

THE GROWTH AND DEVELOPMENT INSTITUTIONAL REPOSITORIES IN BRAZIL

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ABSTRACT

This paper discusses number of institutional repositories, software used, what are the content available in IR, which language mostly used in Brazil. Currently the intellectual output of the educators and the organization plays an essential role in the education knowledge process of a Higher Educational Institution. Articles; Theses; Unpublished; Books; Datasets etc are scattered in many places of an institution in print and electronic form. Therefore it is essential to collect, classify, arrange and store these materials digitally in a single platform by establishing Institutional Repository (IR) and to provide easy access to them over intranet/internet to the institute community and others. The 84 repositories are available in Brazil country with consists of total 11, 17,688 number of records and 62 repositories are in a mono-lingual type language which is used Spanish and Portuguese only. It is found that, most of the repositories are also used Portuguese languages but only one repository are generated by using Spanish language only.

Key words: Institutional repository, Brazil, software, Type of languages; No. of records.

1. INTRODUCTION

An institutional repository (IR) is an online archive for collecting, preserving, and disseminating digital copies of the intellectual output of an institution, particularly a research institution. An institutional repository can be viewed as a "...a set of services that a university offers to members of its community for the management and dissemination of digital materials created by the institution and its community members. This includes materials such as monographs, academic journal articles, both preprints and post prints undergoing peer review, as well as electronic theses and dissertations (ETDs).

Dr S.R. Ranganathan's five laws of library science enforce on the thought of providing the right information to the right users on right time by making the document available to the user irrespective of users and the place of the document. An institutional repository might also include other digital assets generated by academics, such as administrative documents, course notes, learning objects, or conference proceedings. Deposit of material in an institutional repository is sometimes mandated by that institution. Some of the main objectives for having an institutional repository are to provide open access to institutional research output by self-archiving it, to create global visibility for an institution's scholarly research, and to store and preserve other institutional digital assets, including unpublished or otherwise easily lost literature such as theses or technical reports.

2. INSTITUTIONAL REPOSITORIES

We may define IR shortly as 'a digital archive of an intellectual product created by the staff and students of an individual institution so as to make it available and accessible by the end users within the institution in e- form'. IR is a very powerful initiative that can serve as an engine of change for any institution and become an indispensable component for information and knowledge sharing in the scholarly world. IR provides a method for capturing and maintaining today's electronic resources, so that tomorrow's scholars can use and understand the thinking behind the published records

Institutional repositories are digital collections of the outputs created within a university or research institution. Whilst the purposes of repositories may vary in most cases they are established to provide Open Access to the institution's research output. Repositories adhere to an internationally-agreed set of technical standards that means that they expose the metadata of each item in their contents on the Web in the same basic way. In other words, they are 'interoperable'. This common protocol to which they all adhere is called the open Archives Initiative Protocol for Metadata Harvesting. The contents of all repositories are then indexed by Web search engines such as Google and Google Scholar, creating online Open Access databases of freely-available global research. As the level of self-archiving grows the Open Access corpus will represent an increasingly large proportion of the scholarly literature.

3. REVIEW OF LITERATURE

Crow (2002) identified an institutional repository with four major qualities: institutionally defined, scholarly, cumulative and perpetual, and open and interoperable. Khan and Kumar Das (2008) stated that “A digital repository is one where digital content, assets, are stored and can be searched and retrieved for later use.” According to Yeates (2003), “An institutional repository is the collective intellectual output of an institution recorded in a form that can be preserved and exploited.” Dhanavandan (2014) identified, the United States has 17 (14.17%) repositories for LIS, followed by the United Kingdom (12, 10.00%), and Germany (9, 7.50%). India is in the fifth position with 5 (4.17%) repositories on LIS.

According to Lynch (2003), a university-based 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.

4. SCOPE AND LIMITATION OF THE STUDY

This study is only limited to open access Institutional Repositories which are listed in the DOAR. It is only considered in Brazil and other countries are not considered.

5. OBJECTIVES OF THE STUDY

The following objectives are framed

1. To know the name and strength of records available IRs in Brazil
2. To identify the contents available in the IRs in Brazil
3. To identify the various software using in IRs
4. To know the subject wise distribution of IRs
5. To find out the types of languages used in IRs

6. METHODOLOGY

This study is to find out the growth and development Institutional repositories available in Brazil. The required data has been collected from the open access directory from <http://www.opendoar.org/> on 1st December 2014. The data was analyzed by using suitable statistical tools as per the data retrieved from the source.

7. ANALYSIS AND INTERPRETATION

This study is aimed to discuss about growth and development of the Institutional Repositories available in Brazil. The respected sources were collected from OpenDOAR directory. The name of the repositories and their strength of records are shown in table-

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Table 1: Name of the Institutional Repositories in Brazil Vs No.of Available Records

SI.No.	Name of the Repositories	No. of Repositories	No. of Records
1	BDSF (Biblioteca Digital do Senado Federal)	1	244830
2	Lume - Repositório Digital da Universidade Federal do Rio Grande do Sul	1	104386
3	Acervo Digital da Unesp	1	89645
4	Repositório Institucional UNESP	1	72358
5	Alice (Repository Open Access to Scientific Information from Embrapa)	1	54332
6	PePSIC - Electronic Psychology Journals (Portal de Periódicos Eletrônicos de Psicologia (PePSIC))	1	53358
7	Biblioteca Digital de Teses e Dissertações da Universidade de São Paulo (Digital Library USP)	1	49714
8	Repositório Institucional da UFSC	1	48462
9	Biblioteca Digital da UNICAMP	1	42528
10	Biblioteca Digital da Produção Intelectual da Universidade de São Paulo (BDPI/USP)	1	40810
11	Infoteca-e	1	29481
12	Biblioteca Digital Jurídica do Superior Tribunal de Justiça (BDJur)	1	25168
13	Banco Internacional de Objetos Educacionais	1	19835
14	DSpace at UFPR	1	16795
15	Projeto Maxwell (MAXWELL)	1	16604
16	BDBComp (Biblioteca Digital Brasileira de	1	16320

	Computação)		
17	Repositório Institucional da Universidade de Brasília (RIUnB)	1	15416
18	Repositório Institucional da Universidade Federal da Bahia (RI/UFBA)	1	14835
19	Scientific Electronic Library Online - Brazil (SciELO - Brazil)	1	14739
20	Repositório Institucional de Produção Científica da ENSP	1	14605
21	REPOSCOM (Repositórios Institucionais em Ciências da Comunicação)	1	10138
22	Jobim	1	9701
23	CBPF Index	1	9152
24	Repositorio Institucional da Universidade Federal do Ceará	1	8944
25	Biblioteca Digital de Monografias (BDM)	1	8717
26	Biblioteca Digital de Teses e Dissertações Eletrônicas da UERJ	1	7989
27	Brasiliiana USP	1	7661
28	ARCA (Institutional Repository of Fiocruz)	1	6289
29	Repositório Institucional da PUCRS	1	6208
30	Repositório Institucional da Universidade Federal do Rio Grande do Norte	1	5530
31	Repositorio Digital	1	5272
32	Repositório Institucional do UniCEUB	1	5242
33	RIUFLA (Repositório Institucional da Universidade Federal de Lavras)	1	4347
34	Repositório Institucional da Universidade Federal de Uberlândia (RI UFU)	1	4237
35	Repositório Institucional da Universidade Federal do Rio Grande	1	3828
36	Repositório Institucional da Universidade Federal do Pará (RIUFPA)	1	3664
37	Repositório de Outras Coleções Abertas (ROCA)	1	2542
38	roca	1	2542
39	Biblioteca Digital Ação Educativa	1	2157
40	Repositório Institucional UFMS (RIUFS)	1	1851
41	SciELO Public Health	1	1609
42	ARES - Acervo De Recursos Educacionais Em Saúde	1	1437
43	Livre Saber - Repositorio Digital de Materiais Didaticos	1	1364
44	Biblioteca Virtual Sobre Corrupcao	1	1340
45	Biblioteca Digital do IDP	1	1197
46	Repositório Institucional da ENAP	1	1156

47	Repositório Institucional da Universidade Federal de Goiás	1	1042
48	Repositório Institucional da Universidade Tecnológica Federal do Paraná (RIUT)	1	911
49	Repositório Institucional da Universidade Federal de Sergipe	1	886
50	Repositório UEPG	1	536
51	Livro Aberto	1	492
52	Repositório Institucional da Fundação João Pinheiro	1	479
53	Ri - INT (Repositório Institucional - Instituto Nacional de Tecnologia)	1	425
54	Repositório Acadêmico de Biblioteconomia e Ciência da Informação (RABCI)	1	422
55	RIDI - Repositório Institucional Digital do Ibict	1	408
56	Central de Informações sobre Cooperação Jurídica Internacional (Information Center on International Legal Cooperation)	1	338
57	Repositório Digital da Universidade Municipal de São Caetano do Sul	1	338
58	Guaiaca	1	335
59	Repositório Institucional da UFRB	1	281
60	Repositório Institucional da Universidade Federal do Espírito Santo	1	262
61	Carpe dIEN	1	255
62	Repositório Digital da Universidade Federal de Minas Gerais	1	246
63	Repositorio Institucional da Fundacao Santo Andre	1	231
64	Repositório Institucional da Universidade Federal Fluminense (RIUFF)	1	213
65	Repositório Institucional da Universidade Federal do Acre	1	200
66	Repositório Eletrônico - Departamento de Ciências Agrárias	1	190
67	Repositório Institucional Rede CEDES	1	151
68	RCTI	1	126
69	Repositório de Publicações Científicas da Universidade Federal do Maranhão	1	125
70	SciELO Social Sciences	1	120
71	Repositório de Divulgação das Produções Científicas e Técnicas da UFGD	1	110
72	Repositório Institucional da Fundação Centro Tecnológico de Minas Gerais	1	106
73	Repositório de Dados Eleitorais	1	73

74	Repositório Institucional da UFPE	1	47
75	Repositório Institucional da Universidade Federal de Santa Catarina	1	4
76	Repositório Institucional da UFVJM	1	1
77	Biblioteca Digital Brasileira de Teses e Dissertações	1	0
78	Biblioteca Digital de Teses e Dissertações	1	0
79	Biblioteca Digital de Teses e Dissertações da Universidade Federal do Maranhão	1	0
80	Biblioteca Multimídia	1	0
81	Biblioteca Virtual em Saúde - Ministério da Saúde (BVS)	1	0
82	Repositório de Teses e Dissertações da UFPB	1	0
83	Repositório Eletrônico Institucional (REI)	1	0
84	SabeRES (Repositório Saberes em Gestão Pública)	1	0

Table 1 shows the name of the Institutional repositories and their number of records are available in the Brazil. There are 84 repositories are available in Brazil country with consists of total 11, 17,688 number of records as on data collection period.. Among the 84, BDSF (Biblioteca Digital do Senado Federal) repositories have more than two lakhs records and Lume - Repositório Digital da Universidade Federal do Rio Grande do Sul repository have more than one lakh records during the data accessing period. . But, it is revealed from the table among the 84 repositories, 8 repositories has no single records in their repositories.

Table 2: Name of the Organization of Institutional Repository Vs Name of Software Used

Sl .No.	Name of the Organisations of Irs	Software
1	Universidade Estadual Paulista "Júlio de Mesquita Filho" (UNESP), Brazil	DSpace
2	Universidade Aberta do SUS - UNA-SUS, Brazil	DSpace
3	Ministério da Educação, Brazil	DSpace
4	Ação Educativa, Brazil	DSpace
5	Biblioteca Digital Brasileira de Teses e Dissertações, Instituto Brasileiro de Informação em Ciência e Tecnologia (ibict), Brazil	TEDE
6	UFMG Database Group, Universidad Federal de Minas Gerais (UFMG), Brazil	
7	Universidade de São Paulo (USP), Brazil	DSpace

8	UNICAMP (Universidade Estadual de Campinas), Brazil	Nou-Rau
9	Biblioteca Central, Universidade de Brasília (UnB), Brazil	DSpace
10	Universidade Federal do Rio Grande do Norte (UFRN), Brazil	TEDE
11	Universidade de São Paulo (USP), Brazil	
12	Universidade Federal do Maranhão, Brazil	TEDE
13	Universidade do Estado do Rio de Janeiro, Brazil	ETD-db
14	Instituto Brasiliense de Direito Público, Brazil	DSpace
15	Senado Federal, Brazil	DSpace
16	Superior Tribunal de Justiça, Brazil	DSpace
17	Escola Nacional de Saúde Pública Sergio Arouca (ENSP), FIOCRUZ (Fundação Oswaldo Cruz), Brazil	
18	Coordenação de Biblioteca / CGDI / SAA / SE, Ministério da Saúde, Brazil	
19	Controladoria-Geral da União, Brazil	DSpace
20	Universidade de São Paulo (USP), Brazil	Corisco
21	Instituto de Engenharia Nuclear, Brazil	DSpace
22	Centro Brasileiro de Pesquisas Físicas, Brazil	
23	Conselho Nacional de Justiça (National Council of Justice), Brazil	DSpace
24	Universidade Federal Do Paraná (UFPR), Brazil	DSpace
25	Universidade Federal de Pelotas, Brazil	DSpace
26	Empresa Brasileira de Pesquisa Agropecuária (Brazilian Agricultural Research Corporation) (Embrapa), Brazil	DSpace
27	FIOCRUZ (Fundação Oswaldo Cruz), Brazil	DSpace
28	Instituto Antonio Carlos Jobim, Brazil	DSpace
29	Secretaria Geral de Educação a Distância - Universidade Federal de São Carlos, Brazil	DSpace
30	Instituto Brasileiro de Informação em Ciência e Tecnologia (ibict), Brazil	DSpace
31	Universidade Federal do Rio Grande do Sul (UFRGS), Brazil	DSpace
32	Instituto de Psicologia - USP e Conselho Federal de Psicologia, Brazil	SciELO
33	Pontifícia Universidade Católica do Rio de Janeiro (PUC-RIO), Brazil	Maxwell
34	Centro de Tecnologia da Informação Renato Archer (CTI), Brazil	DSpace
35	RABCI (Repositório Acadêmico de Biblioteconomia e Ciência da Informação), Brazil	Drupal
36	Tribunal Superior Eleitoral, Brazil	
37	Universidade Federal da Grande Dourados (UFGD), Brazil	DSpace
38	Universidade Tecnológica Federal do Paraná, Brazil	DSpace
39	Universidade Federal do Maranhão, Brazil	DSpace
40	Universidade Federal da Paraíba (UFPB), Brazil	TEDE
41	Universidade Federal de Minas Gerais, Brazil	DSpace
42	Universidade Municipal de São Caetano do Sul, Brazil	DSpace
43	Departamento de Ciências Agrárias, UNITAU (Universidade de Taubaté), Brazil	DSpace
44	Universidade Federal da Paraíba (UFPB), Brazil	DSpace
45	Instituto Nacional de Tecnologia (INT), Brazil	DSpace

46	Escola Nacional de Administração Pública (ENAP), Brazil	Dspace
47	Setor de Informação Tecnológica, Fundação Centro Tecnológico de Minas Gerais (CETEC), Brazil	Dspace
48	Fundação João Pinheiro, Brazil	Dspace
49	Pontifical Catholic University of Rio Grande do Sul, Brazil	Dspace
50	UFPE (Universidade Federal de Pernambuco), Brazil	Dspace
51	Universidade Federal do Recôncavo da Bahia, Brazil	Dspace
52	Universidade Federal de Santa Catarina (UFSC), Brazil	Dspace
53	UFVJM (Universidade Federal dos Vales do Jequitinhonha e Mucuri), Brazil	Dspace
54	Universidade de Brasília (UnB), Brazil	Dspace
55	Universidade Federal da Bahia (UFBA), Brazil	Dspace
56	Universidade Federal de Goiás, Brazil	Dspace
57	Universidade Federal de Lavras (UFLA), Brazil	Dspace
58	Biblioteca Universitária, Universidade Federal de Santa Catarina (UFSC), Brazil	Dspace
59	Universidade Federal de Sergipe, Brazil	Dspace
60	Universidade Federal de Uberlândia, Brazil	Dspace
61	Universidade Federal do Acre, Brazil	Dspace
62	Universidade Federal do Espírito Santo (UFES), Brazil	Dspace
63	Universidade Federal do Pará, Brazil	Dspace
64	Universidade Federal do Rio Grande (FURG), Brazil	Dspace
65	Universidade Federal do Rio Grande do Norte (UFRN), Brazil	Dspace
66	Universidade Federal Fluminense (UFF), Brazil	Dspace
67	Universidade Tecnológica Federal do Paraná, Brazil	Dspace
68	Escola Nacional de Saúde Pública Sergio Arouca (ENSP), FIOCRUZ (Fundação Oswaldo Cruz), Brazil	Drupal
69	Centro Universitário de Brasília, Brazil	Dspace
70	Ministério do Esporte, Universidade Federal de Santa Catarina (UFSC), Brazil	Dspace
71	Universidade Federal de Mato Grosso do Sul, Brazil	Dspace
72	Universidade Estadual Paulista "Júlio de Mesquita Filho" (UNESP), Brazil	Dspace
73	Escola de Governo do Paraná, Brazil	
74	Universidade Estadual de Ponta Grossa (UEPG), Brazil	Dspace
75	Portcom (Rede de Informação em Comunicação dos Países de Língua Portuguesa), Intercom (Intercom - Sociedade Brasileira de Estudos Interdisciplinares da Comunicação), Brazil	Dspace
76	Universidade Nove de Julho - UNINOVE, Brazil	Dspace
77	Fundação Santo André, Brazil	Dspace
78	Universidade Federal do Ceará, Brazil	Dspace
79	Empresa Brasileira de Pesquisa Agropecuária (Brazilian Agricultural Research Corporation) (Embrapa), Brazil	Dspace
80	Instituto Brasileiro de Informação em Ciência e Tecnologia (ibict), Brazil	Dspace

81	Universidade Tecnológica Federal do Paraná, Brazil	DSpace
82	BIREME (Centro Latino-Americano e do Caribe de Informação em Ciências da Saúde), Brazil	SciELO
83	Edelstein Center for Social Research, BIREME (Centro Latino-Americano e do Caribe de Informação em Ciências da Saúde), Brazil	SciELO
84	BIREME (Centro Latino-Americano e do Caribe de Informação em Ciências da Saúde), Brazil	SciELO

The table 2 shows the name of the organization which is maintained the institutional repositories that are available in Brazil. Among the 84 repositories maximum number of repositories are using DSpace(75%) software.

Table 3: Distribution of Software using IRs in Brazil

SI.No	Software	No. of IR	Percentage
1	DSpace	63	75
2	SciELO	4	4.76
3	TEDE	4	4.76
4	Drupal	2	2.38
5	Corisco	1	1.19
6	ETD-db	1	1.19
7	Maxwell	1	1.19
8	Nou-Rau	1	1.19
9	Not Mentioned	7	8.33
		84	100

Table 3 indicates the list of software are using in the institutional repositories in Brazil. Among the 84 repositories, 63 (75%) repositories are using DSpace software, 4(4.8%) repositories are established by equally using SciELO and TEDE software and 2(2.4%) repository are generated by using Drupal software. Finally 7 (8.3%) repository are not specified their software in the DOAR. So, it is evident from the table, DSpace software occupy the first position among the institutional repositories in Brazil.

Table 4: Contents Wise Distribution of IRs in Brazil

SI.No.	Category of Subjects	No. of IRs	%
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1	Multidisciplinary	48	57.14
2	Law and Politics	5	5.95
3	Health and Medicine	4	4.76
4	Science General	4	4.76
5	Agriculture, Food and Veterinary	2	2.38
6	Social Sciences General	2	2.38
7	Agriculture, Food and Veterinary; Biology and Biochemistry; Ecology and Environment; Computers and IT	1	1.19
8	Arts and Humanities General; Fine and Performing Arts	1	1.19
9	Biology and Biochemistry; Ecology and Environment; Geography and Regional Studies	1	1.19
10	Business and Economics; Education; Management and Planning	1	1.19
11	Chemistry and Chemical Technology; Physics and Astronomy; Mechanical Engineering and Materials	1	1.19
12	Computers and IT	1	1.19
13	Education	1	1.19
14	Education; Law and Politics; Management and Planning	1	1.19
15	History and Archaeology; Language and Literature; Library and Information Science	1	1.19
16	Library and Information Science	1	1.19
17	Management and Planning	1	1.19
18	Mathematics and Statistics; Law and Politics	1	1.19
19	Mechanical Engineering and Materials	1	1.19
20	Multidisciplinary; Education	1	1.19
21	Physics and Astronomy	1	1.19
22	Psychology	1	1.19
23	Social Sciences General; Library and Information Science	1	1.19
24	Technology General	1	1.19
25	Technology General; Library and Information Science	1	1.19
	Total	84	100.00

Among the 84 repositories in Brazil, 48(57.14%) repositories available in Multidisciplinary subject which is shown in table 4. And 5(5.95%) repositories are available only for law and politics subject and 4(4.76%) repositories are equally available for Health & Medicine and Science general subjects. But only one repository especially available for Education and Library Psychology, Management and Planning and Information Science subject. It is revealed from the table maximum of the institutional repositories are having multidisciplinary subjects.

Table 5: Distribution of Languages using IRs in Brazil

Sl. No	Type of Languages	No. of IRs	Percentage
1	Mono lingual	62	73.81

2	Bi-Lingual	13	15.48
3	Tri-Lingual	9	10.71
	Total	84	100

Table 5 stated the distribution types of languages are used in the institutional repositories in Brazil. Among the 84 repositories, 62(73.81%) repositories are in a mono-lingual type language which is used Spanish and Portuguese only. And 13(15.48%) repositories are in bi-lingual type languages which consist of Portuguese/English. And remaining 9 (10.71%) repositories are using Tri-lingual type of languages which using English/Spanish/Portuguese. But maximum numbers of repositories are using mono-lingual type. It is concluded that, most of the repositories are also used Portuguese languages but only one repository are generated by using Spanish language only.

Table 6: IRs in Brazil Vs No. of Records

Sl. No	Classification of Records	No. of IRs	Percent
1	1-100	4	4.76
2	101-1000	25	29.76
3	1001-5000	15	17.86
4	5001-10000	11	13.10
5	10001-20000	9	10.71
6	20001-30000	2	2.38
8	40001-50000	4	4.76
9	50001-100000	2	2.38
10	60001-70000	4	4.76
11	100001-200000	1	1.19
12	Above 200000	1	1.19
13	No Records	8	9.52
	Total	84	100.00

The table 6 indicates the institutional repositories in Brazil were classified based on the no. of records available in the repositories. The no. of records were classified under following frequency. It is classified like that upto 1-100, 101-1000, 1001-5000, 5001-10000, 10001-20000, 20001-30000, 40001-50000, 50001-100000, 100001-200000 and above 200000 records which are available in the sources. Among the 84 repositories, 4 (4.76%) has below 100 records, 25(29.76%) has more than 100 but below 1000 records. Further 15(17.86%) repositories are having the records more than 5000 but below 10000 records. It is found that 1(1.19%) repository is having more than

200000 records and 8 (9.52%) repositories are not specified the collection of the Institute.

Table 7: Relation between Content and Languages in IRs in Brazil

Sl. No	Content	English/ Spanish/ Portuguese	Portuguese	Portuguese/ English	Spanish	Total
1	Articles	4(4.76)	3(3.57)	3(3.57)	0	10(11.90)
2	Articles; Books	1(1.19)	1(1.19)	0	0	2(2.38)
3	Articles; Conferences; Theses	0	1(1.19)	0	0	1(1.19)
4	Articles; Conferences; Theses; Books	1(1.19)	3(3.57)	0	0	4(4.76)
5	Articles; Conferences; Theses; Books; Learning Objects; Multimedia	3(3.57)	15(17.86)	0	0	18(21.43)
6	Articles; Multimedia	0	1(1.19)	0	0	1(1.19)
7	Articles; References	0	2(2.38)	0	0	2(2.38)
8	Articles; Theses	0	2(2.38)	0	0	2(2.38)
9	Articles; Theses; Books	0	3(3.57)	4(4.76)	0	7(8.33)
10	Articles; Theses; Books; Special	0	1(1.19)	0	0	1(1.19)
11	Articles; Theses; Multimedia	0	3(3.57)	0	0	3(3.57)
12	Articles; Theses; Unpublished; Books; Datasets	0	1(1.19)	1(1.19)	0	2(2.38)
13	Articles; Theses; Unpublished; Special	0	1(1.19)	0	0	1(1.19)
14	Books	0	2(2.38)	0	0	2(2.38)
15	Conferences:Unpublished	0	0	2(2.38)	0	2(2.38)
16	Datasets	0	1(1.19)	0	0	1(1.19)
17	Learning Objects; Multimedia; Software	0	5(5.95)	0	0	5(5.95)
18	Multimedia; Special	0	1(1.19)	1(1.19)	0	2(2.38)
19	References; Books	0	1(1.19)	0	0	1(1.19)
20	Theses	0	8(9.52)	2(2.38)	1(1.19)	11(13.10)
21	Theses; Books	0	2(2.38)	0	0	2(2.38)
22	Theses; Multimedia	0	2(2.38)	0	0	2(2.38)
23	Theses; Unpublished	0	2(2.38)	0	0	2(2.38)
	Total	9 (10.71)	61 (72.62)	13 (15.48)	1 (1.19)	84 (100)

Table 7 indicates relation between of contents and languages used in the institutional repositories in Brazil. Among the 84 repositories in Brazil, 15(17.86%)

repositories content for Articles; Conferences; Theses; Books; Learning Objects; Multimedia in Portuguese language and 10 (11.90%) repositories are provide only article. It is found that only one repository is available by Spanish for these purpose.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	61.757	69	.720
Likelihood Ratio	59.526	69	.785
N of Valid Cases	84		

The Chi-square test is applied for further discussion. The computed Chi-square value is 61.757 and the degrees of freedom value is 69 which is higher than its tabulated value at 5 percent level of significance. Hence the difference among the institutional repositories with respect content and languages is statistically identified as not significant.

Table 8: Relationship between Language and Software using IRs

Languages	Corisco	Drupal	DSpace	ETD-db	Maxwel	Nou-Rau	SciELO	Not specific	TEDE	Total
English/Spanish/Portuguese	0	1 (1.19)	5 (5.95)	0	0	0	3 (3.57)	0	0	9 (10.71)
Portuguese	1 (1.19)	1 (1.19)	47 (55.95)	0	1 (1.19)	1 (1.19)	0	6 (7.14)	4 (4.76)	61 (72.61)
Portuguese/English	0	0	10 (11.90)	1 (1.19)	0	0	1 (1.19)	1 (1.19)	0	13 (15.47)
Spanish	0	0	1 (1.19)	0	0	0	0	0	0	1 (1.19)
Total	1 (1.19)	2 (2.38)	63 (75.00)	1 (1.19)	1 (1.19)	1 (1.19)	4 (4.76)	7 (8.33)	4 (4.76)	84(100)

Table 8 shows the relationship between languages vesus software using in institutional repositories in Brazil. Among the 84, 63(75.00) repositories us in DSpace which including 47(55.95%) repositories in Portuguese language , 10(11.90%) repositories in Portuguese/English languages, 5(5.95%) repositories in

Portuguese/English/Spanish languages and only one repositories using Spanish language only. Some of the software like Corisco, ETD-db, Maxwell and Nou-Rau used in only one repository in Brazil. It is pointed out that 7 (8.33%) repositories are not specified languages used in their respective sources.

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	31.654	24	.136
Likelihood Ratio	25.624	24	.373
N of Valid Cases	84		

The Chi-square test is applied for further discussion with respect of languages using in Institutional repositories versus software. The computed Chi-square value is 31.654 and the degrees of freedom value is 24 which is higher than its tabulated value at 5 percent level of significance. Hence the difference among the institutional repositories in software and languages is statistically identified as significant.

Table 9: Status of Last Updating of IRs

Sl. No.	Last Updated	No. of IRs	%	Cumulative %
1	November 2014	63	75.00	75.0
2	October 2014	1	1.19	76.2
3	August 2014	2	2.38	78.6
4	July 2014	1	1.19	79.8
5	January 2014	1	1.19	81.0
6	December 2013	1	1.19	82.1
7	November 2013	1	1.19	83.3
8	October 2013	1	1.19	84.5
9	July 2013	1	1.19	85.7
10	October 2012	1	1.19	86.9
11	February 2012	1	1.19	88.1
12	January 2012	1	1.19	89.3
13	April 2011	1	1.19	90.5
14	Not updated	8	9.52	100.0
	Total	84	100.00	

The table 9 indicates the status of the last updating of the records and maintenance of the Institutional repositories which are available Brazil. Among the 84 repositories, 63(75.00%) repositories are updated their status and records in the end of

November 2014 but 1(1.19%) repository is updated in the month October 2014. It is concluded from the table 8 (9.52%) repositories are not specified their updation status and records and 1(1.19%) repository is not updated their records after 2011.

Table 10: No. of Reviewed status of IRs

Sl. No.	No. of Reviewed	No. of IRs	Percentage
1	Below 100	2	2.38
2	101-1000	7	8.33
3	1001-2000	17	20.24
4	2001-3000	55	65.48
5	3001-4000	2	2.38
6	Above 4000	1	1.19
	Total	84	100.00

The table 10 indicates the number of reviewed status of the Institutional repositories in Brazil. Out of 84, 1(1.19%) repository reviewed more than 4000 time and 2(2.38%) repositories reviewed more than 3000 but below 4000. But 55(65.48%) repositories are reviewed more than 2000 but below 3000 times but 2 repositories are reviewed below 100 times. It is revealed from the table nearly 70 percent of the institutional repositories are reviewed frequently.

8. FINDINGS

- The 84 repositories are available in Brazil country with consists of total 11, 17,688 number of records. Among the 84, BDSF (Biblioteca Digital do Senado Federal) repositories have more than two lakhs records.
- In Brazil 63 (75%) repositories are using DSpace software, 4(4.8%) repositories are established by equally using SciELO and TEDE software and 2(2.4%) repository are generated by using Drupal software.
- The 62(73.81%) repositories are in a mono-lingual type language which is used Spanish and Portuguese only. And 13(15.48%) repositories are in bi-lingual type languages which consist of Portuguese/English.
- 63(75.00%) repositories are updated their status and records in the end of November 2014 but 1(1.19%) repository is updated in the month October 2014.

- It is revealed from the table nearly 70 percent of the institutional repositories are reviewed frequently

8. CONCLUSION

Institutional Repositories have a vital role in that removing access barriers will accelerate research, enrich education, and share learning. Analysis of institutional repositories in Brazil is not sufficient when comparing the growth of higher educational institutions. So, the library professionals trying to make the necessary initiatives to create the institutional repositories more. It is good effort for accessing all the IR in one place all over the world.

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