

BIBLIOMETRIC INFORMATION SERVICE FOR INFORMED SCHOLARLY DECISION MAKING AMONG ACADEMIC INSTITUTIONS IN EAST AFRICA

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Abstract

The purpose of this paper is to explore the extent to which bibliometrics is incorporated in LIS education in Eastern Africa to equip LIS professionals with skills and competencies required to harness opportunities for libraries to develop and provide innovative bibliometric information services. This is particularly important in an era in which there is an urgent need for information professionals who can use bibliometric tools to analyze vast amount of information on a regular basis and generate reports that can be used to support research-related decision making. Qualitative approaches including the authors' extensive experience with and exposure to LIS education as well as practice as an University Librarian in both private and public universities in Uganda and Rwanda respectively, together with interviews and literature review were employed to generate insights into LIS education in East Africa with specific reference to bibliometrics. The research findings revealed that the majority of Academic Librarians were less familiar with with bibliometrics, but they viewed altmetrics as effective and were interested in receiving training to learn more about bibliometrics. Librarians who had been in the profession for over 20 years knew less about bibliometrics compared to those enrolled on Masters and Doctoral Library and Information studies. The study suggests that although bibliometrics has been reported to be very useful in solving diverse issues, however, LIS education programs in East Africa seem to have very limited coverage of bibliometric in course offerings. Incorporating bibliometrics into academic librarianship will go a long way in empowering academic librarians with skills that are required to provide high quality services in the scholarly communication process, as well as to increase the visibility and status of libraries with in the University communities.

Incorporating bibliometrics in LIS education can potentially enhance the professional profile of LIS professionals and may well increase the visibility of the libraries in relation to their wider academic environment where bibliometrics is getting increasingly important in terms of research evaluation. The paper provides a call to action to LIS

educators, including redesigning the curriculum to take care of current students and the alumni so as to fill the existing bibliometrics skills gap among Library and Information professionals in East Africa.

Keywords: *Bibliometrics, LIS education, bibliometrics education, Academic Librarians, Scholarly Communication, East Africa*

Introduction

Research has reported increasing interest in bibliometrics, at the libraries as well as in academia in general is the growth in use of bibliometrics to evaluate research performance, especially in universities, and governments, and also by policymakers, research directors and administrators, information specialists and librarians and researchers (Åström, Hansson, & Olsson, 2011). Consequently, the roles of academic librarians are evolving to include the provision of bibliometrics services to researchers. Bibliometrics is a quantitative analysis of the academic output of people, institutions, facilities, regions and countries that uses statistical methods to make statements about the quantity, extent, frequency, significance and connections of publication (Åström et al., 2011; Ball, 2017)

Given the significant changes in systems of research management and policy, where evaluation of research outcomes are increasingly linked to the allocation of research funds on various levels - from individual scholars, to institutions and national systems for academic research, such as the national level distribution of government funds between publically funded universities, the role of bibliometric analyses cannot be over emphasized. Bibliometric methods are increasingly being utilized in the developed world to identify quantitative indicators for academic productivity and quality, including, demonstrating the importance and impact of one's own research and/or that of a research group which information can be useful for applying for tenure, promotion or grants demonstrating the value of a researcher's scholarly works to the institution as well as demonstrating return on investment to funding bodies, industry and the general public (Åström et al., 2011; Ball, 2017; Davis, Wilson, & Horn, 2005; Whitley, R. & Gläser, 2007). Furthermore Bibliometrics is being employed in identifying areas of research strength and weaknesses in order to inform future research priorities for an institution, identifying top performing journals in a subject area to support decisions on deciding where to publish - learning more about a subject area and identifying emerging areas of research (Tera Malone, 2016). Additionally Bibliometrics can be used to identify top researchers in a subject area. This can be useful for locating potential collaborators or competitors and informing the recruitment process.

The motivation for this paper comes from the premise that despite the fact that roles of academic librarians are evolving to include the provision of bibliometrics services to researchers, solving diverse issues, however, LIS education programs in East Africa seem to have very limited coverage of bibliometric in course offerings and the majority of academic librarians in East Africa do not seem to be prepared to provide bibliometric services.

This could account for scant application of bibliometrics to identifying the quantity and structure of literature on a specific subject, examining the growth of literature output in a subject during a identifying country-wide distribution of research literature in a particular subject, comparing and measuring the growth rate of literature on a particular subject in various countries and analyzing the authorship pattern of literature on a particular subject published from various countries as well as quantitatively assessing the core journal titles and less used or border lined publications in particular disciplines; interrelationships between authors from different institutions also aiding librarians in evaluating the effectiveness of their holding within the East African region. The paper is relevant to both Library and Information Science Educators and LIS professionals. The motivation for choosing this aims is that the effective provision and interpretation of bibliometric reports has ramifications at institutional, regional and global levels. For instance, data comparing the number of articles published on a particular subject can be used to identify potential partnerships with in the region and/or beyond, or an aspect in which there has been limited research.

Methodology

Qualitative approaches, including face to interviews were employed during a short course in Bibliometrics for 16 Academic Librarians in Rwanda. Furthermore telephone interviews were conducted with selected academic librarians from Uganda who had completed their studies in the 90s and early 2000s as well as academic librarians who are currently enrolled for Masters and Doctoral studies at the East African School of Library and Information Science.

The respondents were requested to share their experiences with bibliometrics, including familiarity the bibliometric tools and how they had applied bibliometrics to respond to needs by their Vice Chancellors and academic staff to support research related decision making within their institutions. The respondents were also asked for their comments about areas for improvement for bibliometrics.

Findings

The first question elicited the respondent's familiarity with bibliometrics. When asked how familiar they were with bibliometric, including the main metrics and main bibliometric tools used to measure the impact of research outputs and publications, only one respondent out of the 16 respondents in Rwanda reported to be familiar with them while the majority indicated no familiarity with the main metrics bibliometric tools. The response from the Ugandan counterparts indicted limited familiarity with metrics and bibliometric tools.

The respondents were requested to indicate whether they are had been called upon by the academic staff and/or their Vice Chancellors to provide metrics to support research related decision making within their institutions, including promotion, research funding and trending research. The respondents from Rwanda reported that they had received such requests but lacked the competence to conduct bibliometric analysis. Their counterparts in Ugandan counterparts had received requests for bibliometric analyses but lacked the practical skills to conduct the analyses since thee training they has received had not enabled them to attain practical skills in conducting bibliometric analyses.

The respondents were requested to provide comments about what needs to be done to ensure that academic Librarians can harness opportunities that accrue from availability of digital bibliographic information and tools for analyzing this vast amount of information on a regular basis to support evidence based research related decision making at micro and macro-levels. All respondents suggested that both formal and informal training in terms of short courses and workshops would help to address the bibliometrics skills gap among academic Librarians in East Africa.

Discussion

This study has revealed that most academic librarians in from Rwanda who participated in the study were not very familiar with bibliometrics. This could partly be attributed to lack of Library and information Science Education in Rwanda and lack of courses on bibliometrics in Library and Information Science schools in Universities where the Rwandan academic librarians attended obtained their bachelors and masters training. On the other hand Academic Librarians in Uganda who had completed their LIS training in the 90s and mid 2000s were not exposed to any training in Bibliometrics which explained why they lacked familiarity with bibliometrics. This could be attributed to lack of short courses to facilitate continuous professional development. On the other hand respondents who were currently enrolled on Masters and Doctoral studies in Library and Information Science were more familiar with bibliometrics although they expressed lack of practical skills

needed to conduct bibliometric analyses. The finding of the current study are collaborated by studies in the developed world such as (Zhao, 2011) in which very limited coverage of bibliometrics in Library and Information Science programs was reported. The findings of the current study are also confirmed by a study conducted in Australia (Davis et al., 2005) where it was reported that no Australian University taught infometrics. The current study suggests that a need for education regarding bibliometrics for Academic Librarians in East Africa to enable them to relevant in the current academic environment.

The current study also suggests that while University libraries in Europe are increasingly focusing on development of knowledge and services related to scholarly communication other than the searching and retrieving of scholarly information as reported by (Åström et al., 2011) University Libraries in the East African region are a large extent focusing energies on issues concerning the acquisition and organization of its collections, as well as searching and retrieving information for the users of the library. The paper suggests that LIS schools need to incorporate bibliometrics into the curriculum as a way of redefining and widening of the professional role of LIS professionals so as to enable them to support the scholarly communication process, as well as to increase the visibility and status of academic libraries.

Conclusion

The rapid technological advances have transformed librarianship and LIS as a field of practice and of research. The literature advocates for librarians to take up these cutting-edge technologies to remain relevant an academic environment where many activities that traditionally have been part of the core of the field and the profession, to an increasing extent have come to be performed by others. However, there is little the current research has highlighted a big skills gap which when not filled will leave academic librarians irrelevant due to inability to conduct systematic evaluations of research systems and institutions, particularly in relation to allocation of research funds, new possibilities and expectations. These findings suggest that the need for LIS educators in East Africa need to adapt the curriculum to take on an active role in a range of different aspects of scholarly communication, including training in doing bibliometric analyses cannot be over emphasized.

The results of this study also indicate increased opportunities for academic libraries, because conducting bibliometric analyses that can lead to evidence based decision making has the potential to strengthen the position of libraries within the context of the university, including the Senior Management, researchers and the students. By showing the benefits of bibliometrics to both university senior management and to the research community, academic libraries will take on a position more central in the development of their

universities and thus be perceived as the vehicles to attaining research-led status.

Limitations of the study:

A limited number of academic Librarians in Rwanda and Uganda participated in the study. With these limitations it is not appropriate to generalize the study findings outside of the group of librarians who responded. Nonetheless the study provides rich insights into the need for LIS schools in East Africa to respond to bibliometrics-skills needs of the current students and the alumni.

Future Research

Future studies that produce concrete evidence would be invaluable to the profession. One potential direction for future research might include in-depth interviews with academic librarians who are using bibliometrics in their jobs to discover how they are using them and for what purposes. It might also be useful to explore the opinions of academic staff, and vice chancellors to obtain their perceptions about the contribution of bibliometrics to research –related decision making, including choice of research focus, allocation research funds and academic staff promotions.

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