	1.95	50	South Africa	4	0.41
13	Switzerland	19	1.84	51	Argentina	3	0.30
14	Japan	18	1.74	52	Bangladesh	3	0.30
15	Australia	17	1.74	53	Denmark	3	0.30
16	Colombia	17	1.54	54	Taiwan	3	0.30
17	Pakistan	15	1.43	55	Belarus	2	0.20
18	Canada	14	1.43	56	Belgium	2	0.20
19	Chile	14	1.43	57	Latvia	2	0.20
20	Czech Republic	14	1.43	58	Norway	2	0.20
21	Hong Kong	14	1.43	59	Peru	2	0.20
22	Iran	14	1.43	60	Algeria	1	0.10
23	South Korea	14	1.43	61	Barbados	1	0.10
24	Croatia	13	1.33	62	Bosnia	1	0.10
25	France	11	1.12	63	Georgia	1	0.10
26	Mexico	9	0.92	64	Iraq	1	0.10
27	Tunisia	9	0.92	65	Israel	1	0.10
28	Italy	8	0.82	66	Kenya	1	0.10
29	Netherlands	8	0.82	67	Macedonia	1	0.10
30	Cuba	7	0.71	68	Mauritius	1	0.10
31	Russia	7	0.71	69	Moldova	1	0.10
32	Slovakia	7	0.71	70	Nepal	1	0.10
33	Turkey	7	0.71	71	Nicaragua	1	0.10
34	Venezuela	7	0.71	72	Nigeria	1	0.10
35	Bulgaria	6	0.61	73	Puerto Rico	1	0.10
36	Finland	6	0.61	74	Sri Lanka	1	0.10
37	Hungary	6	0.61	75	United Arab Emirates	1	0.10
38	Jordan	6	0.61		Total	974	100

5.3 Status of Indian Journals

Table 3 gives the information about the status of 93 Indian journals in the field of technology and engineering. The subject of Computer Science is the highest publications 60 (64.51) percent, International journals 55 (71.42) percent and National journals 5 (31.25) percent followed by General civil engineering International journal 10(12.98) percent, National journal 5(31.25) percent and General technology International journal 10(12.98) percent, National journal 2 (12.5) percent.

Table 3: Status of Indian Journals

S. No	Journal Subject	No. of journals	National journals	International journals
1.	Chemical Technology	2(2.15)	1 (6.25)	1 (1.29)
2.	Computer Science	60(64.51)	5 (31.25)	55 (71.42)
3.	Construction	1(1.07)	-	1 (1.29)
4.	General and civil engg.	15(16.12)	5 (31.25)	10 (12.98)
5.	Materials	2(2.15)	2 (12.5)	-
6.	Military Science	1(1.07)	1 (6.25)	-
7.	Technology (General)	12(12.90)	2 (12.5)	10 (12.98)
	Total	93	15	77

5.4 Year wise distribution of Indian Journals

Table 4 indicates the year 2010 and 2011, highest publications 29 (31.18) percent of Indian journals published in the field of technology and engineering. The lowest publications are in the year of 1950, 2004 and 2005, 1 (1.07) percent.

Table 4: Year wise distribution of Indian Journals

S.No	Start year	No. of Journals	%
1.	1950	1	1.07
2.	2000	2	2.15
3.	2004	1	1.07
4.	2005	1	1.07
5.	2007	4	4.30
6.	2008	4	4.30
7.	2009	17	18.27
8.	2010	29	31.18
9.	2011	29	31.18
10.	2012	5	5.37
Total 93			100

5.5 Publisher wise Distribution of Indian Journals

Table5 depicts that the publisher wise distribution of open access e-journals in the field of technology and engineering. Academy & Industry Research Collaboration Center24 (25.80) percent dominating the highest publication in India followed by Engineering Journals Publication and NIACAIR.

Table 5: Publisher wise distribution of Indian journals

S.No	Publisher	No.of Journals	%
1.	Academy & Industry Research Collaboration Center (AIRCC)	24	25.80
2.	Engg Journals Publication	6	6.45
3.	NISCAIR	5	5.37
4.	Bioinfo Publications	3	3.22
5.	Integrated Publishing Association	3	3.22
6.	Applied Science Innovations Private Limited	2	2.15
7.	Foundation for Interdisciplinary Research in Engineering	2	2.15
8.	Indian Academy of Sciences, Springer	2	2.15
9.	Innovation Science Publications	2	2.15
10.	RG Education Society	2	2.15
11.	Seventh Sense Research Group	2	2.15
12.	Technopark Publications	2	2.15
13.	Association of Computer Communication Education for National Triumph (ACCENT)	1	1.07
14.	Ayushmaan Technologies	1	1.07
15.	Bharati Vidyapeeth's Institute of Computer Applications and Management	1	1.07

5.6 Recently Started (2012) Journals in Technology and Engineering

Journal Name	Website Link
International Jrl. of Electronics & Com. Sci. Engg.	http://www.ijecse.org
International Journal of Advanced Com. Research	http://www.theaccents.org/ijacr/openaccess.html
International Journal of Comp. Sci. and Network	http://ijcsns.org
Itjl. Jrl. for Sci. & Emerging Technologies with Latest Trends	http://www.ijsett.com
International Jrl. of Recent Tech. and Engg	http://www.ijrte.org

The above tables show the recently started open access e-journals in the year of 2012 in the subject of technology and engineering.

6. MAJOR FINDINGS OF TE STUDY

It is observed that the subject of Computer Science was dominating the highest publications. It is observed that United States was highest publishing with 148 e-journals followed by India and Egypt. It is observed that the highest publication of the year 2010 and 2011, Twenty nine open access e-journals in India published. It is observed that publisher wise distribution of open access e-journals in India, Academy & Industry Research Collaboration Center dominating the highest publication in the field of technology and engineering.

7. CONCLUSION

DOAJ is a comprehensive and covers open access scientific and scholarly journals that use an appropriate quantity control system, and it will not be limited to particular language or subject areas. DOAJ is increase the visibility and scholarly journals there by encouraging their increased usage and impact. Research scholars, technology and engineering scientists, professionals should browse the DOAJ site and access the free online journals on their subject areas. It is also suggested that technology and engineering scientists and Research scholars should publish their research work in online open access journals for wider visibility of their research work and for greater impact factor (IF) and citation index.

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