Research Application Summary

Readership analysis of impact storylines from University based research

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Abstract

By 2025, every smallest personal items to the largest continents, everything, and everywhere will be digitally connected, and responsive to people's wants and likes. Universities have no choice but to increase the use and availability of knowledge and information digitally. This study has shown that there has been growth in the volume of resources on the RUFORUM repository with 32.6% growth in the number of users and access. The use of social media has further increased the rate and number of visitors to the website ad repository. The growth in traffic has been coming from mainly the three continents; Africa, Europe and North America pooled together by a common use of English as the central communication language. It is therefore important that RUFORUM continues to use its various convening events and network members as conduits to draw traffic towards the website, repository and social media accounts. This will increase the visibility of various documents and increase the level of reference to RUFORUM on-line resources.

Key words: Access, audience, repository, RUFORUM, social media

Résumé

D'ici 2025, des petits objets personnels aux plus grands continents, tout chose et tous endroits seront numériquement connectés, et sensible aux besoins et aux préférences des peuples. Les Universités n'ont pas d'autre choix que d'augmenter l'utilisation et la disponibilité des connaissances et de l'information numérique. Cette étude a montré qu'il y a eu une croissance en volume des ressources de la plateforme du RUFORUM avec une croissance de 32,6% du nombre d'utilisateurs et de la consultation de la plateforme. L'utilisation des médias sociaux a de plus augmenté le taux et le nombre de visiteurs du répertoire et du site. La croissance du trafic était principalement en provenance de trois continents; Afrique, Europe et Amérique du Nord réunies ensemble par une utilisation courante de l'anglais comme langue de communication. Il est donc important que le RUFORUM continue à utiliser ses évènements de grand rassemblement et réseaux comme des canaux pour attirer le trafic vers les sites web, répertoires et médias sociaux. Ceci permettra d'accroître la visibilité de

divers documents et d'augmenter le niveau de consultation et de référence des ressources électronique du RUFORUM

Mots clés: Accès, audience, répertoire, RUFORUM, médias sociaux

Introduction

Higher education institutions including universities, national and regional research institutes are the heart of knowledge generation. For many years, universities and other institutions have been challenged to make knowledge easily available and accessible to various stakeholders and service the stakeholder needs. Accordingly, a growth in knowledge repositories over the last 10 years has been visible with about 85% of institutions having some sort of institutional repositories. This growth in knowledge repositories also corresponds to the growth in research output from higher education institutions. This growth in research output has also been observed in sub-Saharan Africa for example; there was an increase from 0.44% in 2003 to 0.72% in 2012 (Kigotho, 2014). The pattern of this growth is unwavering with the increasing digitalization of the smallest personal items to the largest continents, everything, everywhere will be digitally connected, and responsive to peoples wants and likes by 2025 (Reuters, 2015). In response to this trend, universities have increasingly adopted digital and on-line dissemination of information and available knowledge.

The growth in research output and communication channels propelled by digitalization is further escalated by increased availability of the open source repository platforms as well as the establishment of the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH). The OAI-PMH is an interoperability protocol for exchanging information between repositories and networks (Pinfield *et al*., 2014). At the same time, social media including among other platforms, facebook, twitter, LinkedIn and blogs as well as a rise in the amateur online museums, archives, and collections has drastically increased (Terras, 2010). There is a strong evidence that researchers and organisations engaged in talking about their research through the social media networks realise an increased spike in the download and utilization of their research works (Terras, 2012). This strong correlation arises from the fact that social media unlike other channels of disseminating research outputs 'pushes' relevant knowledge straight to the end-user (Allen *et al*., 2013). In addition institutions having different social media platforms have the opportunity to facilitate the end users to self-select the sort of knowledge and information they so wish to receive.

The development, application and use of institutional repositories as well as associated social media platforms has primarily been guided by a series of theoretical underpinnings. For example, the Socio-Technical Interaction Networks (STIN) and Social Exchange Theories have been used to provide insights into self-archiving practices of faculty (Kim, 2011) while the Unified Theory of Acceptance and Use of Technology (UTAUT) has been used to demonstrate the importance of performance expectancy, particularly demonstrating the degree to which an individual believes that using a particular system will help him/her attain and/or increase performance (Venkatesh *et al*., 2003). Importantly, the Innovation Diffusion Theory (IDT) that has been widely adopted in integrating social media to enhance the

performance of institutional repositories in information and knowledge dissemination has gained considerable focus (Pinfield *et al.*, 2014). At the re-development of the RUFORUM website (www.ruforum.org), the IDT framework was utilised and allowed for a broad based functionality platform with integrated platforms including the repository and active social media platforms. The purpose was to ensure greater connectivity, engagement and reach to a diversity of stakeholders and actors. However, since the refurbishment, launch and consistent use there has been no analysis undertaken to unravel the dynamics and trends of reach, engagement and use of the information and knowledge shared through the RUFORUM institutional repository and social media platforms, hence the rationale for this study.

Methodology

Data used in this study were retrieved from the RUFORUM institutional repository and the RUFORUM social media accounts: twitter, facebook, blog and LinkedIn using the retrieve tool inbuilt with the system at design. The time period of analysis was from 2010 to the present (2016); indicating a time period from the launch of the RUFORUM website and institutional repository to the period of website upgrade. The retrieval was facilitated by the administrators with backend access and manipulation rights. Data were cleaned and classified according to categories and collections. Data analysis in this study was guided by the Innovation Diffusion Theory (IDT). The IDT explains how, over time an idea and/or product gains momentum and spreads through a specific population or social system. This approach has been used by several researchers. Jones *et al.* (2006) and Xia (2012) for example have used it to explain the development of institutional-level advocacy campaign aimed at promoting the use of institutional repositories. Accordingly, data from this study was analysed in-line with access classification and media through which the repository was accessed. Summary and comparative statistics were generated at univariate and bivariate level.

Research application

Trend in access.   Over the last five years, the RUFORUM repository has been accessed 121,805 times with 1,317 best ever views. Access levels have more than tripled per month from the 2010 commencement period. Between 2010 and 2013; the repository access was generally within the similar margin however a fundamental leap in the number of persons accessing the repository was observed in 2014 (Fig. 1); particularly experiencing a sharp rise from around June through July to August 2014. This period corresponds the 2014 RUFORUM Fourth Biennial and Africa Higher Education Week Conference that was held in Maputo Mozambique. In 2015, the first two months were rather slow but this changed from March, 2015 taking a sharp rise peaking in May before relaxing through June-August and again rising through September. The rise from August-September relate to the RUFORUM Annual general meeting that was conducted in Windhoek, Namibia (Fig. 1). However, the overall positive improvement in the level of access to the RUFORUM repository could be explained by internal re-organisation within RUFORUM that led to the establishment of the communications and knowledge management offices. This led to the focused attention of increasing the rate at which materials with various innovations were uploaded from various

units and Network universities as well as focused attention on increasing visibility of uploaded materials.

Channels of communication. The RUFORUM Secretariat uses four principal sources of reaching out to its audience including; facebook, blog, and twitter. This facilitated the access of information by; 1,406; 598; and 1,539 respectively. Youtube is used separately to channel innovations that have been documented through video and voice. This has also seen commendable downloads over the years. There has been a growing traffic on the RUFORUM official blog page with 9,734 visitors and 19,252 views on the documents peaking in 2015 (Fig. 2). Persons accessing RUFORUM communication from twitter come from the global audience with access coming from especially Europe, United States and Africa.
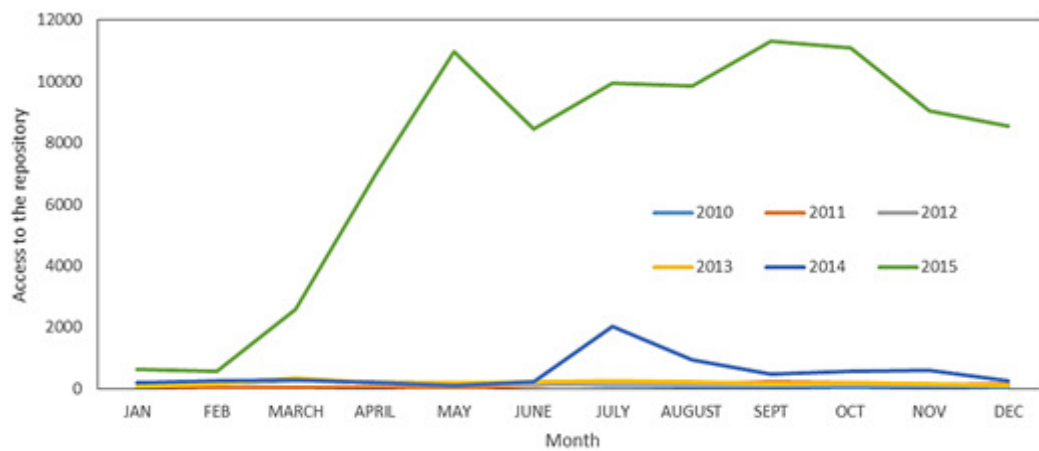

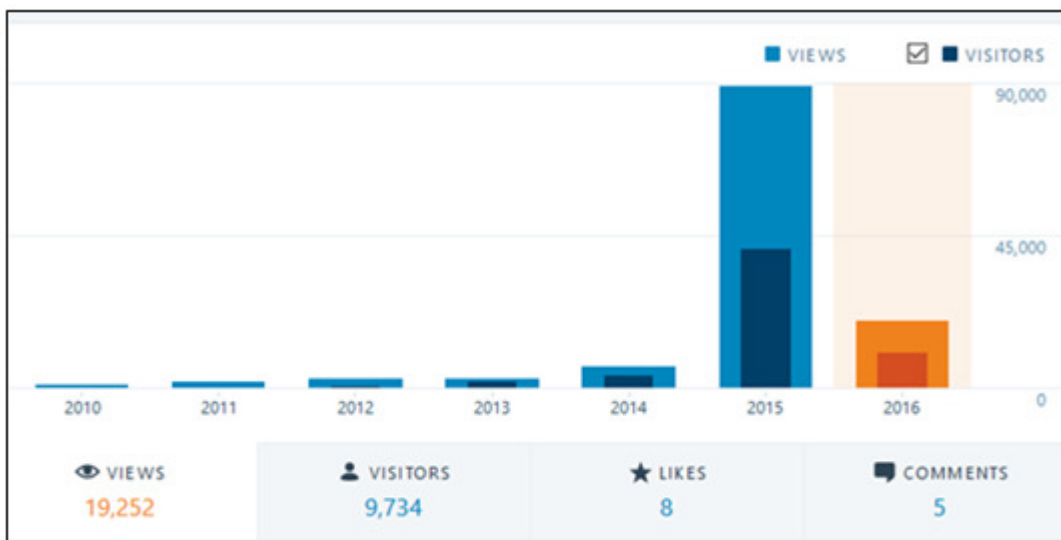**Figure 1. Trend in access of RUFORUM institutional repository**

Figure 2. Growth in traffic in the RUFORUM blog page

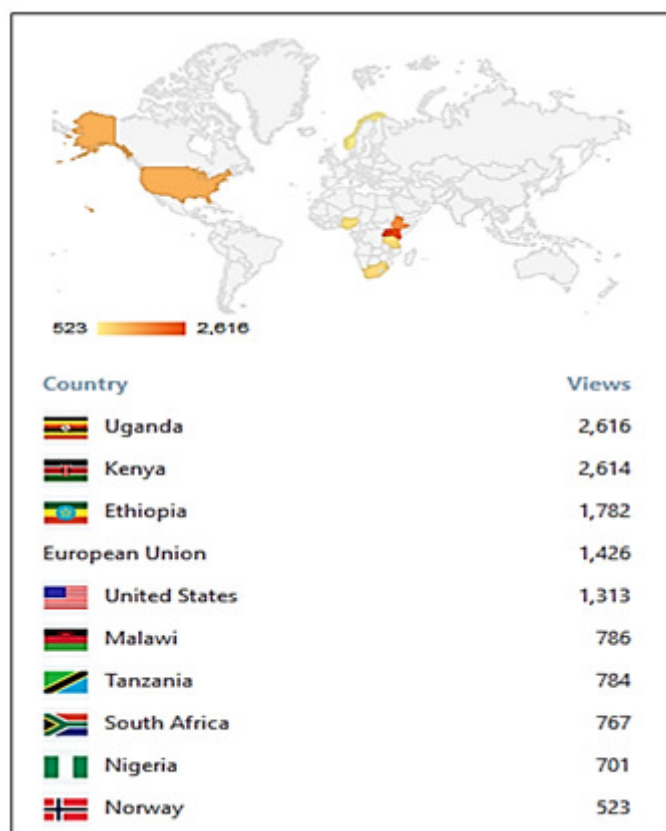| Country	Views
Uganda	2,616
Kenya	2,614
Ethiopia	1,782
European Union	1,426
United States	1,313
Malawi	786
Tanzania	784
South Africa	767
Nigeria	701
Norway	523

Figure 3. Access to RUFORUM repository from the global audience

The African countries searching and accessing information most from the RUFORUM repository are Uganda, Kenya and Ethiopia while the United States dominates access from outside Africa (Fig. 3).

Conclusion

The institutional repository hosted by RUFORUM has provided opportunity for increased traffic and activity within the RUFORUM website. The multiple communication channels used including social media have further helped to increase the activeness of the institutional repository. The RUFORUM reach has subsequently increased with a better global audience reach. Institutional restructuring and focused attention at increasing the use of alternative communication channels pulls the internet traffic towards the website. Thus, RUFORUM has managed to achieve a strategic takeoff and is using its website as a reference point for profiling university based research coming from Africa. Sustaining this momentum will be vital in ensuring greater traffic and access of the documents. RUFORUM further needs to make use of its various convening events and network partners as conduits to advertise what is available within the repository as well as draw social media traffic to RUFORUM accounts to create a movement of RUFORUM believers over time.

Acknowledgement

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