

Jumping the Institutional Repository Bandwagon: Inferences for the National University of Samoa (NUS)

Rafia Naz, National University of Samoa

Abstract

In this digital era where educational institutions are operating in a digital environment, many have realised the significance of jumping the institutional repository (IR) bandwagon. An institutional repository fundamentally premises on amassing, handling, preserving and publicizing scholarly works generated in a digital form by academia, scholars, and students in universities. The repositories correspondingly function as an inclusive databank of the parent institute, which in turn expedites knowledge sharing and management of research scholarship, enhances discernibility and extensive access, promotes speedy dialogues on research, and certifies long term preservation of documents. This enquiry principally deliberates on the benefits and challenges of institutional repositories (research repository) and its inferences for NUS. The tenacity is to persuade stakeholders of the academia that it is time for them to exploit ICTs and jump the institutional repository bandwagon.

Keywords: *Institutional repository, National University of Samoa, Higher education (HE), Information and Communication Technologies (ICTs)*

Introduction

Information and Communication Technologies (ICTs) are virtually changing the dynamics of the scholarly milieu and administration of research in Higher Education (Abrizah, et al., 2017; Bhardwaj, 2014; Giesecke, 2011; Marsh et al., 2017; Rieh et al., 2007). Institutional repositories (IR) in this regard have emerged as a platform for sharing research (Lagzian et al., 2015) and have been witnessed as an innovative model for accumulating research outputs (Lynch, 2003). IR is a massive databank that has been set up to manage, share, access, and record a scholars' datasets (Uzwysyn, 2016). Advocates that have deliberated on the benefits of IRs, admitted augmented knowledge sharing, heightened control over the digital assets of the academia, and improved preservation of documents (Crow 2002a, b; Gibbons, 2004; Rusbridge et al., 2005; Yeates, 2003), whilst Crow (2002a, b) stipulated that the scholarly work produced by individuals, faculty, and students of an institute remained accessible both internally and externally with certain confines on accessibility. Uzwysyn (2016) postulates that IRs permit enhanced scrutiny, substantiation, appraisal, transparency, and authentication of the scholars' outcomes by other professionals. IRs further hastens prompt access to internationally dispersed researchers who are conferred to share, comprehend, and synthesize outcomes. The author further advances that the community of scholars' benefit from online sharing, collaboration and aggregation of scholarly statistics (Uzwysyn, 2016).

The rudiments and significance of IRs from the reviews indicate enriched web presence, discernibility and reputation, centralisation of research outputs, standardisation, improved research performance, reduction in publishing expenditures and wearying access barriers (Ahmad et al., 2012; Barwick and Pickton, 2006). Other returns comprise of data mining (Oliver and Swain, 2006; Pinfield et al., 2014) and enhanced data planning and management (Gibbons, 2004). Holland and Denning (2011) advise that IR is a research assessment instrument. Based on the comprehensive reviews on the returns and eminence of IRs, the next section discusses the Challenges of developing and implementing an IR.

The Challenges of Developing and Implementing an Institutional Repository

Academic analysis reveals a number of predominant challenges in developing and implementing IRs at universities. These range from issues of culture change (Grieg, 2005), contemplation on the category of users when implementing repositories (Aschenbrenner, 2008), researchers' reverence towards full-text versus abstracts or citations (Bansode, 2011), handling diverse users and the overall administration of repositories (Johnson, 2002). MacMillan (2014) correspondingly establishes that research cultures differ widely. Johnson (2002) also debated that the contest of IRs is for national studies to match up to global scholarships (Johnson, 2002). Arlitsch and Grant (2018) further hypothesised that the fragmented environment of IR domino effects on the impediments. Efforts and costs are therefore replicated, frequent software platforms and versions are succeeded concurrently, metadata are applied contradictorily, users are served second-rate, and archives are incapable to take advantage of collective data about content and users (Arlitsch and Grant, 2018).

Other studies highpoint a broad spectrum of impediments that impact scholars' readiness to share their own data. One of the explanations of course is lack of supportive research data infrastructure (Kuipers and Van der Hoeven, 2009; Tenopir et al., 2011). Tenopir et al. (2011) states that the inclination of scholars' is adversely obstructed by the deficiency of the scholars' knowledge concerning prevailing systems. Ogburn (2010) advocates that curating research data dictates renewed strategies and practices for engaging with the academia. Lyle (2014) in his study endorses the requisites of encompassing a consortium of institutional associates whilst McLure et al. (2014) ponders on the essentials of data management tools in executing best practices that ease data proprietors to articulate and communicate their data for preservation. A fundamental contest in mounting a data repository is delineation of a metadata schema that will admit diverse datasets while accumulating standardization to permit deposits to be effortlessly examined (Hourclé, 2008; Orchard, 2014). Simons and Richardson (2012) highlight the requisites of developing skill sets for its users allied to repository software usage. He further reflects on access apprehensions such as copyright legislature and open access standards. Lynch's (2003) research discourses on policy issues. Likewise, Prabhakar and Rani (2017) discourse on the prominence of framing policies, standardizing bibliographic details, examining copyright policy and persuading faculty to deposit their scholarships. The authors comment that the triumph of IRs is subject to the readiness of scholars to deposit their scholarship. Institutions essentially ought to create awareness on the prominence of IRs and its preservation must be an institutional strategic goal (Prabhakar and Rani, 2017).

Methodology

This study has undertaken an exploratory review of the secondary literature sourced from internet; mainly journals, conferences, books and book chapters. This enquiry principally deliberates on the benefits and challenges of institutional repositories (research repository) and it's inferences for NUS. The tenacity is to persuade stakeholders of the academia that it is time for them to exploit ICTs and jump the institutional repository bandwagon. This enquiry is confined to NUS and the research implications are institution specific. Given the varying context of the institutional milieu of countries, the implications and conclusive findings may not be directly fixated in another scenario. The variables discussed may vary given the contextual changes. This enquiry has not undertaken any investigation on human subjects therefore, ethics clearance pertaining to that was not deemed essential.

Discussion: Inferences for NUS

Firstly, an institutional repository for research will afford NUS the prospects to build a digitalized platform in which the affiliates of the university would be able to deposit their scholarly works in a digital format. Given that the digital resources would be inputted by the students, faculty and members of the university, this digital content would be easily archived. This then becomes the source of intellectual capital for the NUS. The current D-space needs to be further enhanced.

Secondly, IR would augment knowledge sharing/transfer within NUS. It would conceivably stimulate visibility of scholar's research endeavors and permit enhanced access. These enhanced levels of accessibility could likewise bolster unanticipated discovery traversing multiple disciplines that may not have been conceivable formerly. Staff would be able to identify common research areas/interests for cross-disciplinary and cross-faculty research – this is the starting point of building research capacities and accelerating research. Users of the IR would also gain as they would be able to access the system internally, externally and from anywhere 24/7.

Thirdly, digitally archiving research output will empower NUS to centralize research in a distinct location via its software. This will provide pertinent analytics to track research performance data across the university/disciplines. It will also set the impetus for homogenizing institutional record keeping. Heightened research relevance, quality of scholarly work and impact factor will augment data analytics enabling NUS to benchmark to other national and international universities.

Fourthly, building a research culture appears noteworthy. For NUS, this means building capacity in its staff and students to undertake research. This entails providing leadership and top management support, enabling funding and setting up incentives/schemes for grants, instituting research programs, aiding staff and students via training and development (workshops, seminars, mentoring, etc), setting up clear policies, practices and guidelines for research, setting parameters for research ethics and monitoring the behavior of scholars, overcoming bureaucratic hurdles and stimulating cross-disciplinary research. It further signifies building greater research cognizance and pursuing stakeholder insights on avenues for crafting/revising existing systems, processes, & policies for improved research governance, administration and ethics. This also calls for collaborative research amid faculty and students, faculty and other staff, or collaborative research with other universities/agencies. Facilities/equipment and infrastructure also strengthen the capacity building initiatives. Once research culture is strengthened, the researchers can be easily classified as research active and their research load can be measured. This will again set the stimulus for policy development regarding staff workloads. At NUS, it is important to build communities of practice. This can be encouraged through discussion forums, research colloquiums etc whereby scholars can engage in productive knowledge sharing.

Fifthly, ICTs will provide NUS the edge in storing academic content electronically and archiving and preserving it. This would mean that the NUS university library need not be overcrowded. Contemplation would be regarding the costing for journals.

Sixthly, NUS needs to scheme out the requirements for software, hardware, architecture, and training. It needs to identify and classify the user groups impacted, gauge the apprehensions of stakeholders, ponder on access issues, deal with copyright issues (legal framework), decide on open access issues and map out the systems, policies, procedures and guidelines that will facilitate the development/implementation of IRs.

Finally, at an institutional level, there's a need to draw on the models, best practices and strategies/guiding principles from affiliate institutions to build communities of practice to reflect and set the stage for NUS modelling and best practices.

Conclusion

It cannot be blatantly claimed that this study has exhausted the strategies/guidelines on how an institutional repository (IR) should be developed and implemented. Nor does it contend that the inferences of IR for NUS are definitive in deliberation. There could be promising firsthand insinuations from stakeholders. Developing and executing a digital platform will provide countless leverage to

NUS. It would be well positioned internationally as it accumulates, archives, preserves, and showcases the scholarly outputs of its institution to other institutions, think-tanks, private sector organizations, NGOs, governments or to its stakeholders. In leveraging this, it can not only enhance its scholarly prominence, but gauge its usage and assess the impact of the NUS research scholarship. This will further provide analytics to validate the University's research quality and excellence in line with the Strategic Goals of the University.

References

- Abrizah, A., Noorhidawati, K., and Kiran, K. 2017. "Global Visibility of Asian Universities' Open Access Institutional repositories". *Malaysian Journal of Library and Information Science* 15 (3): 53-73
- Ahmad, P., Aqil, M., and Siddique, M.A. 2012. "Open institutional repositories in Saudi Arabia: Present and future prospects". *International Journal of Digital Library Services* 2(2): 58-68.
- Anuradha, K.T. 2013. "Design and Development of Institutional Repositories: A Case Study". *The International Information. Library Review* 37(3): 169-178.
- Arlitsch, K., and Grant, C. 2018. "Why So Many Repositories? Examining the Limitations and Possibilities of the Institutional Repositories Landscape". *Journal of Library Administration*, 58(3): 264–281.
- Aschenbrenner, A. 2008. "The Future of Repositories? Patterns for (Cross-) Repository Architectures". *D-Lib Magazine* 14: 11-12.
- Bansode, S.Y. 2011. "Developing Institutional Repository in University Library: A Case Study of University of Pune". *International Journal of Information Dissemination and Technology* 1 (4): 188-192.
- Barwick, J. P. L. 2007. "Building an institutional repository at Loughborough University: Some experiences". *Program: Electronic Library and Information Systems* 41 (2): 113 – 123.
- Barwick, J., and Pickton, M. 2006. "A librarian's guide to institutional repositories". *eLucidate* 3 (2): 3 - 9.
- Bhardwaj, R. K. 2014. "Institutional Repository Literature: A Bibliometric Analysis. *Science & Technology Libraries*" 33:2, 185-202.
- Crow, R. 2002a. "The case for institutional repositories". A SPARC Position Paper, Washington: The Scholarly Publishing and Academic Resources Coalition. http://www.arl.org/sparc/IR/IRFinal_release102.pdf (Accessed 01 March 2020).
- Crow, R. 2002b. "SPARC Institutional Repository Checklist & Resource Guide". http://www.arl.org/sparc/IR/IR_Guide_v1.pdf (Accessed 01 March 2020).
- Gibbons, S. 2004. "Establishing an Institutional Repository". *Library Technology Reports* 40 (4) July-August 2004.
- Giesecke, J. 2011. "Institutional Repositories: Keys to Success". *Journal of Library Administration* 51: 5-6: 529-542.
- Grieg, M. 2005. "Institutional Advocacy Campaign: Guidelines and Practical Advice". DAEDALUS Project: Work Package 3 – Advocacy. <https://dspace.gla.ac.uk/handle/1905/377> (Accessed 01 March 2020).
- Holland, M., and Denning, T. 2011. *Making the Repository Count: Lessons from Successful Implementation in university Libraries and Digital Learning Environments*. Surrey: Ashgate.
- Hourclé, J. A. 2008. FRBR Applied to Scientific Data. *Proceedings of the ASIST Annual Meeting*, 45 (1). <http://dx.doi.org/10.1002/meet.2008.14504503102> (Accessed 01 March 2020).
- Johnson, R. K. 2002. "Institutional Repositories: Partnering with Faculty to Enhance Scholarly Communication". *D-Lib Magazine*, 8:11. <http://www.dlib.org/dlib/november02/johnson/11johnson.html> (Accessed 01 March 2020).
- Kuipers, T., and Van der Hoeven., J. 2009. "Insight into Digital Preservation of Research Output in Europe". *Survey Report*. http://www.parse-insight.eu/downloads/PARSE-Insight_D3-4_SurveyReport_final_hq.pdf (accessed 01 March, 2020).

- Lagzian, F., Abrizah, A., and Wee, M. C. 2015. "Critical Success Factors for Institutional Repositories Implementation". *Electronic Library* 33 (2): 196– 209.
- Lyle, J. 2014. "ICPSR: A Consortial Model to Advance and Expand". *Social and Behavioral Research*, 2 (1): 19-29.
- Lynch, C. A. 2003. "Institutional repositories: Essential infrastructure for scholarship in the digital age". *ARL: a bi monthly report*, 226: Feb, 1-7. <http://www.arl.org/newsltr/226/ir.html> (Accessed 01 March 2020).
- MacMillan, D. 2014. "Data sharing and discovery: What librarians need to know". *Journal of Academic Librarianship*, 40(5): 541-549. <http://dx.doi.org/10.1016/j.acalib.2014.06.011> (Accessed 01 March 2020).
- Marsh, C., Wackerman, D., and Stubbs, J. A. W. 2017. "Creating an Institutional Repository: Elements for Success!" *The Serials Librarian* 72: 1-4, 3-6.
- McLure, M., Level, A. V., Cranston, C. L., Oehlerts, B., and Culbertson, M. 2014. "Data Curation: A Study of Researcher Practices and Needs". *Portal: Libraries & the Academy*, 14 (2):139-164.
- Ogburn, J. L. 2010. "The Imperative for Data Curation". *Portal: Libraries and the Academy*, 10(2): 241–246.
- Oliver, K. B., and Swain, R. 2006. "Directories of Institutional Repositories: Research Results & Recommendations", *72nd IFLA General Conference, Proceedings*.
- Orchard, S. 2014. "Review: Data Standardization and Sharing -The Work of the HUPO-PSI. BBA - Proteins and Proteomics", 1844 (1, Part A), 82-87. <http://dx.doi.org/10.1016/j.bbapap.2013.03.011> (Accessed 01 March 2020).
- Pinfield, S., Salter, J., Bath, P.A., Hubbard, B., Millington, P., Anders, J.H.S., and Hussain, A. 2014. "Open-Access repositories worldwide, 2005–2012: Past Growth, Current Characteristics, and Future Possibilities". *Journal of the Association for Information Science and Technology* 65 (12): 2404– 2421.
- Prabhakar, S. R., and Rani, M. 2017. "Benefits and Perspectives of Institutional Repositories in Academic Libraries". *Scholarly Research Journal for Interdisciplinary Studies*, 5 (25): 6904-6909.
- Rieh, S. Y., Markey, K. Yakel, E., St. Jean, B., and Kim, J. 2007. "Perceived Values and Benefits of Institutional Repositories: A Perspective of Digital Curation". https://ils.unc.edu/digccurr2007/papers/rieh_paper_6-2.pdf (Accessed 01 March 2020).
- Rusbridge, C., Burnhill, P., Ross, S., Buneman, P., Giaretta, D., Lyon, L., and Atkinson, M. 2005. The Digital Curation Centre: A Vision for Digital Curation. From Local to Global Data Interoperability - Challenges and Technologies. *Mass Storage and Systems Technology Committee of the IEEE Computer Society*. June 20-24, 2005. Sardinia, Italy. http://www.dcc.ac.uk/docs/DCC_Sardinia_paper_final.pdf (accessed 01 March, 2020).
- Simons, N., and Richardson, J. 2012. New Roles, New Responsibilities: Examining Training Needs of Repository Staff. *Journal of Librarianship & Scholarly Communication*, 1 (2), eP1051. <http://dx.doi.org/10.7710/2162-3309.1051> (accessed 01 March, 2020).
- Swan, A.2011. *Institutional Repositories – Now and Next*. In *University Libraries and Digital Learning Environments*. Surrey: Ashgate.
- Tenopir, C., Allard, S., Douglass, K., Aydinoglu, A.U., and Wu, L. 2011. Data Sharing by Scientists: Practices and Perceptions. *PLoS ONE* 6: e21101. <http://dx.doi.org/10.1371/journal.pone.0021101> (Accessed 01 March 2020).
- Uzwyszyn, R. 2016. "Research Data Repositories: The What, When, Why, and How". *Computers in Libraries* 36 (3): 18-27.
- Yeates, R. 2003. "Over the Horizon: Institutional Repositories". *VINE: The Journal of Information and Knowledge Management Systems* 33(2): 96-99.