Needs for mobile-responsive institutional open access digital repositories

Patrick Ajibade

Introduction

Scholarly published materials that are freely provided are important to academia, students, librarian and the public (Li *et al*., 2021). The importance of open access (OA) publications cannot be underestimated, as it provides scientific information freely (Havrilova, 2019), assist students information literacy (Holden, 2018) and the OA license platforms enable the reuse of vital scholarly information through open visibility of such (Brücker *et al*., 2020, p. 66). Undoubtedly, one of the major importance of OA publishing is the promotion of outputs visibility (Francke *et al*., 2018), which are very critical to the young and emerging scholars for various reasons such as recognition, promotions and tenure tracks purposes.

Despite the importance of OA publishing to scholars and academia, it was reported that some journals mislead scholars by claiming OA while they are not OA (Schwarz Rodrigues *et al*., 2020). They only make journal articles OA after charging the authors a huge amount of money before they are freely accessible. This is referred to here as "pay-for-play", as some of these charges are, in most cases, a commercial business profit model and do not promote academic scholarships. While it is arguable that the journal needs to cover the cost of editorial and management, staffing and salaries, and hosting the articles online, the cost being charged is ridiculously excessive.

This is why many academic institutions are moving or have opted for using institutional repositories. However, most of the items in the institutional repositories would have been published elsewhere before the author copies were given to the libraries to upload in the repositories.

Mobile devices and open access research

Although it was argued that institutional repositories had not been widely accepted for use for OA (Kepaliene, 2020). Most scholars' unwillingness to embrace the institutional repositories as the reservoir of their scholarly outputs might be because most repository designs do not align with standard publisher's platforms designed to host scholarly communications. Hence, the perception might be that the scholarly communities might not regard some of the outputs by the scholars are quality work. One of the reasons is that most institutional repositories appear or are designed as merely a dumping site. Therefore, rigorously planned OA archival repositories such as online resources that are targeted to facilitate higher education transformation in the context of scholarly communications are essential.

In terms of institutional repositories designs, Generation Z information users must be considered who predominantly consume information on smart devices/phones. The paper is the first of its kind to approach library and information science (LIS) OA debates from a mobile-first/mobile applications perspective in Africa because almost all student information is consumed using the mobile phone. It is important to look at OA challenges from these perspectives in Africa, given the unique challenges facing the academics in the continents that are not experienced in Europe or the USA. Digital divide, low bandwidth, cost of data access and poor internet infrastructure/facilities still plague most

institutions in Africa, with notable exceptions to South African universities. One reason for this is the lack of required bandwidth to swiftly access large audiovisual materials and access mobile data, especially when most students are off-campus. The cost of data is borne by many academics and students alike to access information online. The other problem is the way information is currently packaged that is not mobile-friendly. Yet, information packaging is integral to efficient information management (Ajibade, 2017; Kang'ethe and Ajibade, 2016) and information communication. The majority of the e-book's chapters are not enabled to allow students to access one chapter at a time. Also, the readability of the contents is not mobile-friendly.

Therefore, one of the ways to solve one of the challenges is to use academic libraries as the conduit in negotiating their databases subscriptions. The libraries must negotiate mobile-first content in their contract renewals with vendors and publishers. Mobile view optimisation should be enabled to access LIS contents and tested before release. The 2021 libraries OA symposia did not even gloss over digital divides even though it is still a huge challenge to OA in the continents. Because, without assessing the impact and addressing digital literacy, digital platforms and access to digital devices and mobile-friendly content, even if all the published materials are freely accessible, most students in the continents would still not be able to access to some of those as mentioned earlier.

One major aspect that is still lacking is a non-existent focus on web development interfaces and mobile-first platforms to increase access to scholarly publication. It could be because most LIS scholars relied solely on access provided by their respective academic libraries. However, there must be concerted efforts to build and deploy

mobile-friendly web interfaces beyond the mobile applications that are purposefully designed to increase OA footprints.

Oppenheim (2005) indicated that OA could be conceived as a journal (or repositories) with OA, using the platform, or as institutional repositories. However, one major factor that may encourage wider use of other sources over OA contents from the institutional repositories lies with extensive indexing and references importing capabilities of electronic resources by journals' publishers. It is easy for authors to import in-text citations as well as reference managers. In comparison, most repositories' contents are not properly indexed or curated using advanced technologies available to our librarians (Ajibade and Mutula, 2020a, 2020b). Therefore, scholars might have to type each reference manually.

Still most debates on OA have not touched on mobile development, online resources with interfaces for importing bibliographies into references managers, or the ability to have mobile-friendly interfaces. The academic libraries must play an active role in hosting all journals that are accredited and affiliated with their institution. This would serve as competitive platforms against for-profit publishers. However, the libraries must improve the design of their institutional repositories in line with how major journal articles publishers indexed their journals online. Also, there must be efforts to hire system librarians within the LIS domain to manage institutional repository projects continuously. This might require the ability of actual project development skills and web development prowess. If all these suggestions are implemented, and most of the scholarly communication is professionally curated, indexed and hosted by the libraries, some of the challenges of OA would be resolved, particularly in the global south and elsewhere.

REFERENCES CITED AND CONSULTED

Ajibade, P. (2017), "Efficient information management as organisational performance drivers in South Africa", *Journal of Social Sciences*, Vol. 53 No. 2, pp. 95-106.

Ajibade, P. and Mutula, S.M. (2020a), "Big data, 4IR and electronic banking and banking systems applications in South Africa and Nigeria", *Banks and Bank Systems*, Vol. 15 No. 2, p. 187.

Ajibade, P. and Mutula, S.M. (2020b), "Big data research outputs in the library and information science: South African's contribution using bibliometric study of knowledge production", *African Journal of Library, Archives and Information Science*, Vol. 30 No. 1, pp. 49-60.

Brücker, J., Paier, D., Panzenböck, C. and Wetzinger, J. (2020), "Open access: significance in relation to the science system, EU programmes and institutional implementation", *Wirtschaft Und Management*, Vol. 28 No. July, pp. 47-76.

Francke, H., Lindelöw, C. and Olsson, L. (2018), "Author perspectives on research visibility and impact", *In 23rd Nordic Workshop on Bibliometrics and Research Policy 2018*, *Borås*, November 8-9 2018.

Havrilova, L. (2019), "Open access to scientific information as a form of information and analytical support of scientific activities and communication", *Teacher Professionalism: Theoretical and Methodological Aspects*, No. 9, pp. 5-20.

Holden, I. (2018), "Open access and students in information literacy class: a quest for understanding", *JLAMS*, Vol. 14 No. 1, p. 3.

Kang'ethe, S.M. and Ajibade, P. (2016), "Validating the fact that effective information packaging and dissemination is a strong tool to mitigate the effects of HIV/AIDS in selected African countries", *Journal of Human Ecology*, Vol. 55 No. 3, pp. 221-226.

Kepaliene, F. (2020), "Green open access in Lithuania ["zALIOJI" atviroji prieiga lietuvoje]", *Knygotyra*, Vol. 75, pp. 141-161, available at: https://0-www. scopus.com.wam. seals.ac.za/inward/record.uri?eid=2-s2.0-85 099743944anddoi=10.15388%2fKNYGOT YRA.2020.75.64andpartnerID=40andmd5= 02986d74ed4dab0aed551b3dc712024c

Li, H., Liu, L. and Wang, X. (2021), "The open access effect in social media exposure of scholarly articles: a matched-pair analysis", *Journal of Informetrics*, Vol. 15 No. 3, p. 101154.

Oppenheim, C. (2005), "Editorial: open access and the UK science and technology select committee report free for all?", *Journal of Librarianship and Information Science*, Vol. 37 No. 1, pp. 3-6.

Schwarz Rodrigues, R. de Araújo, K.H. Breno, S.D.S. Lavinia, L. and Campos Brizola, A.L. (2020), "Directory of open access journals in keywords: distribution and themes of articles", Directory of Open Access Journals in Keywords: Distribution and Themes of Articles, 110-121.

FURTHER READING

Ajibade, P. and Mutula, S.M. (2018), "Information management as a nexus to promote the use of indigenous medicine and enhance public healthcare delivery: a bibliometric analysis".

Bawack, R. and Nkolo, P. (2018), "Open access movement: reception and acceptance by academic libraries in developing countries", *Library Philosophy and Practice*, 0_1-24.

Cowan, S. and Bulock, C. (2017), "Open access in the world of scholarly journals", *The Serials Librarian*, Vol. 72 Nos 1/4, pp. 194-200.

Holzman, A. (2016), "US open access publishing for the humanities and social sciences", *European Political Science*, Vol. 15 No. 2, pp. 177-182.

Jiao, X. (2011), "Will open access be the future?", *TEIN 2011 – 2011 2nd ETP/IITA Conference on Telecommunication and Information*, 1, pp. 229-231, available at: https://0-www.scopus.com.wam.seals.ac.za/ inward/record.uri?eid=2-s2.0-84926019728 andpartnerID=40andmd5=6d874f06effd78ae 79a5ed5803bf016c

Nicholas, D., Jamali, H.R., Herman, E., Xu, J., Boukacem-Zeghmouri, C., Watkinson, A., Rodríguez-Bravo, B., Abrizah, A., Świgoń, M. and Polezhaeva, T. (2020), "How is open access publishing going down with early-career researchers? An international, multi-disciplinary study", *Profesional de la Informacion*, Vol. 29 No. 6, pp. 1-22, art. no. e290614.

Pankowska, M. (2011), "Open access movement in science and research, international conference on information society", i-Society 2011, art. no. 5978464, pp. 330-335, available at: https://0-www. scopus.com.wam.seals.ac.za/inward/record. uri?eid=2-s2.0-80052565213anddoi=10.110 9%2fi-society18435.2011.5978464andpart nerID=40andmd5=ccf883330894d2758c9d 3d7f3c495326

Ranasinghe, W. and Chung, J.M. (2019), "Open access journal publishing in Sri Lanka:

characteristics and future potential", *Journal of Educational Media and Library Sciences*, Vol. 56 No. 2, pp. 245-266.

Ray, M. (2016), "An expanded approach to evaluating open access journals", *Journal of Scholarly Publishing*, Vol. 47 No. 4, pp. 307-327.

Siler, K. (2017), "Future challenges and opportunities in academic publishing", *Canadian Journal of Sociology/Cahiers Canadiens de Sociologie*, Vol. 42 No. 1, pp. 83-114.

Swanberg, S.M., Thielen, J. and Bulgarelli, N. (2020), "Faculty knowledge and attitudes regarding predatory open access journals: a needs assessment study", *Journal of the Medical Library Association*, Vol. 108 No. 2, pp. 208-218.

Patrick Ajibade (*ajibadep.sa@gmail. com*) is based at the Online Resource for Higher Education Transformation, Nelson Mandela University, Port Elizabeth, South Africa.