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INSTITUTIONAL REPOSITORY AND INFORMATION DISSEMINATION AN ANALYSIS STUDY OF E-PRINTS AT INDIAN INSTITUTE OF SCIENCE, BENGALURU, INDIA

Nagarjuna Pitty*

Senior Scientific Officer, JRDTML, IISc, Bengaluru, India.

*Corresponding Author

Nagarjuna Pitty*

Senior Scientific Officer, JRDTML, IISc, Bengaluru, India.

ABSTRACT

The research article defines objectives of institutional repositories and it elaborates statistical inferences of the objectives at e-Prints@IISc. This Paper explains in terms of Collection institutional Repository at e-Prints objectives such as Type of Documents, Unidentified, Refereed and Non Refereed documents, Divisions contribution, and decade wise or age of the resources.

KEYWORDS: e-Prints at Indian Institute of Science, Digital Resources, Institutional Repository, Information, dissemination.

1. INTRODUCTION

The improvement of web innovation has carried gigantic occasion to bring the aftereffects of examination principally to all through computerized correspondence anybody, anyplace and whenever. In the new years a huge sum conversations and activities are taken in the zone of open access. Open Access is an abridgment of numerous insightful writing are uninhibitedly available now with no impediment and tries to decrease boundaries to academic correspondence.

Open access writings are accessible in open access diaries, institutional vaults, subject storehouses, advanced files, etc. Open access encourages accessibility and appropriation of insightful correspondence unreservedly, as a way to take care of the issue of unavailability principally because of monetary limitation explicitly in Developing Countries. (S. B. Ghosh

and Anup Kumar) Institutional vault (IR) has arisen as a methods for putting away computerized substance created by research associations, colleges and so forth This new innovation offers the Nobel laureates and scientists to store their work, which encourages the intended interest group to get to the exploration distributions by means of computerized structure. (Ramesh Kuri-2014) The embodiment of IR is to make innovative work distributions to be openly accessible on the web. It is expressed that the greater part of the foundations embrace the open source IR programming's for making/building up their own archives.

The kind of records may kept in Institutional Repository are postulations, papers, meeting papers, diary articles, reports, licenses, and so forth There is no uncertainty Institutional Repositories can fill in as a motor for foundations of advanced education, and all the more comprehensively for the insightful endeavors that supports research exercises. (N. Ashok Kumar).

Institutional Repositories are thinking of the such countless destinations dependent on the establishment, however lion's share of the Institutional Repositories are basically worry with following targets, for example, I) worldwide perceivability for an organization's grant ii) gather content in a solitary area iii) open access iv) institutional examination yield without help from anyone else filing and v) store and protect institutional computerized resources, including unpublished or in any case effortlessly lost ("dim") writing (e.g., theories or specialized reports) and so forth.

The structure of an Institutional Repository for any association is required in the current situation of computerized world in view of the specific changes, for example, Technology, Increase in the general volume of exploration, Increasing need of documented and admittance to unpublished data bearing articles, Increasing interest to get to information objects from anyplace whenever, Increase vulnerability over who will deal with the conservation filing of advanced academic examination materials. (Kanchan Kamila-2009).

In India e-Prints at Indian Institute of Science is a quickest developing Repository contrast with other institutional stores. e-Prints at Indian Institute of Science gathers, protects and scatters in computerized design the examination yield made by the Indian Institute of Science research network. It empowers the Institute people group to store their preprints, post prints and other insightful distributions utilizing a web interface, and coordinates these distributions

for simple recovery and sharing.

2. METHODOLOGY

The examination receives contextual investigation strategy through which a survey of writing of articles on IR distributed till date is filtered to acquire the data of IR in India. The Institutional Repository and e-Prints at Indian Institute of Science Institutional Repository site (http://www.eprints.Indian Institute of Science.ac.in) is utilized as essential hotspot for the contextual analysis on specific boundaries, for example, number of records, equipment and programming utilized, development of assortment, area shrewd appropriation of substance, use and recovery design and so forth to meet the destinations.

3. OBJECTIVES OF THE STUDY

3.1 e-Prints developments in India;

3.2 About e-Prints at Indian Institute of Science Development;

3.3 e-Prints at Indian Institute of Science Collection analysis:

3.3.1 Type of Documents;

3.3.2 Unidentified, Refereed and Non Refereed documents;

3.3.3 Divisions Institutional Repository;

3.3.4 Age wise of sources available in Institutional Repository;

3.3.5 e-Print Rank Position in India.

3.1 e-Prints developments in India

Countless IRs have been set up around the world, in excess of 5267 vaults have been enlisted with Registry of Open Access Repository (ROAR) as kept up by Open Archive Initiative's site (http://roar.eprints.org) just as by Open Directory of Open Access Registry Open Directory (OpenDOAR). In India Libraries and data focuses have appended to different kinds of foundations are currently participating in open access development, by setting up institutional stores, computerized storehouses to give overall admittance to their exploration records. Institutional stores from India as enlisted with ROAR. Existing IRs in India-there are 389 IRs enrolled with ROAR, OpenDOAR.

Innovative work (R&D) establishments and higher learning foundations in India, for example, Indian Institute of Science, Indian Institutes of Technology (IITs), and Indian Statistical Institute (ISI), organizations under the Council of Scientific and Industrial Research (CSIR) and Indian Council of Medical Research (ICMR) are occupied with storing

their scholarly work in the institutional vault. Driving Indian logical exploration foundations, presently Indian Institute of Science is one establishment having in excess of 51440 reports in its store.

3.2 About e-Prints at Indian Institute of Science Development

The Indian Institute of Science was set up in 1909 from that point forward, it has developed into a head foundation of examination and progressed guidance, with in excess of 5,000 dynamic analysts working in practically all wilderness regions of science and innovation. Consistently it produces numerous scholarly works it very well might be diary articles, reports, proposition and theses, licenses, guidelines and so on In 2004, to gather and spread all the scholarly work the Indian the name of "e-Prints at Indian Institute of Science". Organization of Science made stride in setting up of Institutional Repository and that has accompanied late Dr T.B. Rajashekar was the group chief in setting up the e-Prints at Indian Institute of Science vault, His massive information in the zones of Library and Information Science, and in the arising field of advanced library, was successfully put to use in a portion of the creative and novel highlights of e-Prints at Indian Institute of Science. It gathers safeguards and disperses in computerized design the exploration yield made by the Indian Institute of Science research network. It empowers the Institute people group to store their preprints, post prints and other academic distributions utilizing a web interface, and arranges these distributions for simple recovery. While e-Prints at Indian Institute of Science can be gotten to by anyone, accommodation of records to this storehouse is restricted to the Indian Institute of Science research network as it were.

e-Prints at Indian Institute of Science vault is running on e-Prints open chronicle programming, a uninhibitedly distributable document framework accessible from eprints.org. e-Prints at Indian Institute of Science follows the Open Archives Initiative (OAI) system permitting distributions to be handily listed by web crawlers and other ordering administrations. From the analysts viewpoint the Institute is attempting to dazzle on them the preferences that they remain to acquire by storing their exploration papers in the open-access, interoperable institutional vault by focusing on the accompanying focuses: (https://eprints.iisc.ac.in)

1. Helps in setting up need for research discoveries;
2. Being interoperable, metadata from the vault are accessible through cross chronicle specialist co-ops like OAIster

3. Indexed by Google Scholar, Microsoft's Windows Live Academic Search, Scirus

4. Better perceivability and more extensive access

5. Rapid correspondence of examination;

6. Long-term conservation;

7. Integrated perspective on Indian Institute of Science research distributions;

8. Value-added administrations like individual and office insightful distribution postings; and Graphical perspective on use measurements.

3.3 e-Prints at Indian Institute of Science analysis study

An institutional storehouse stores and makes open the instructive, research and related resources of an establishment. A large portion of the as of now settled institutional vaults are giving open admittance to the examination yields of a college or exploration establishment. The substance conceivably incorporates research information, learning material, picture assortments and numerous other various sorts of substance. The Indian Institute of Science Institutional Repository is exceptionally wealthy in its assortment and subsequently the creators have thought about coming up next rules' to survey the complete assortment of its vault.

3.3.1 Type of Documents
Table 1: Type of Document at e-Prints@IISc.

Sl. No.	Type of Document	No. of Document's	Percentage
1	Book	38	0.07%
2	Book Chapter	110	0.21%
3	Conference Proceedings	2073	4.03%
4	Conference Papers	5300	10.30%
5	Conference poster	76	0.15%
6	Departmental Technical Report	61	0.12%
7	Journal Article	41849	81.31%
8	Editorials/Short Communications	1699	3.30%
9	Patents	26	0.05%
10	Preprints	218	0.42%
11	Teaching Resource	4	0.01%
12	Other	13	0.03%
13	Conference/Workshop items	1	0.00%
	Total	51468	100.00%

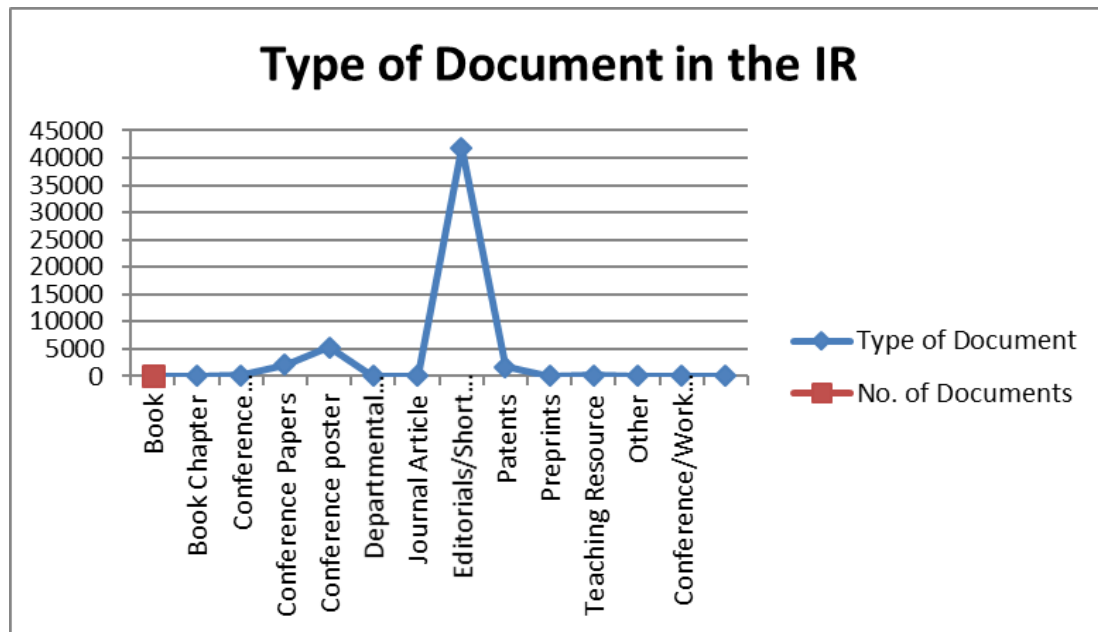## Type of Document in the IR

Figure 1: Type of documents available in IR.

e-Prints at Indian Institute of Science one significant and biggest in the assortment is sort of records. Table 1 self clarifies the sort of the reports distribution accessible as kept with e-Prints at Indian Institute of Science storehouse. Complete of 51468 reports, greatest 41849 (81.43%) number of archives were diary articles. Followed by 5300 (10.13%) Conference Papers, 2073 (4.06%) Conference procedures, 1699 (3.30%) Editorial/Short Material, 38(0.07%) Book and 107 (0.20%) Book parts, 61 (0.11%) Departmental Technical Report, 76 (0.14%) Conference Posters, 26 (0.05%) Patents, 4 (0.007%) Teaching Resource and 1 (0.001%) Conference assets.

3.3.2 Unidentified, Refereed and Non Refereed documents

Table 2: Un Identified Refereed and Non-Refereed Documents.

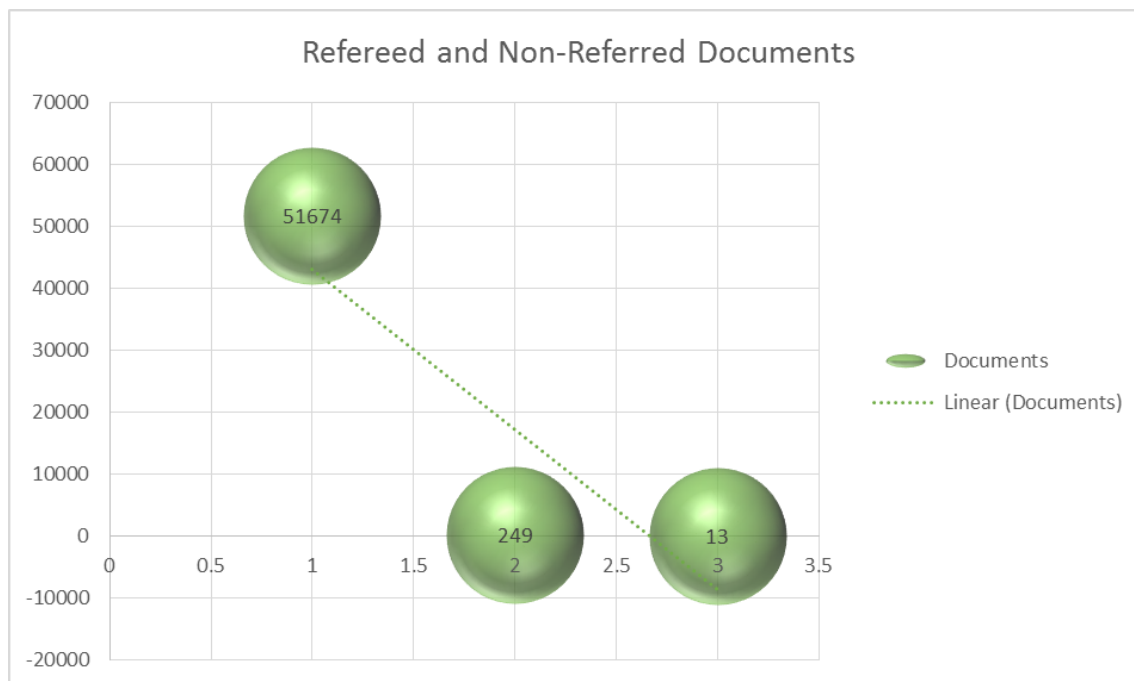| Refereed/ Non Referred	No of Documents	Percentage
Refereed documents	51674	99.50%
Not Refereed documents	249	0.48%
Un identified	13	0.02%
Total	51936	100%

Figure 2: Unidentified, Refereed and Non-Referred Documents.

e-Prints at Indian Institute of Science concealments all Un Identified, Refereed and Non-Refereed documents. Table-2 shows the no of research resources accessibility of unidentified, refereed and non-referred documents. Therefore, total no. of 51936 documents, mainstream 51674 of refereed documents and remaining other documents like non-refereed and unidentified.

3.3.3 Divisions Institutional Repository

Table 3: Division wise contribution of Resources.

| Sl No	List of Divisions	No of Resources	CM Documents	Percentage
1	Division of Biological Sciences	8602	8602	15.75%
2	Division of Chemical Sciences	12546	21148	22.97%
3	UG Program	39	21187	0.07%
4	Division of Electronic Sciences	7767	28954	14.22%
5	Division of Information Sciences	244	29198	0.45%
6	Division of Mechanical Sciences	13251	42449	24.26%
7	Division of Physical and Mathematical Sciences	9486	51935	17.37%
8	Division of Interdisciplinary Sciences	2431	54366	4.45%
9	Others	192	54558	0.35%
10	Administration	10	54568	0.02%
11	Autonomous Societies/Centers	37	54605	0.07%
12	Centers under the Director	17	54622	0.03%
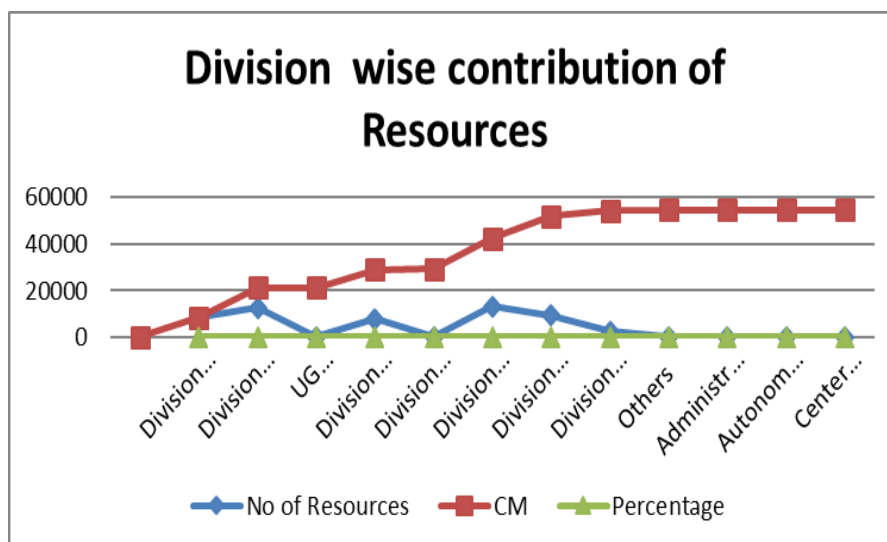
Figure 3: Divisions Institutional Repository.

Indian Institute of Science have gigantic no. of divisions with the end goal of examination work. There are the greater part century divisions. The Indian Institute of Science is significantly contributing the examination exercises, supported exploration project works, and just as scholarly exercises. Table-3 clarify the contributed their exploration works at Institute thus it has been protected at e-Prints at Indian Institute of Science and for future scattering reason. The larger part 13251 (24.26%) of reports showed up from the division of Mechanical Sciences followed by 12546 (22.97%) from the division of Chemical Sciences, 9486 (17.37%) from division of Physical and Mathematical Sciences, 7767 (14.22%) from the division of Electronic Sciences, 8602 (15.75%) from division of Biological Sciences, 192 (0.35%) from other unidentified divisions, 244 (0.45%) from division of Information Sciences, 39 (0.07%) from UG, 17 (0.03%) from Centers structure the Director.

3.3.4 Decade wise of sources available in Institutional Repository

Table 4: Decade wise of sources available in IR.

Decade source type Available	No of sources Available	Percentage	CM Sources
1914-1923	91	0.18%	91
1924-1933	83	0.16%	174
1934-1943	15	0.03%	189
1944-1953	40	0.08%	229
1954-1963	264	0.51%	493
1964-1973	949	1.84%	1442
1974-1983	3528	6.86%	4970
1984-1993	5845	11.36%	10815
1994-2003	9486	18.44%	20301

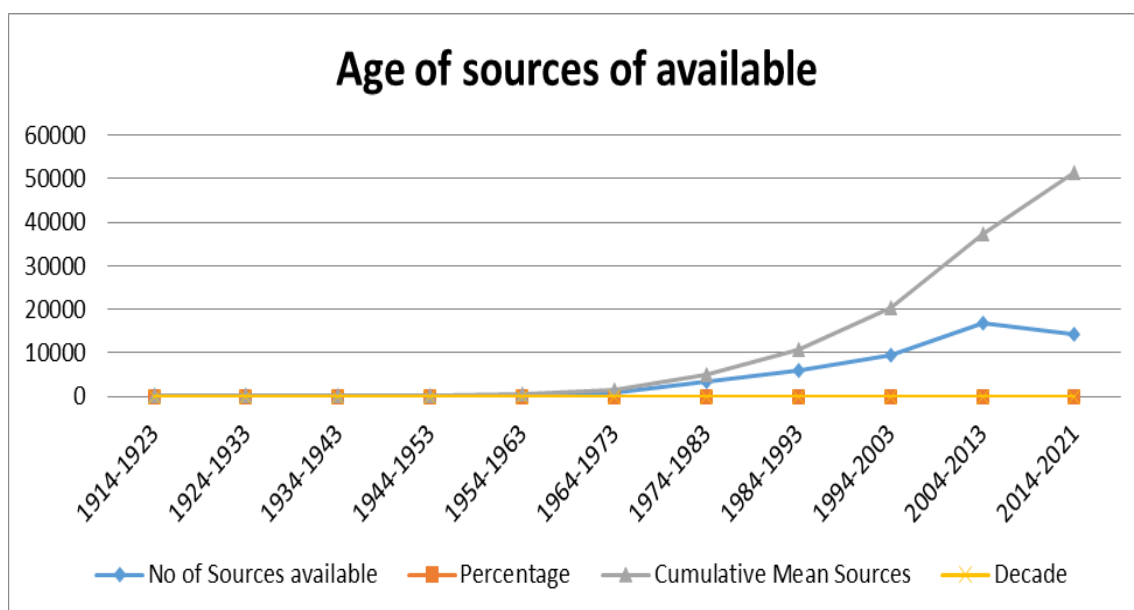| 2004-2013	16928	32.90%	37229
2014-2021	14224	27.64%	51453
Total	51453	100.00%	102906

Figure 4: Decade wise of sources available in IR.

Decade astute of sources accessible in exploration articles has in the e-Prints at Indian Institute of Science store. Obviously it is interesting archive and all exploration articles are safeguarded for future reference and spread of the other examination reference. During 1914-1923, there are 91 old archives are found in the vault. Followed by this 83 are between 1924-1933, 15 of every 1934-1943, 40 out of 1944-1953, 264 out of 1954-1963, 949 out of 1964-1973, 3528 out of 1974-1983, 5845 out of 1984-1993, 9486 out of 1994-2003, 16928 out of 2004-2013, 14224 out of 2014-2021 and 51453 from 2004 to 08th January 2021. The result shows that the propensity towards expanding number of volume of creation. This could be because of expanding familiarity with computerized files and its advantages for the two sides of creators just as their establishments (www.ijodls.in 2014).

3.3.5 e-Print Rank Position in India

Table 5: e-Prints at Indian Institute of Science Rank Position in India.

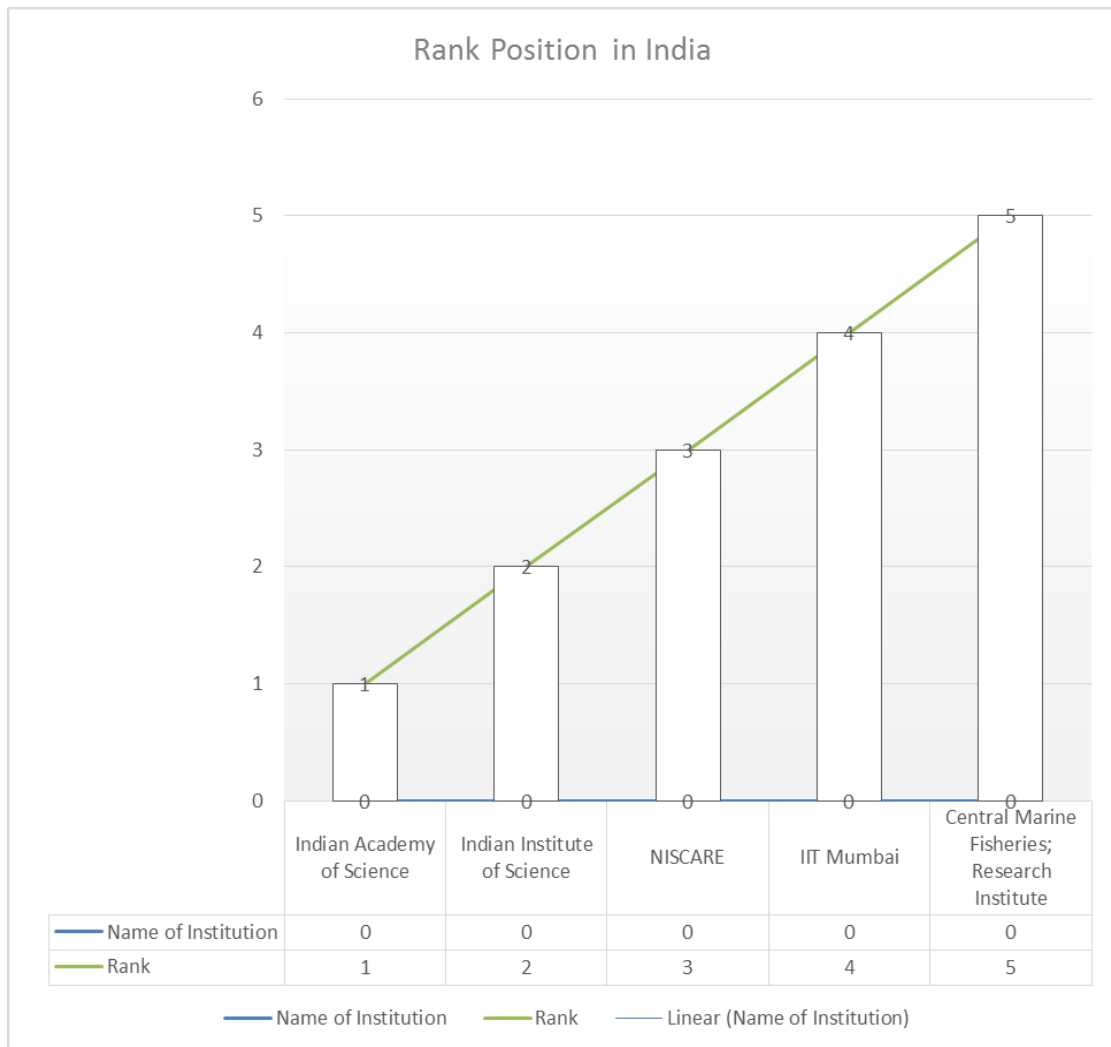| Name of the Institution	Documents	Percentage	Rank
Indian Academy of Science	106359	43%	1
Indian Institute of Science	51488	21%	2
NISCARE	50904	21%	3
IIT Mumbai	22261	9%	4
Central Marine Fisheries; Research Institute	14176	6%	5
Total	245188	100%	

Figure 5: e-Prints Rank Position in India.

Table 5 uncovers the rank position dependent on the assortment of reports at e-Prints at Indian. The Rank has been granted or pronounced dependent on the most noteworthy articles existing in their separate stores. According to the table that the Indian Academy of Science stands top or first position with having 106359 reports. The Indian Institute of Science acquired second position with having 51488 reports; NISCARE protected third position with having 50904 archives; IIT Mumbai position fourth position with having 22261 records and Central Marine Fisheries Research Institute positions fifth position with having 14176 records.

4. OBSERVATIONS

1. It is seen that Journal articles have been contributed in significant numbers instead of, the other type of data.

2. Majority of the accessible records in e-Prints at Indian Institute of Science are refereed

archives. This epitomizes the fortune of value store.

3. Division of Chemical Sciences and Biological Sciences both contributed most extreme number of records to the stores. It shows that these two divisions are more dynamic driven in distributing and contributing variegated data sources to the vault.

4. The previously Published wellsprings of data discovers its present for huge scope in to the e-Prints at Indian Institute of Science storehouse.

5. The examination has audited that, PDF and Images JPGs designed archives are more contrasted with the other organized reports, for example, HTML, Plain content, RTF and so on

6. Only IIT, IIM and innovative work associations rank high in keeping most extreme number of sources in to the institutional stores and

5. CONCLUSION

As withdrawn closed the synopsis on e-Prints at Indian Institute of Science assets. Indian Institute of Science has emphatically development in the assortment of exploration articles saved for future spread this has been conceivable through e-Print programming as it were. The Indian Institute of Science e-Prints vault examination concentrate a lot of fascinating on different goals like Type of Documents, Unidentified, Refereed and Non Refereed reports, Divisions Institutional Repository, Decade shrewd of sources accessible in Institutional Repository, e-Print Rank Position in India. Subsequently every instructive exploration foundation should be safeguard their own examination resemblance for future spread of the data. There is a requirement for steady development in new Institutional Resources being enlisted by utilizing e-Prints open source programming. Each exploration establishment need for proceeds with endeavors in their own Institutional Repository.

Right now, the public authority body called National Knowledge Commission has suggested and University Grants Commission have unmistakably expressed that, all open subsidized examination foundations should be build up their own exploration assortments and preserver with open access software's.

As experienced the outline on e-Prints at Indian Institute of Science Institutional Repository of Indian Institute of Science has effectively made its own comment in the model guide of Institutional Repositories in India utilizing the e-Prints programming. This exertion could be duplicated in all the Faculties in consequences of their references, effect, record and eminence.

These days, as like these examination foundations, colleges are additionally creating more computerized goals like exploration articles, reports, proposal, Audio/Video, clippings and datasets in truly expanding number. Henceforth, there is additionally a need of setting up of institutional vaults. In such manner the public authority body called National Knowledge Commission has suggested and University Grants Commission have expressed that, all open subsidized exploration ought to be made open access. It has been seen that there is a persistent development in new IRs being enrolled and furthermore there is a flood in the quantity of records over the period. There is need for coordinated endeavors here.

6. ACKNOWLEDGMENTS

This research article would not be complete without acknowledging the e-Prints at Indian Institute of Science, Bengaluru and OpenROAR websites. Of course the paper collected all the years of data has been collected form e-Prints website at IISc, Bengaluru, due to this the paper accomplishment successfully. As I knew without data it is not possible to complete the objectives of these study in this paper.

I also takes this opportunity to thanks all authors in the references I has been mentioned in the bellow. Who are published in the previous years, I have been referred their published article and got clear idea to write this paper successfully.

DISCLOSURE OF CONFLICT OF INTEREST

As the paper is authored by single author so there is no conflict of interest.

7. REFERENCES

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