GLOBAL RESEARCH PERFORMANCE ON OPEN SOURCES AND MOOCS IN DIMENSIONS DATABASE

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ABSTRACT:
Open source is considered to have more flexible rules than free software, since it allows companies and developers to impose certain usage restrictions and licenses in order to protect the code's integrity.A massive open online course (MOOC) is a model for delivering learning content online to any person who wants to take a course, with no limit on attendance.The results of the present study provides a better insight of previous trends, patterns and other pivotal factors which acts as a platform for collaborating research culture and knowledge sharing in the field of open Sources and Moocs.

KEYWORDS:Open Sources, Moocs, Bibliometric Analysis.

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INTRODUCTION

The conferees believed the pragmatic, business-case grounds that had motivated Netscape to release their code illustrated a valuable way to engage with potential software users and developers, and convince them to create and improve source code by participating in an engaged community. Open source technology is a means of developing computer software through a more collaborative approach than most traditional software. When software is considered "open source," all or part of its source code is made available to the public or purchasers of the software.

Massive Open Online Courses (MOOCs) are free online courses available for anyone to enroll. MOOCs provide an affordable and flexible way to learn new skills, advance your career and deliver quality educational experiences at scale. The authors found that the MOOC was generally effective at communicating difficult material Newtonian mechanicseven to students who weren't MIT caliber. In fact, the students who started the online course knowing the least about physics showed the same relative improvement on tests as much stronger students. Among the largest MOOCs are: Introduction to Computer Science (Harvard / edX) Learning how to Learn (UC San Diego / Coursera) Machine Learning (Stanford / Coursera**)** MOOCs (cMOOCs: Connectivist MOOCs) often emphasized open-access features, such as open licensing of content, structure and learning goals, to promote the reuse and remixing of resources. Some later MOOCs (xMOOCs: extended MOOCs) use closed licenses for their course materials while maintaining free access for students.

Review of Literature:

Dr. Khaparde V.S, (2013) Bibliometric Analysis of Research Publication of Department of Chemistry, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad,The paper brings out the result of a bibliometric study of research publications of department of chemistry, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, for the period 1975-2012. It analyzed all the 774 research publications from the 144 journals. it examines year- wise distribution of papers, authorship pattern, journal in which author publish, productivity of faculty and discipline-wise distribution etc. findings, suggestions and references are shown with relevant data analysis

Bhagat, M.P. & khaparde, V. (2019) study of Scientometric analysis of 214 research articles covered during the periods of 2011- 2015 in SCOPUS Database. This study reviewed the length of title, numbers of pages, type of document, chronological distribution of articles, type of references, authorship pattern and author productivity. It revealed that the majority of articles i.e.121 articles are published by Australian contributors, followed by the USA and more than two-thirds, i.e. .112 (55.80%), of papers were contributed by single authors. Most productive authors are Beer A.M. contributed 23 Papers and Majority references are from print references.

Dhage Santosh, Khaparde S. Vaishali, Ambhore P.Sagar (2020). The present paper focuses on Mapping of World Publications: Sydenham Chorea Disease. Which has given on PubMed database for during the year 2000 to 2018? There are total 9799 documents on Sydenham Chorea Disease. It discusses on ascertain the Sydenham chorea research of documents, ranking of most prolific authors, institution-wise distribution of publications. Concept mapping is a general method, it is particularly useful for helping social researchers and research teams develop and detail ideas for research and, it is especially valuable when researchers want to involve relevant stakeholder groups in the act of creating the research project. Although concept mapping is used for many purposes strategic planning, product development, market analysis, decision making, measurement development we concentrate here on its potential for helping researchers formulate their projects.

Bhagat, M.P. & khaparde, V. (2022). The rapid development of research in android technology has led to a tremendous number of publications containing the achieved knowledge of this area of research. Mapping of science has a long tradition in many fields in evaluating and analyzing the growth of technology and we find a lack of comprehensive scientometric study in the area of android. In this article, we provide extensive insights into basic publication output patterns, research productivity and growth rate, research impact, year-wise distribution of publications, collaborative patterns for author and institutes, highly preferred journals, highly impact factored journals, citation patterns etc. during 2011- 2020. The results of the present study provides a better insight of previous trends, patterns and other pivotal factors which acts as a platform for collaborating research culture and knowledge sharing in the field of android.

DEFINITIONAL ANALYSIS:

Open Sources: Open source is a term that originally referred to open source software (OSS). Open source software is code that is designed to be publicly accessible anyone can see, modify, and

distribute the code as they see fit. Open source software is developed in a decentralized and collaborative way, relying on peer review and community production. Open source software is often cheaper, more flexible, and has more longevity than its proprietary peers because it is developed by communities rather than a single author or company. It denoting software for which the original source code is made freely available and may be redistributed and modified.

Moocs:A course of study made available over the internet without charge to a very large number of people. Anyone who decides to take a Mooc simply logs to the websites and sign up.A massive open online course (MOOC) is a model for delivering learning content online to any person who wants to take a course, with no limit on attendance.

SCOPE & LIMITATION OF THE STUDY:

The present study is based on the Scientometric evaluation of publications in Open sources and moocsduring 2017-2021.

DATA COLLECTION: The data were collected from Dimensions Database (https://app.dimensions.ai/discover/publication)for this study and the records related to Open Sources and Moocs were retrieved on 02nd july2022. A total of 9561 records received for the year 2017-2022 were extracted and grouped into various categories such as top twenty researchers, source wise publications, , type of publications and top twenty highly cited research publications.

OBJECTIVES OF THE STUDY

The objectives of the present study are listed below:

- To find out annual distribution of publications.
- High productive authors for affiliation institution and country wise publications
- To identify journal wise distribution of publications.
- To find out subject-wise impact factor and highly impact factor research productivity.
- To find out the Institution wise distribution of publications.
- To find out the Country wise distribution of publications.
- To find out the Keyword wise distribution of publications.

Data Analysis and Interpretation:

Table No. 1. Annual Distribution of Publications

Table No.1:Annual Distribution of Publications			
Sr.No.	**Year**	**Citations**	**%**
1	2017	1165	12.18
2	2018	1431	14.97
3	2019	1785	18.67
4	2020	2444	25.56
5	2021	2736	28.62
Total		**9561**	**100**

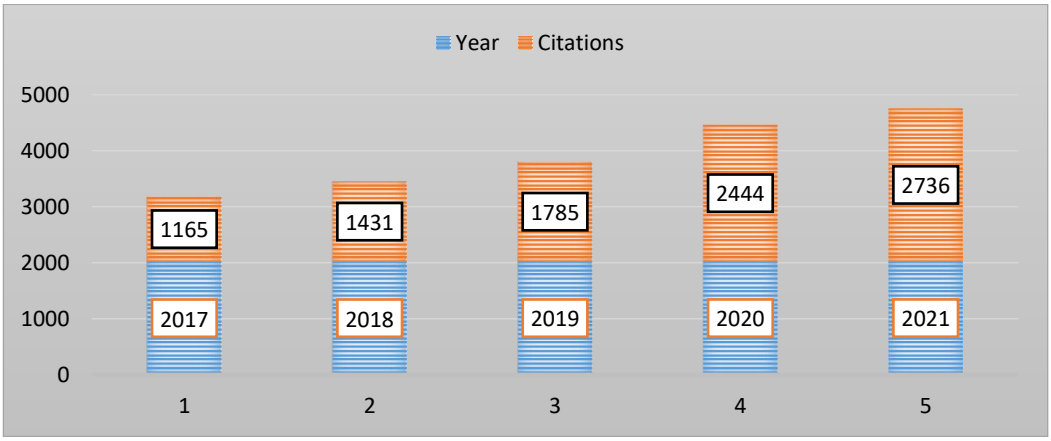
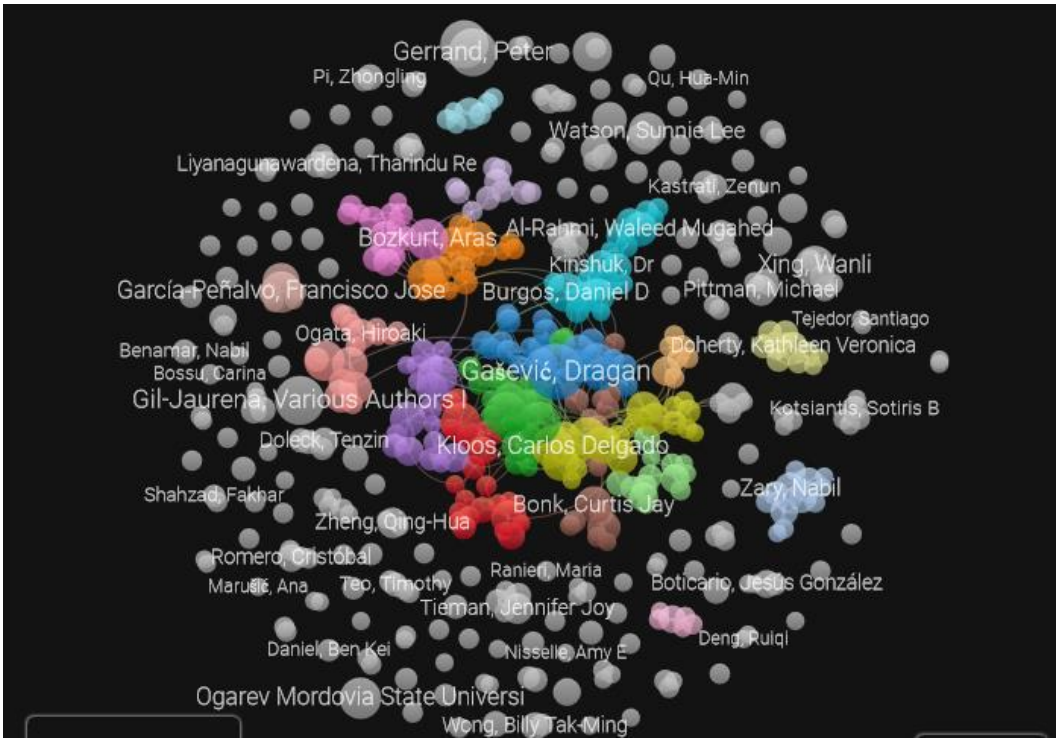


Fig.No.2: Annual Distribution of Publications

It can be observed from the Table No. 1 & Figure no. 1 out of the total 9561 contributions majority of the contributions i.e. 2736 contributions were contributed in 2021 were as minimum contributions i.e. 1165contributions were contributed in 2017.

Table No.2: Ranking of Authors based on geographical Publications

Table No.2:Ranking of Authors based on geographical Publications						
Sr. No.	**Author**	**University**	**Country**	**Publications**	**Citations**	**Mean**
1	Dragan Gasevic	Monash University	Australia	37	1240	33.51
2	Ines Gil-Jaurena	National University of Distance Education	Spain	28	0	0
3	Michail N Giannakos	Norwegian University of Science and Technology	Norway	23	545	23.7
4	Carlos Delgado Kloos	University of Madrid	Spain	21	573	27.29
5	Kshitij Sharma	Norwegian University of Science and Technology	Norway	21	310	14.76
6	Aras Bozkurt	Anadolu University	Turkey	20	298	14.9
7	Marco Kalz	Heidelberg University of Education	Germany	19	513	27
8	Daniel D Burgos	Universidad Internacional De La Rioja	Spain	18	254	14.11
9	Francisco Jose	University of Salamanca	Spain	18	426	23.67
10	Wanli Xing	University of Florida,	United States	18	517	28.72
11	Khe Foon Timothy Hew	University of Hong Kong	China	17	1,365	80.29
12	María Soledad Ramírez-Montoya	Monterrey Institute of Technology and Higher Education	Mexico	16	202	12.63
13	Sunnie Lee Watson	Purdue University West Lafayette	United States	16	230	14.38
14	Curtis Jay Bonk	Indiana University Bloomington	United States	16	201	12.56
15	Carlos Alario-Hoyos	University of Madrid	Spain	16	370	23.13
16	Sonsoles Lopez-Pernas	Technical University of Madrid	Spain	15	139	9.27
17	Zhonggen Yu	Beijing Language and Culture University	china	14	76	5.43
18	Di Zou	Education University of Hong Kong	china	13	363	27.92
19	Justin F Reich	Massachusetts Institute of Technology	United States	12	597	49.75
20	Dr Kinshuk	University of North Texas	United States	11	586	53.27



Graph No.2: Ranking of Authors based on geographical Publications

Table .2 and Graph No.2 shows that the high productive authors for affiliation institution and country wise rank list of publications by authors. Author Dragan GasevicMonash UniversityAustraliawere published the highest number of articles for the study period with 37records with 1240 citations and mean is 3.34, next consecutive authors namely Dr Kinshuk University of North Texas with 11publication with 586 affiliation institute and geographical area of United States the lowest citation author and mean is 53.27, then followed by Ines Gil-Jaurena 28 publications, Michail N Giannakos. With 23 Publications and Carlos Delgado Kloos with publications 21 respectively.

Table No.3: Journal wise distribution of publications

Table No.3:Journal wise distribution of publications				
Sr.No.	**Journal Name**	**Publications**	**Citations**	**mean**
1	Education and Information Technologies	249	2,004	8.05
2	Computers & Education	215	10,114	47.04
3	IEEE Access	200	2,785	13.93
4	International Journal of Emerging Technologies in Learning (IJET)	196	1,033	5.27
5	Sustainability	189	2,750	14.55
6	Integration of Education	179	243	1.36
7	International Journal of Educational Technology in Higher Education	131	3,284	25.07
8	British Journal of Educational Technology	130	2,607	20.05
9	Journal of Physics Conference Series	125	203	1.62
10	Computers in Human Behavior	119	4,009	33.69
11	Frontiers in Psychology	115	1,058	9.2
12	Open Praxis	115	911	7.92
13	IEEE Transactions on Learning Technologies	112	1,932	17.25
14	Interactive Learning Environments	99	1,073	10.84
15	Educational technology research and development	98	1,470	15

16	PLOS ONE	84	1,370	16.31
17	Journal of Interactive Media in Education	82	1,257	15.33
18	Computer Applications in Engineering Education	76	638	8.39
19	Journal of Computer Assisted Learning	69	1,374	19.91
20	Education Sciences	69	880	12.75

The study found that the total research output of the Open Sources and Moocs for the study period(2017–2021) published in journals. In Table 3 The journal "Education and Information Technologies" topped with249 publications with the Citation of 2004 and Mean is 8.05, next "Computers & Education"with 215 with the Citation and third position by"IEEE Access with 200 publications with the Citation 2785 respectively. "International Journal of Emerging Technologies in Learning (IJET) placed in fourth position got citation 196.

Table No.4: Keyword wise Distribution of Publication.

Table No. 4: Keyword wise Distribution of Publication			
Sr.No.	**Words**	**Citations**	**%**
1	HUMANS	225	25.40
2	EDUCATION DISTANCE	104	11.74
3	LEARNING	52	5.87
4	FEMALE	48	5.42
5	MALE	44	4.97
6	INTERNET	41	4.63
7	CURRICULUM	39	4.40
8	STUDENTS	38	4.29
9	COVID-19	33	3.72
10	EDUCATIONAL MEASUREMENT	31	3.50
11	ADULT	30	3.39
12	COMPUTER-ASSISTED INSTRUCTION	30	3.39
13	SURVEYS AND QUESTIONNAIRES	27	3.05
14	EDUCATION MEDICAL	25	2.82
15	SARS-COV-2	25	2.82
16	MIDDLE AGED	22	2.48
17	PANDEMICS	21	2.37
18	HEALTH PERSONNEL	18	2.03
19	UNIVERSITIES	17	1.92
20	YOUNG ADULT	16	1.81

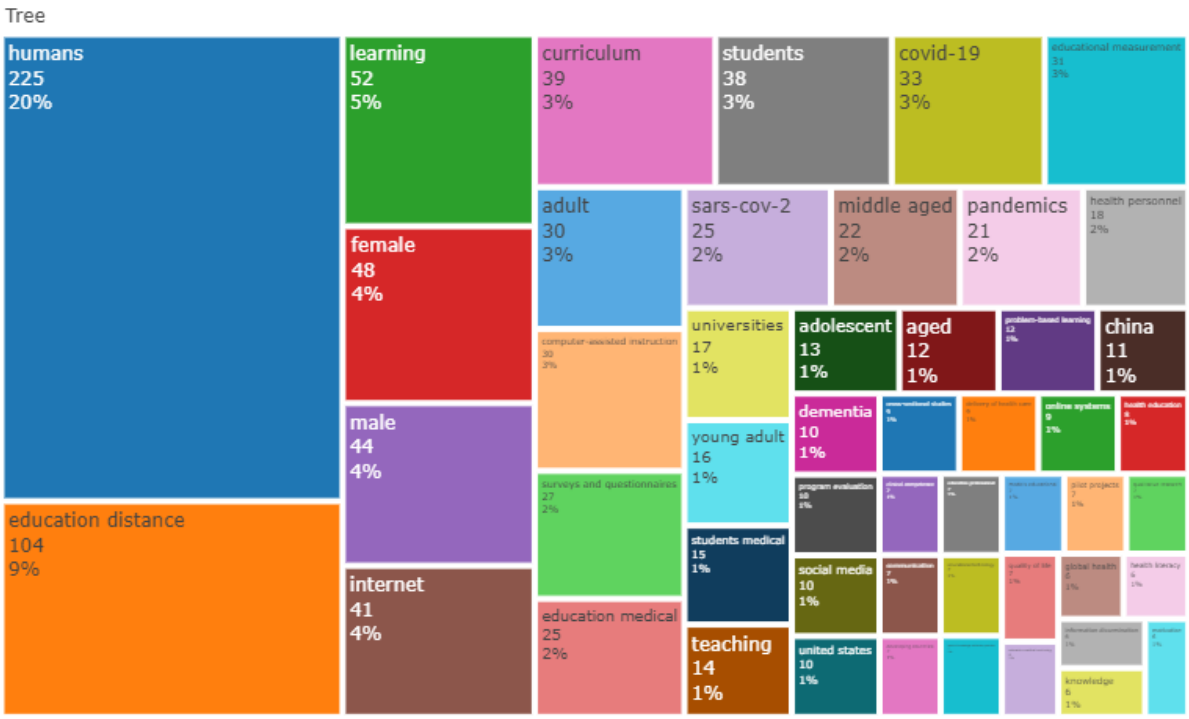


Figure No.4: Keyword wise Distribution of Publication

Table No.4 presents the top 20 keywords used by the researchers in their publications. It isclearly seen from the table that the word Humans has been used 225(25.40%) times by the researchers. Fallowed by Education Distances is 104(11.74%)and Learning with52(5.87%) times Female 48 (5.42%) times and Male is on fifth position with 44(4.97%)respectively.

Table No.5: Country wise distribution of contribution

Table No.5:country wise distribution of contribution				
Sr.No.	**Country**	**Citations**	**%**	**SCP**
1	CHINA	7	0.21	7
2	MALAYSIA	7	0.21	7
3	HONG KONG	6	0.18	6
4	UNITED KINGDOM	4	0.12	4
5	INDONESIA	2	0.06	2
6	ARGENTINA	1	0.03	1
7	DENMARK	1	0.03	1
8	GEORGIA	1	0.03	1
9	ISRAEL	1	0.03	1
10	NORWAY	1	0.03	1

It can be observed from Table No. 5 the country wise distribution of contributors, the table 5 reveals that out of the total 9561 contributors has contributed during 2017-2021, majority of article 7(0.21%) have been contributed form China country,7(0.21%) contributors have been contributed form Malasiya,6(0.18%) contributors have been contributed fromHongkong, 4(0.12%) contributors have been contributed from United Kingdom, 2(0.06%) contributors have been contributed from Indonesia ,5 country contributed with one publication.

Table No.6: Institution wise distribution of publication

Table No.6:Instituation wise distribution of publication			
Sr.No.	**Institutions**	**Citations**	**Percentage**
1	UNIVERSITY OF HONG KONG	12	1.35
2	HARVARD UNIVERSITY	10	1.12
3	MONDOR INSTITUTE OF BIOMEDICAL RESEARCH	9	1.01

4	BEIJING YOUAN HOSPITAL	7	0.79
5	ST. PETER'S HOSPITAL	7	0.79
6	UNIVERSITY OF MELBOURNE	7	0.79
7	HARVARD UNIVERSITY	6	0.67
8	MINISTRY OF INDUSTRY AND INFORMATION TECHNOLOGY	6	0.67
9	PEKING UNIVERSITY	6	0.67
10	UNIVERSITY OF ANGERS	6	0.67
11	AIDAN (UNIVERSITY OF TASMANIA	5	0.56
12	BRIGHAM AND WOMEN'S HOSPITAL	5	0.56
13	CENTRAL SOUTH UNIVERSITY	5	0.56
14	CENTRAL SOUTH UNIVERSITY	5	0.56
15	DEB (FLINDERS UNIVERSITY	5	0.56
16	JENNIFER (FLINDERS UNIVERSITY	5	0.56
17	KATHLEEN (UNIVERSITY OF TASMANIA	5	0.56
18	MAKERERE UNIVERSITY	5	0.56
19	UNIVERSITY OF COPENHAGEN	5	0.56
20	UNIVERSITY OF INDONESIA	5	0.56

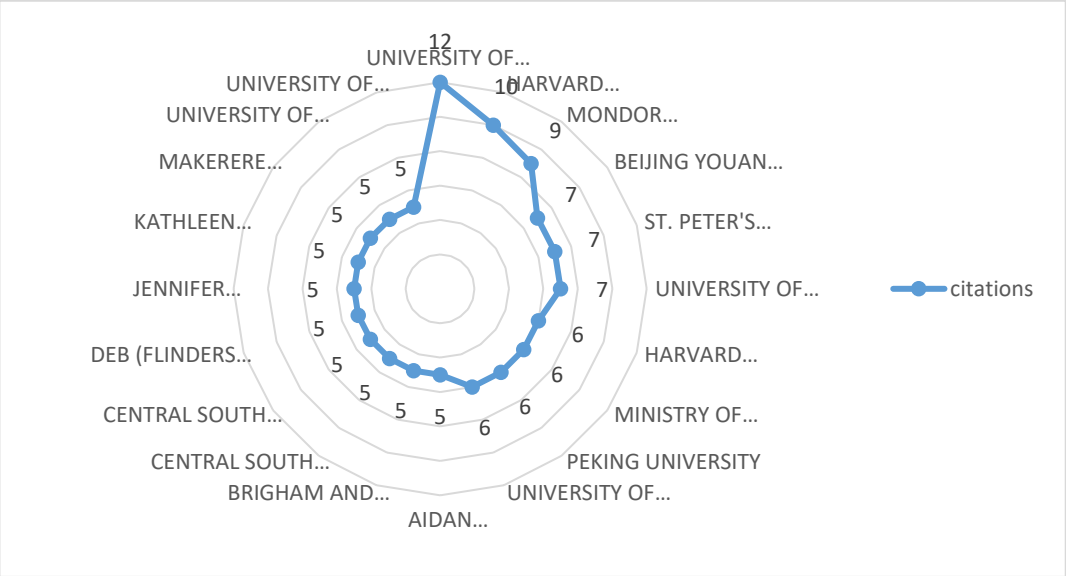


Figure No.7: Institution wise distribution of publication

The individualities of 20 most productive institutions were analysed in this part, Institutions which published more than 20 and above publications have considered as highly productive institutions. The institution "UNIVERSITY OF HONG KONG" holds the first rankand the Institution published 12 (1.35) research papers, the second rank holds by "HARVARD UNIVERSITY" the institution published 10 (1.12%) Research papers .The "MONDOR INSTITUTE OF BIOMEDICAL RESEARCH "holds the 3rd rank, the institution published 9(1.01%) research papers.

Conclusion:

The study recommends that theauthors, research and development should come forward to increase the productivity of publications on Open Sources and Moocs by means of contributing their research findings. The research and development institutions should encourage the researchers to publish more number of scholarly communications on Open Sources and Moocs, publishers should encourage the authors by means of inviting new finding in order to publish in their reputed journals. Above all the government policies should support in continue the research to find the solution for this study.

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