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ADDING ALTMETRIC DOUGHNUT: PROPOSAL TO INCREASE AUTHOR VISIBILITY ON UNIVERSITY REPOSITORIES IN SRI LANKA

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Abstract

Sri Lankan universities have developed their institutional repositories to promote communications of research findings among stakeholders. At present, universities' strategic plans inevitably include measures and actions to increase the webometric rankings of the institution. This is partly achieved through accessible local research publications deposited on self-archived platforms. Despite, to what extent the research and publication reach the general public is the question. Most of these repositories use in-built metrics, visible only to administrators and registered users who can view the number of downloads and data as such. However, those analytics do not show the visibility of research among the general public except for the system/database administrators. However, the paradigm shifted a few years ago to adopt a holistic bibliometric to evaluate the research's impact on society. The majority of laypeople are active on social media and do not have access to almost any scholarly resources available via expensive subscriptions. At this point, the authors propose Altmetric tools to expand the author's visibility on non-scholarly platforms such as mass and social media. Almost all university libraries in Sri Lanka, run their repositories on DSpace open-source software. Altmetric badges can be embedded into DSpace through the proper configuration. By adding an Altmetric widget, popularly known as Altmetric doughnut, the visibility of publications is expected to increase author's visibility and his/her work on other platforms, especially on social media. In this regard, the study proposes possibilities to incorporate freely available webometric tools to make the research visible and viable in society. An extensive research project will be planned and executed to assess the technical compatibilities, challenges, and prospects of adding Altmetric tools to the Sri Lankan university repositories.

Keywords: Altmetric tools, DSpace, Institutional Repositories, Author Visibility

Introduction

Institutional repositories tremendously support open access initiatives thus deposited materials of academics and researchers are expanded in their visibility and increased citations. Nevertheless, being visible among academia is not to exert a research impact on society (Aguillo, 2020). Therefore, it is realized that research findings ought to reach a larger audience, especially on social media.

Besides, institutional repositories are significantly essential for the visibility of local literature (Saini, 2018). This would strengthen interfaculty and university collaboration in action research in Sri Lanka. In this regard, local literature has to reach the laypeople and community for an effective impact of continuous research hence research should reach deeper levels of society.

In parallel to increasing visibility, universities are striving to establish their reputation and university administrators are curious about trying the latest measures to present their university's impact of the scholarly output on society. In this line, adding Altmetrics or alternative metrics to digital repositories help universities to add value to local research publications in this electronic era (Konkiel & Scherer, 2013). Hence, the authors of this proposal explore the possibilities of embedding such holistic tools to increase the visibility of scholarly communications generated by Sri Lankan universities.

According to Konkiel and Scherer (2013), repositories generally produce statistics on downloads and views, however, it is equally important for them to measure the citation counts harvested from social networking sites where Altmetrics tools are important. Meanwhile, usage statistics using Google Analytics can be effective, however; those statistics are accessible only to the repository administrator but not visible on the repository's interface in Sri Lanka. In this regard, Altmetric doughnut facilitates, if integrated with university repositories, the visibility of research from the general public's point of access.

What is Altmetrics?

Altmetrics is nothing but alternative metrics to measure the citation impact of research publications, especially their mentions on social media. Priem et al (2010) elaborate that this venture gives new facets for analytical metrics for scholarly communications. Altmetrics present a wider and more heterogeneous spectrum of measures. In his work, Aguillo (2020) cites the sources from which Altmetrics reaps its data. It draws data from reference management systems, self-archiving platforms, and social media like YouTube and Twitter. Moreover, Altmetrics is useful both at the article level as well as at individual levels, thus it has the potential to measure the research output beyond the scientific audience.

In this sense, the authors of this proposal explored the possibilities of exploiting Altmetric tools available on their official website. Interestingly, **Altmetric Score** is a holistic tool to display the impact of local research on Sri Lankan communities in general. In addition to that, there are free tools available on Altmetric.com, which are **Altmetric bookmarklet**, **Altmetric Explorer**, and embeddable institutional repository badges (https://www.altmetric.com/products/free-tools/).

Objectives

To analyses the open visibility practices incorporated in Sri Lankan University Repositories in order to increase the research visibility among general public and academia locally as well as globally.

Methodology

A web survey was executed on all the repository web pages of Sri Lankan universities to identify the platforms used to develop the repository, interface framework, and any Altmetric tools used in the repositories. The repositories with operational links have been taken into account and they were manually visited to assess their technical features and availability of metrics.

Results and Discussion

Based on the results the authors identified the source of the repository platforms, their interface structure, and availability of bibliometric tools.

Firstly, it has been found that almost all the university repositories in Sri Lanka have been developed on DSpace platform using the XMLUI framework except the University of Colombo which is using JSPUI. DSpace is open-source software with flexible configuration. The Software provides only a few metrics such as views based on geography, number of downloads, and search history with its customization. Unless enabled for a public view, those metrics are only accessible to the database administrator. In this survey, it was noticed that there were no visible usage statistics.

Secondly, it was observed that there are no metrics incorporated to show the number of citations for the holdings on the repositories visible to the web viewers/outsiders. In this regard, the authors have identified a need to incorporate alternative metrics to show the citations of research publications on social media. Altmetrics provide excellent analytics of citations on both scholarly and non-scholarly platforms like Twitter and YouTube. **Altmetric It**, which is individually installed and plugged into web browsers, was run for selected repositories to find if they were cited on social media. Articles with DOI (Digital Object

Identifier) had generated Altmetrics doughnut of metrics showing tweets, readership, and other social media citations. However, articles without DOI could not produce these metrics.

Integrating Altmetric analytics using IR badges

As Mandal (2019) describes, DSpace is developed using high-level programming languages like *Java* which supports enabling Altmetrics discovery on institutional repositories. In this regard, ***altmetrics.cfg*** file in modules that come under the sub-directory of ***config*** of DSpace could be configured with the true necessary field to track various parameters specific to contributors. Therefore, the survey results showed the possibility of incorporating those metrics into the institutional repositories of Sri Lankan universities to evaluate the impact of research on society.

Conclusion

It has been strongly perceived that research impact is measured in terms of social changes. The social media presence of individuals is becoming stronger with technological advancements and easy access to the Internet. Hence, Sri Lankan research repositories need to evaluate how far those deposits reached the general public through social media. In this regard, the impact of scholarly publications deposited on Sri Lankan university repositories on society needs to be emphasized using Altmetric analytics.

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