

# STATUS OF INSTITUTIONAL REPOSITORY IN SRI LANKA: AN ANALYTICAL STUDY

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**ABSTRACT:** This paper highlights on the growth and development of Institutional repositories of Asian countries particularly in Sri Lanka. This paper also examines the usage of institutional repositories in Sri Lanka. The data for the study has been collected from the website of respective institutions in Sri Lanka. The study analyzed the Communities and Sub Communities, Contribution of authors of the institutional repositories in Sri Lanka. The study found out that, the awareness among the usage of Institutional Repositories in the Sri Lanka is less among the faculty members and research scholars, hence it was recommended from the study that more training programmes should be initiated to create awareness for using Institutional Repositories in Sri Lanka.

**Keywords:** Institutional Repositories, DSpace, Digital, Registry, Directory

## 1. INTRODUCTION

An IR may be defined as an on-line locus for collecting and preserving in digital form the intellectual output of an institution. According to Lynch (2003) an institutional repository is a “set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long term preservation where appropriate, as well as organization and access or distribution.” Many universities and colleges world over have initiated projects to develop repositories that will enable faculty and researchers to upload and download scholarly literature and use them to share resources with each other either within the institution or across the region, or more widely still.

## 2. OBJECTIVES

Nowadays, the development of information and communication technologies (ICT), management of various types of electronic resources has become a popular mode of information dissemination. This study is an attempt to understand the distribution and magnitude of OARs in various perspectives with the following objectives.

- To identify the overall growth of Institutional Repository in Asia and Sri Lanka
- To examine the Asian country wise distribution of Institutional Repository
- To identify the subjects archived by Institutional Repository
- To determine language diversity in Institutional Repository
- To find out the contribution of authors in Sri Lanka Universities.

## 3. METHODOLOGY

This study adopted an analytical method where the data are readily available in the website. At first, the institutions that are using Dspace software for building Institutional repository in each of the Institution in Sri Lanka were identified and sorted out separately. Then data regarding the collections, communities etc were separately collected from the website the respective institutions. The study also further analysed the number of institutions using Dspace ,their collections, number of Communities and Sub Communities available, number of authors etc.,. All these data were subsequently tabulated for making observations.

## 4. RESULTS AND DISUSSION

### 4.1 Distribution of Repositories by Country

From Asian countries institutional repositories, It was found that from the table 2 analysis Japan maintains the highest number of repositories at 196 (30.87%) followed by the Turkey with 74 (11.65%), India repositories at 73 (11.50%), Taiwan has 59 (9.29 %) of institutional repositories and Indonesia 56 (8.82 %) with institutional repositories respectively. And the remaining countries were involved the repositories work at below 50 institutions. China (39), Korea (28), Malaysia (21), Thailand (11), Sri Lanka (11), Iran (10) and Bangladesh (10) were make significant contributions (above 10 organizations). Saudi Arabia (9), and Philippines (7) were has involved the digital preservation for repositories each above 5 institutions. The countries of Singapore (4), Hong Kong (4), Pakistan (3), Kazakhstan (3), Georgia (3), Kyrgyzstan (2), Azerbaijan (2), Armenia (2), Vietnam (1), Qatar (1), Nepal (1), Lebanon (1), Laos (1), Iraq (1), Palestinian (1) and Afghanistan (1) were involved the digital preservation work for institutional repositories..

**Table 2: Distribution of repositories by Asian Countries**

S.No	Countries	No. Of Repository	S.No	countries	No. of Repositories
1	<b>Japan</b>	<b>196 (30.87)</b>	16	Hong Kong	4 (0.63)
2	Turkey	74 (11.65)	17	Pakistan	3 (0.47)
3	India	73 (11.50)	18	Kazakhstan	3 (0.47)
4	Taiwan	59 (9.29)	19	Georgia	3 (0.47)
5	Indonesia	56 (8.82)	20	Kyrgyzstan	2 (0.31)
6	China	39 (6.14)	21	Azerbaijan	2 (0.31)
7	Korea	28 (4.41)	22	Armenia	2 (0.31)
8	Malaysia	21 (3.31)	23	Vietnam	1(0.16)
9	Thailand	11 (1.73)	24	Qatar	1(0.16)
10	<b>Sri Lanka</b>	<b>11 (1.73)</b>	25	Nepal	1(0.16)
11	Iran	10 (1.57)	26	Lebanon	1(0.16)
12	Bangladesh	10 (1.57)	27	Laos	1(0.16)
13	Saudi Arabia	9 (1.42)	28	Iraq	1(0.16)
14	Philippines	7 (1.10)	29	Afghanistan	1(0.16)
15	Singapore	4 (0.63)	30	Palestinian	1 (0.16)

### 4.2. Core Content types

Table 3 shows the types of core contents currently stored in Institutional Repositories. Institutional Repositories provides a comprehensive insight of content types of all repositories. Most of institutions were has several (multi) content types for their institutional repositories.

The majority of repositories hold “Journal articles” (2214 institutions) among those 515 (81.8 %) of Asian countries and 73.97 percent of Sri Lankan repositories were given first preferences. Followed by 1759 organizations were used the Theses among those 369 (58.11 %) of Asian institution used this content for repositories. 1207 organizations were used the books among those 194 (30.55 %) of Asian institutions 32.9 percent of Sri Lankan institutions were used this content for repositories. 1146 organizations were used the Unpublished among those 238 (34.16 %) of Asian institutions and 23 institutions in Sri Lanka were used this content for repositories. 1143 organizations were used the Conferences among those 210 Asian institutions and 34 Sri Lankan institutions were used this content

for repositories. Remaining content were used by very least number of institutions from Asia and Sri Lanka.

**Table 3: Distribution of Content Types**

S.No	Content types	World countries	Asian countries	Sri Lanka
1	Articles	2214 (69.82)	515 (81.1)	54 (73.97)
2	Theses	1759 (55.47)	369 (58.11)	37 (50.68)
5	Books	1207 (38.06)	194 (30.55)	24 (32.88)
3	Unpublished	1146 (36.07)	238(34.16)	23 (32.04)
4	Conferences	1143 (36.05)	210 (33.07)	34 (46.58)
7	Multimedia	719 (22.67)	94(14.8)	18 (24.66)
6	Learning Objects	508(16.02)	92 (14.49)	17 (23.29)
9	Special	507 (15.99)	74 (11.65)	11 (15.07)
8	References	469 (14.79)	81 (12.76)	8 (10.96)
11	Datasets	166 (5.23)	15 (2.36)	1 (1.37)
10	Patents	96 (3.03)	35 (5.51)	4 (5.48)
12	Software	52 (1.64)	2 (0.31)	0

**Fig. 3: Content types of repositories by Asian countries**

It could be identified the majority of the Asian countries and Sri Lanka were used the **Journal articles**, thesis and dissertations and conference for their institutional repositories.

#### 4.3 Sri Lanka Contribution – Dspace

*Table 4 Community and Sub Community*

S.N O	INSTITUTIONS	COMMUNITY	SUB COMMUNITY
1	University of Colombo	13	71
2	University of Peradeniya	5	35
3	University of Moratuwa	3	21
4	University of Sri Jayawardenapura	9	67
5	University of Kelaniya	9	59
6	Open University of Sri Lanka	1	4
7	University of Jaffna	7	29
8	Sri Lanka Institute of Information Technology	6	17
9	Rajarata University of Sri Lanka	9	47
10	Industrial Technological Institute	5	17

11	National Science Foundation of Sri Lanka	6	37
12	Rubber Research Institute of Sri Lanka	4	11
13	Coconut Research Institute of Sri Lanka	3	10
14	Hector Kobbekaduwa Agrarian Research and Training Institute	1	6
	TOTAL	81	431

*Table 5 Contribution of Authors*

<b>S.NO</b>	<b>INSTITUTIONS</b>	<b>AUTHORS</b>
<b>1</b>	University of Colombo	1035
<b>2</b>	University of Peradeniya	2614
<b>3</b>	University of Moratuwa	1225
<b>4</b>	University of Sri Jayawardenapura	1098
<b>5</b>	University of Kelaniya	1477
<b>6</b>	Open University of Sri Lanka	
<b>7</b>	University of Jaffna	428
<b>8</b>	Sri Lanka Institute of Information Technology	590
<b>9</b>	Rajarata University of Sri Lanka	781
<b>10</b>	Industrial Technological Institute	834
<b>11</b>	National Science Foundation of Sri Lanka	2951
<b>12</b>	Rubber Research Institute of Sri Lanka	773
<b>13</b>	Coconut Research Institute of Sri Lanka	803
<b>14</b>	Hector Kobbekaduwa Agrarian Research and Training Institute	867
	TOTAL	14476

Table 4 and 5 shows the community and sub community and contribution of authors in Sri Lanka Institutional Repositories. Institutional Repositories provides a comprehensive insight of community content and authors of all repositories. Most of institutions were has several authors contributed for their institutional repositories

In the contribution of authors in Sri Lanka, 2951 authors have contributed to National Science Foundation of Sri Lanka's Collection. It also analyzed the collections, communities, authors etc of the various Institutional repositories. In assessing the Communities and Sub Communities, University of Colombo has the highest of 13 communities and 71 sub communities in Sri Lanka

#### 4.6. Subject archived by Repositories

Table 6 shows that most large institutions effectively hold all subjects in their repositories at globe and Asian countries. It was found that Multidisciplinary repositories are highest in number of institutions.

Out of 3171 institutions 1896 (59.79 %) of institutions were used the subject area of multidisciplinary, 313 (9.87 %) of institutions were used the subject area of Health and Medicine, 243 (7.66 %) of institutions were used subject area of History and Archaeology, 242 (7.63 %) of institutions were used the subject area of Business and Economics, 232 (7.32 %) of institutions were used the subject area of Science General, 229 (7.22 %) of institutions were used subject area of Technology General, 218 (6.87 %) of institutions were used subject area of Law and Politics.

**Table 6: Subject archived by repositories**

S.No	Subject area	World countries	Asian countries	Sri Lanka
1	Multidisciplinary	1896(59.79)	406 (63.94)	32 (43.84)
2	Health and Medicine	313(9.87)	79 (12.44)	9 (12.33)
3	Technology General	229(7.22)	63(9.92)	12(16.44)
4	Science General	232(7.32)	634(99.84)	7 (9.59)
5	Business and Economics	242(7.63)	50 (7.87)	2(2.74)
6	Education	186 (5.87)	36 (5.67)	1(1.37)
7	Law and Politics	218 (6.87)	35 (5.51)	2(2.74)
8	Agriculture food and Veterinary	144 (4.54)	51(8.03)	5(6.85)
9	Computers and IT	168 (5.30)	28(4.41)	7(9.59)
10	Social Sciences General	190 (5.99)	25 (3.94)	4(5.48)
11	Library and Information Science	124 (3.91)	26 (4.09)	5(6.85)
12	Biology and Biochemistry	148 (4.67)	24(3.78)	7(9.59)
13	Chemistry and chemical Technology	93 (2.93)	24 (3.78)	9(12.33)

14	Ecology and environment	144 (4.54)	22(3.46)	4(5.48)
15	Philosophy and religion	125 (3.94)	23(3.62)	0
16	Physics and Astronomy	104 (3.28)	20 (3.15)	8(10.96)
17	History and Archaeology	243(7.66)	21(3.31)	1(1.37)
18	Management and Planning	99 (3.12)	21(3.31)	3(4.11)
19	Mechanical Engineering and Materials	67 (2.11)	16(2.52)	7(9.59)
20	Mathematics and statistics	119 (3.75)	14(2.20)	5(6.85)
21	Earth and Planetary Science	85 (2.68)	13(2.05)	4(5.48)
22	Geography and regional studies	184 (5.8)	13(2.05)	1(1.37)
23	Electrical and electronic engineering	52 (1.64)	12 (1.89)	6(8.22)
24	Psychology	74 (2.33)	10 (1.57)	2(2.74)
25	Civil engineering	42 (1.32)	7(1.1)	3(4.11)
26	Architecture	59 (1.86)	6(0.94)	1(1.37)
27	Arts and Humanities General	164 (5.17)	33(5.20)	1(1.37)
28	Languages and Literature	143 (4.51)	31(4.88)	1(1.37)
29	Fine and Performing Arts	103 (3.25)	7(1.10)	0

Out of 635 institutions, 406 (63.94 %) of institutions were used the subject area of multidisciplinary, 634 (99.84 %) of institutions were used the subject area of Science General, 79 (12.44 %) of institutions were used subject area of Health and Medicine, 63 (9.92 %) of institutions were used the subject area of Technology General, 51 (8.03 %) of institutions were used the subject area of Agriculture food and Veterinary, 50 (7.87 %) of institutions were used subject area of Business and Economics respectively. Remaining subject content was used less number of institutions.

Out of 73 institutions, 32 (43.84 %) of institutions were used the subject area of multidisciplinary, followed by 12 (16.44 %) of institutions were used the subject area of Technology General.

It could be identified the majority of institutions were used the subject areas for IR is **Multidisciplinary**. World countries has multidisciplinary subjects is highest followed by the History and Archaeology. From Asian Countries has highest IR content in the subject of Multidisciplinary and Science General. From Sri Lankan status for subject content in IR of open INSTITUTIONAL REPOSITORY is multidisciplinary and Technology General. In generally, the subject content of IR in open INSTITUTIONAL REPOSITORY is Multidisciplinary, History and Archaeology, Science General and Technology General.

## CONCLUSION

An Institutional Repository can serve as a depository for the research, teaching, and scholarship of an institution. In a university setting, an Institutional Repository provides a centralized digital platform through which community members can highlight their work. Through an Institutional Repository, forthcoming students and faculty can obtain a robust portrait of the types and areas of scholarship in progress in a given department. This study analyzed the utilization of Dspace software in Sri Lankan institutions. The findings revealed that National Science Foundation of Sri Lanka has the maximum number of collections in Sri Lanka.

The study found out that, the awareness among the usage of Institutional Repositories in the Sri Lanka is less among the faculty members and research scholars; hence it was recommended from the study that more training programmes should be initiated to create awareness for using Institutional Repositories in Sri Lanka.

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