

## CURRENT STATUS OF THE INSTITUTIONAL REPOSITORY AT THE SOUTH EASTERN UNIVERSITY OF SRI LANKA

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### ABSTRACT

DSpace is an open-source software which is the most popular and cost-effective tool to build digital repositories. There are 15 Sri Lankan institutional repositories listed in the Directory of Open Access Repositories (OpenDOAR) platform. OpenDOAR is the global directory of academic open access repositories. The present study mainly focuses on the current status of the Institutional Repository at the South Eastern University of Sri Lanka (SEUIR). The study further attempts to compare SEUIR with other listed institutional repositories in OpenDOAR of Sri Lanka. The data were extracted from the statistics calculated through DSpace open source software and analysed for the necessary information. The study highlights the current status of SEUIR and further developments to improve the accessibility of contents to the viewers.

**Keywords:** DSpace, Institutional Repository, Open Source Software, OpenDOAR, SEUSL

### 1. INTRODUCTION

With the development of the smart technologies, current trend of the libraries is to make available their collection in digital forms. Anonymous users can access the authorized contents through the web interfaces. Even though there are many software tools for developing the digital collections or e-libraries present trend is to utilize the open source software systems because of the benefits such as zero cost for purchasing or licensing, customizations, subscriptions, free updates etc. When a resource is having the status of “open access” that increases the visibility of the content. The term open access can be defined as “digital, online, free of charge, and free of most copyright and licensing restrictions. What makes it possible is the Internet and the consent of the author or copyright-holder” (Suber, 2014). According to Mashroofa (2016), open access journals emerged in 1990s and it offers authors to increase the visibility, citations and readership of their work and thereby increased the impact of their research. Availability of the authenticated resources are very much essential to a researcher when conducting a research. Unfortunately, there are minimum facilities available in the developing countries when considering free access to the authenticated contents. Institutional repositories play a big role in this arena. Digital repositories can be developed either from research centers or by the institutions like universities. Therefore, institutional repositories can be defined as “a set of services that offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members”

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(Lynch 2003). Institutional repositories help the users in the aspects of effective scholarly communications, digital preservation of institutional digital assets, easy management, easy access from a single place to the institutional digital contents and increase the visibility of the archived contents of an institution. The ultimate goal of a research is to disseminate the research findings. Through institutional repositories free dissemination of knowledge is possible and due to some restrictions such as copyright issues, bandwidth issues, permissions from the grant providing agencies (GPA's), and etc. resources can be limited to the metadata level to the external members of the institution. These restricted materials are also accessible within the intranets and with the permissions it can be accessed through external locations as well. Therefore, these repositories are now becoming digital knowledge base of each institution. There are many software platforms to develop institutional repositories such as GreenStone Digital library software, GNU E-Print Archiving software and DSpace. Most popular software platform among the OpenDOAR listed repositories, is DSpace due to its benefits such as easy management, traceability and etc. OpenDOAR is the world's authoritative and quality-assured directory of open access repositories. Through this directory, users can browse the repositories by the location, used software to develop the repository, languages used or types of materials used. This study focuses only to the repository of South Eastern University of Sri Lanka. The objective of this study is to identify the current status of SEUSL institutional repository in the aspects of contents uploaded, status among the other listed repositories and to provide suggestions to improve the accessibility of the digital contents in the repository.

## **2. METHODOLOGY**

This study was limited to institutional repositories of universities and other research institutions of Sri Lanka listed in OpenDOAR platform. Case study is the research strategy used for this study and among OpenDOAR listed repositories, only the Institutional Repository of South Eastern University of Sri Lanka (SEUIR - <http://ir.lib.seu.ac.lk/>) was selected to identify the current status of it and to propose further development suggestions to increase the easy access and visibility of its digital contents. Statistics were obtained from DSpace open source software for a period of one year starting from November 2018 and the number of total visits to each community and collections were used to derive the results.

## **3. DISCUSSION AND RESULTS**

According to the data obtained from OpenDOAR platform DSpace is the widely using software to develop institutional repositories globally, followed by Eprints, WEKO, islandora and so on. When compared among the other listed repositories in OpenDOAR in Sri Lanka, almost all the repositories

were built using DSpace. Repository of the International Water Management Institute (IWMI) has been used the “Inmagic DBTextWorks”. Figure 1 displays the distribution of software used in the global point of view. It reveals that the highest percentage of repositories built with DSpace software followed by Eprints and WEKO. This may be because of the DSpace has a lot of benefits such as easy access, indexing, etc and therefore it becomes the widely using software tool for repositories. Same scenario is applicable to the local applications and SEUIR is also developed using DSpace.

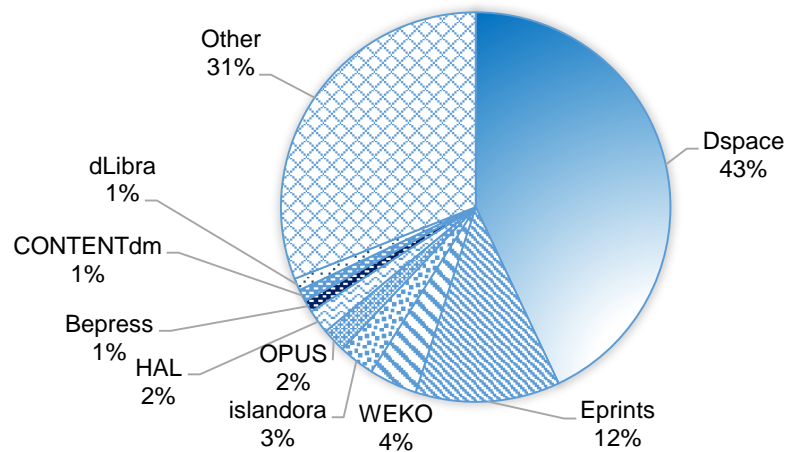


Figure 1. Software platforms used for repositories in OpenDOAR

As elaborated in the Table 1. OpenDOAR listed repositories in Sri Lanka uses different DSpace software versions for their own repositories. Among them most widely used software version is DSpace 5.0 and in SEUIR uses updated version than the most used version (DSpace 5.5). Digital Repository, University of Kelaniya, Digitized Rare Collection – EUSL and Repository of the Sri Lankan Institute of Information Technology using the advanced version than SEUIR and most stable version is DSpace 6.3 according to DuraSpace (not-for-profit organization providing leadership and innovation for open technologies). Only in Digitized Rare Collection – EUSL and Repository of the Sri Lankan Institute of Information Technology (SLIIT) uses this stable version currently among the OpenDOAR listed repositories in Sri Lanka.

Table 1. DSpace Software versions used among OpenDOAR listed repositories

Dspace Version	Institutions
DSpace 1.6.1	7%
DSpace 1.7.2	7%
DSpace 5.0	43%
DSpace 5.5	21%
DSpace 6.0	7%
DSpace 6.3	14%

Table 2. Comparison among OpenDOAR listed repositories in Sri Lanka

Repository	Link	Dspace	Comm	Language	No of items
Central Environmental Authority Repository	<a href="http://cea.nsf.ac.lk/">http://cea.nsf.ac.lk/</a>	DSpace 5.0	8	English, Sinhalese	19841
Coconut Research Institute Repository	<a href="http://cri.nsf.ac.lk/">http://cri.nsf.ac.lk/</a>	DSpace 5.0	3	English	2057
Digital Repository of the University of Peradeniya	<a href="http://dlib.pdn.ac.lk/">http://dlib.pdn.ac.lk/</a>	DSpace 1.7.2	5	English	6279
Digital Repository, The Open University of Sri Lanka	<a href="http://digital.lib.ou.ac.lk/">http://digital.lib.ou.ac.lk/</a>	DSpace 1.6.1	1	English, Sinhalese	9478
Digital Repository, University of Kelaniya	<a href="http://repository.kln.ac.lk/">http://repository.kln.ac.lk/</a>	DSpace 6.0	13	English, Sinhalese	17823
Digital Repository, University of Moratuwa	<a href="http://dl.lib.mrt.ac.lk/">http://dl.lib.mrt.ac.lk/</a>	DSpace 5.5	3	English	8264
Digitized Rare Collection - EUSL	<a href="http://www.digital.lib.esn.ac.lk/">http://www.digital.lib.esn.ac.lk/</a>	DSpace 6.3	5	Tamil, English	3998
Hector Kobbekaduwa Agrarian Research and Training Institute Repository	<a href="http://harti.nsf.ac.lk/">http://harti.nsf.ac.lk/</a>	DSpace 5.0	1	English, Sinhalese	1687
IR South Eastern University of Sri Lanka	<a href="http://ir.lib.seu.ac.lk/">http://ir.lib.seu.ac.lk/</a>	DSpace 5.5		Arabic, English, Tamil, Sinhalese	3305
IWMI Publications	<a href="http://www.iwmi.cgiar.org/publications/latest/">http://www.iwmi.cgiar.org/publications/latest/</a>	Inmagic DBText Works - DSpace 5.0	4	English	5753
National Science Foundation of Sri Lanka, Digital Repository	<a href="http://dl.nsf.ac.lk/">http://dl.nsf.ac.lk/</a>	DSpace 5.0	6	English	15492
Repository of the Sri Lankan Institute of Information Technology	<a href="http://dspace.sliit.lk/">http://dspace.sliit.lk/</a>	DSpace 6.3	3	English	293
Rubber Research Institute Repository	<a href="http://rri.nsf.ac.lk/">http://rri.nsf.ac.lk/</a>	DSpace 5.0	4	English, Sinhalese	1327
Tea Research Institute Repository	<a href="http://tri.nsf.ac.lk/">http://tri.nsf.ac.lk/</a>	DSpace 5.0	1	English	1988
UOC e-Repository	<a href="http://archive.cmb.ac.lk:8080/research/">http://archive.cmb.ac.lk:8080/research/</a>	DSpace 5.5	13	English	4474

Table 2. presents the comparison within the OpenDOAR listed repositories in Sri Lanka. Among them, Central Environmental Authority Repository, Digital Repository, University of Kelaniya, National Science Foundation of Sri Lanka, Digital Repository has the largest collection. They are rich with a content more than 15000 items within the collections. SEUIR is currently having 3305 items in their collection and it has articles uploaded in four different languages such as Arabic, Tamil, English and Sinhala which is a key feature of SEUIR.

Figure 2. Shows the current home page of SEUIR and it is a user friendly interface which gives all the details in a single view.



Figure 2. Home page of the SEUIR

SEUIR contains the main communities and most recently added articles in the home page. It gives the users to search articles either by Authors, Titles or subjects. Further it has an “advanced search” option to find the articles correctly within short period of time. SEUIR also enable the links to the University main web links such as University home page, Library home page and Library catalog.

Table 3. shows the main communities and sub communities arranged to manage knowledge base in SEUIR.

Table 3. Hierarchy of the SEUIR

Community	Sub-Community
Research Publications [3112]	Articles Authored by SEUSL Academics [488]
	Convocation Address [2]
	Proceedings [2251]
	University Journals [371]
	Thesis & Dissertation [196]
Thesis & Dissertation [196]	Bachelor's degree [186]
	Doctor of Philosophy [1]
	Master of Business Administration [9]

As shown in the Table 3. SEUIR has 3305 items archived in it. More archived contents are there in the Research publications collection and it consists of University proceedings and published journal articles.

Figure 3 shows the total number of visits for a period of 1 year starting from November 2018 of “Research Publications” sub community.

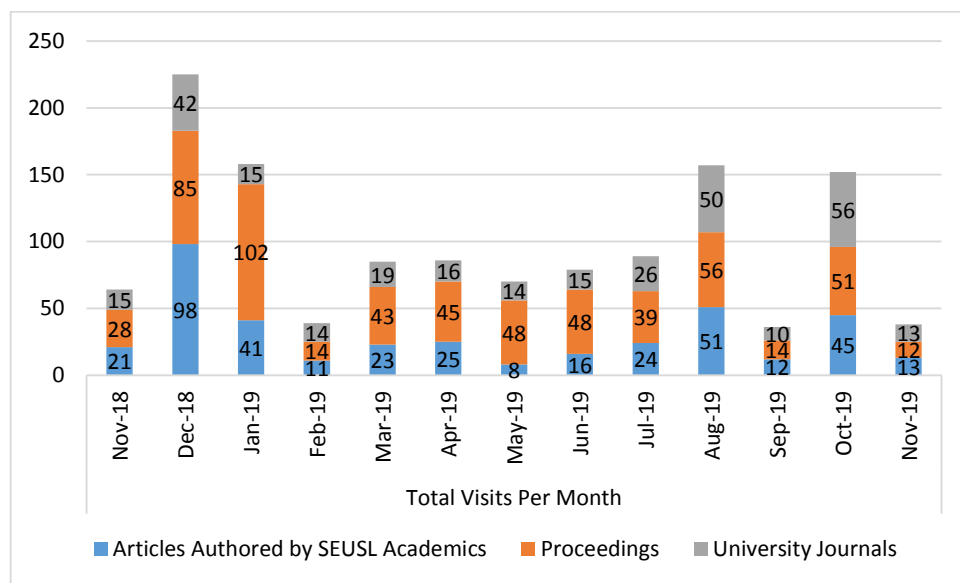


Figure 3. Total Visits to Sub-Community: Research Publications

Most interestingly their main visits were received from countries such as United States, Russia, AP, France and China for this archived contents. That indicates the contents are visible to the global user network and with the DSpace our authors may obtain more number of citations from various countries around the world. Therefore, SEUIR is the best option to the SEUSL authors for disseminate their research findings to a larger audience with zero cost.

Figure 4 shows the total number of visits for a period of 1 year starting from November 2018 of “Thesis & Dissertation” sub community. Main visits were

received from India, France, Malaysia, United Kingdom, United States, AP, Russia, China and EU for this archived contents. It will be more beneficial to the users if SEUIR focused on enriching its Thesis & Dissertation collection since the collection is more valuable to the young researchers to get ideas for a new research. With the implemented research culture in SEUSL, SEUIR now receiving more contents published in Indexed scholarly forums.

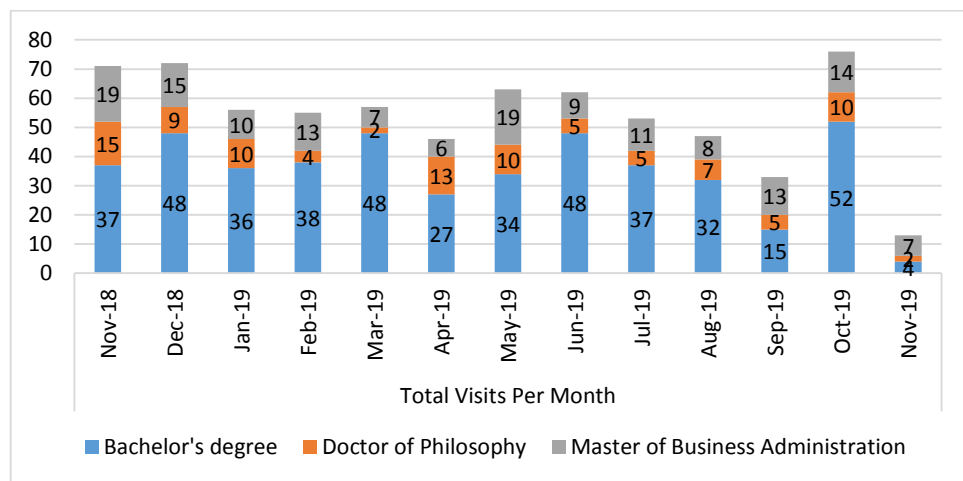


Figure 4. Total Visits to Sub-Community: Thesis & Dissertation

Figure 5 shows the total number of visits for a period of 1 year starting from November 2018 of “University Journals” sub community.

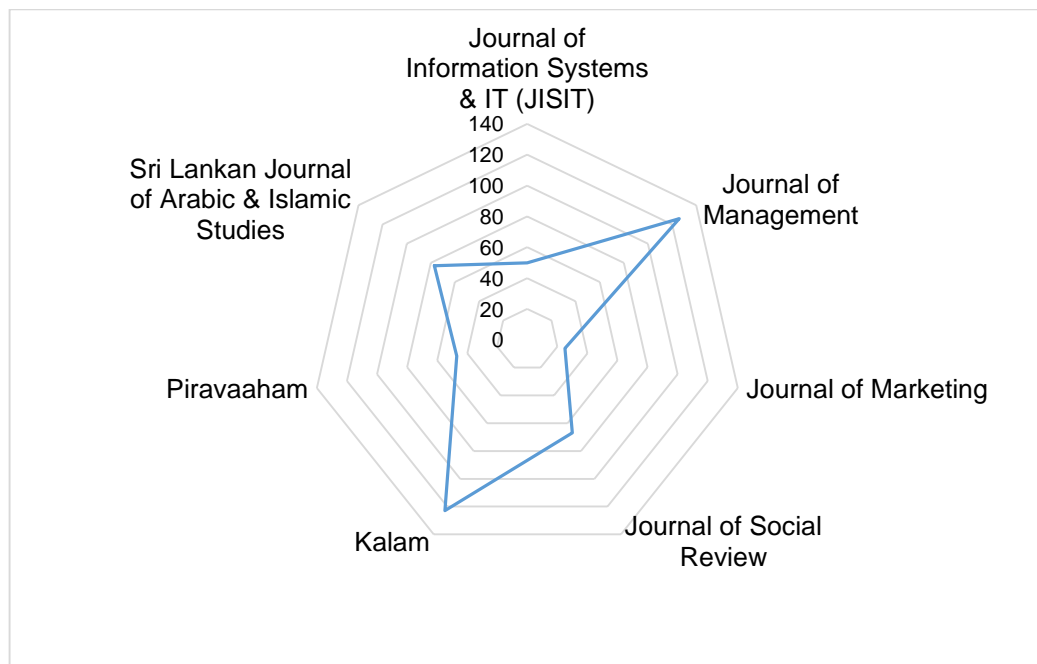


Figure 5. Total Visits to Sub-Community: University Journals

Since this sub community consists of contents from various disciplines such as arts and culture, management, Arabic and Islamic studies,

information technology and etc. this has a wider popularity from various countries. Main visits to this sub community were received from United States, France, Russia, Austria, AP, United Kingdom, India, South Korea, Senegal, China and Vietnam for this archived contents. Journal of Management and Kalam Journal has the most number of visits among the university journals in SEUIR.

Figure 6 shows the total number of visits for a period of 1 year starting from November 2018 of “SEUSL Conferences” sub community.

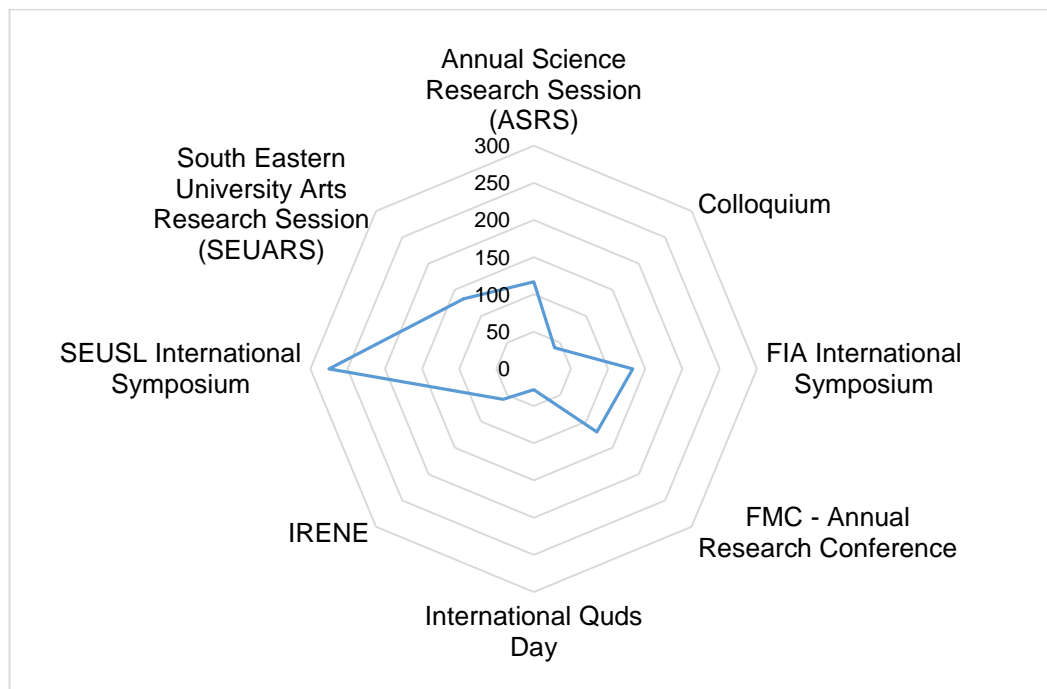


Figure 6. Total Visits to Sub-Community: SEUSL Conferences

SEUSL International Symposium collection has the most number of visits among the other collections in “SEUSL Conferences” sub community. Therefore, among all the other conferences, “SEUSL International Symposium” has the more visibility for its publications compared to other listed conferences. Main visits were received from United States, Russia, China, France, AP, Austria, China, United Kingdom and Ukraine for this archived contents.

Figure 7. shows the different subjects/ keywords used in various articles archived in SEUIR. Users can obtain exact articles by search using the correct keywords.





Figure 7. Keywords of SEUIR

As shown in the Figure 7. SEUIR enriched with 7785 keywords and mostly searched list of keywords are listed in Table 4. According to that, users are searching contents related to Sri Lanka, Islamic Studies and management related contents in SEUIR.

Table 4. Most searched keywords in SEUIR

Word	Number
Sri	659
Lanka	501
The	363
Islamic	337
Study	316
Management	287
Economic	252
Impact	241
Research	220
Performance	214
Banking	213
Tamil	207

SEUIR need further developments such as updates in DSpace version from DSpace 5.5 to a new version. Further developments also needed in user interfaces and in order to increase the visibility of the contents

marketing strategies should be employed. Policy documents on SEUIR should make available to the users and SEUIR should further enrich with unique contents for the community.

#### 4. CONCLUSION

Almost all the Sri Lankan repositories listed in OpenDOAR platform including SEUIR using DSpace software to develop their institutional repositories. SEUIR has updated version than the most used software version (DSpace 5.5) among Sri Lankan repositories listed in OpenDOAR platform. As discussed in this study, SEUIR has some unique features when compared to the other repositories such as multilingual archived contents including Sinhala, Arabic and Tamil. SEUIR has 3305 items of collection with 7785 keywords. SEUIR users are frequently searching contents related to Sri Lanka, Islamic Studies and management. With the implemented research culture in SEUSL, SEUIR now receiving more contents published in indexed scholarly forums. SEUSL International Symposium collection has the most number of visits among the conferences and symposiums organized by the university.

SEUIR receiving more visits from countries such as United States, United Kingdom, Russia, France and China which enables more visibility among the global users. Further developments also needed in user interfaces in order to increase the user friendliness of accessing the contents. Marketing strategies should be employed to popularize the archival collection of SEUIR. Policy documents on SEUIR should make available to the users and SEUIR should further enrich with unique digital contents for developing a better knowledge base to the community.

#### 5. REFERENCES

- Lynch, C. (2003). Institutional Repositories: Essential Infrastructure For Scholarship In The Digital Age. *Portal: Libraries And The Academy*, 3(2), 327-336. doi: 10.1353/pla.2003.0039
- Mashroofa, M., & Seneviratne, W. (2016). Open access initiatives and institutional repositories: Sri Lankan scenario. *Annals Of Library And Information Studies*, 63, 182-193.
- Peter Suber, Very Brief Introduction to Open Access. Retrieved 5 August 2019, from <http://legacy.earlham.edu/~peters/fos/brief.htm>
- Directory of Open Access Repositories. (<http://www.opendoar.org>)
- DSpace - A Turnkey Institutional Repository Application. (2019). Retrieved 21 August 2019, from <https://duraspace.org/dspace/>