Need and Justification for the Implementation of Bibliometrics Studies in Library and Information Science Schools Curriculum in Higher Institutions In Nigeria

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Abstract
This study presents the import for developing and Implementing Bibliometrics studies in Library and information science school's curriculum in Higher Institutions in Nigeria, using a theoretical approach. It observed that knowledge is increasing in a geometrical speed. Hence, identifying the growth of knowledge, core authors and most productive journals in a field becomes imperative for LIS students to learn especially as they are future collection development librarians and researchers. Hence this study provided justifications for the inclusion of Bibliometrics as a course of study in LIS schools which included bibliometric studies opens new ways of understanding the scholarly communication process, aids in making collection development decisions etc. The study also looked at the factors that can hinder the study of Bibliometrics in library schools such as absence of qualified/ professional bibliometricians, inadequate literature, low level of technology penetration etc. Hence, workable recommendations were made. It was concluded therefore that Bibliometrics as a sub-field of library and information science is a must- taught course.

Keywords: curriculum development, library and information science, library schools

Introduction

The growing pace of information explosion and developments in the field of library and information science discipline makes additional demands for new methods of understanding and interpreting data and information in library and information science.

One potent method for creating such understanding and interpretation is through 'bibliometric'. Bibliometrics studies give a simplified picture of a complex reality and must take into account many variables to be useful in practice.

Bibliometrics, according to Aina (2013), covers the study of the number of publications in a given field and characteristics of the subject field. It enables one to identify growth of knowledge, core authors and most productive journals in a field. Bibliometrics can also be used to provide the trends and future directions of a discipline. Bibliometrics, according to Bellis (2009) is a set of methods of quantitatively analyzing scientific and technological literature. Archambault & Gagne (2004) write that bibliometrics is "made up of methods for conducting quantitative analysis of studies". Some of the methods serve to measure sociological aspects of one of the researcher's most important activities – dissemination of research results in published form. Bibliometrics is essentially a quantitative analysis of publication for the purpose of ascertaining specific kinds of phenomena. One can infer at this point that bibliometrics is the application of statistical and numerical approaches for the measuring of both quantitative and qualitative data for books and journals and other published communication media.

Lundberg (2006) traced the history of bibliometrics as a term to Pritchard in 1969. Russel and Rousseau (2010) state that the need for a relatively quick, easy and inexpensive alternative to peer review for evaluating research performance led to the discovery of bibliometrics. Bibliometrics turns the main tool of science, quantitative analysis on itself. At its most fundamental, this approach to research evaluation is simply counting.

Basically, bibliometrics is a type of research method used in library and information science. It utilizes quantitative analysis and statistics to describe patterns of publication within a given field or body of literature. One of the main areas in bibliometric research concern is the application of the three bibliometric laws namely – Lotka's Law *(*which describes the frequency of publications by authors in a given field); *Bradford's law* (which serves as a general guideline to librarians in determining the number of core journals in any given field); and *Zipf's Law* (which predicts the frequency of words within a text). The laws would guide the librarian or student in library and information science on how to use bibliometrics in research.

Commenting, in this regard, Aina (2013) states that Librarians have extensively used bibliometrics laws in selecting journals and other collection development activities such as de-subscription of serials, weeding, etc. All these are to save costs and also to provide the most useful relevant information to the users. Through statistical analysis of borrowing records, one is able to identify frequently borrowed books, and such books

will be placed on reserve or even multiple copies of the book can be purchased. If inter-loan records are analysed, one can identify books that are regularly requested for and that will be an indication that the book should be purchased by the library.

More so, bibliometrics are now used in quantitative research assessment exercises of academic output which is starting to threaten practice-based research. However, users of bibliometrics must remember the two assumptions bibliometrics is based on which are (1) the goal of the researcher is to advance knowledge and (2) scholars have to publish in order to build a reputation and advance their careers. Hence, educational institutions have a responsibility to teach students bibliometrics in Library and Information Science so as to train them in making these assumptions of bibliometric a reality. Having these in mind, including bibliometrics studies into the curriculum, which Ekoja and Odu (2016) describes as the totality of the content of an area of study to be imparted to its intended learners; library and information science inhigher institutions in Nigeria would not be a bad idea.

Statement of the problem

The curriculum of library and information science (LIS) need to be holistic and comprehensive and be able to respond to the dynamic and changing needs of the study. With information, knowledge and published papers increasing at a geometrical speed, library students therefore need to equip themselves for the challenges ahead as future librarians and researchers. Studying Bibliometrics provides the platform for LIS students to brace themselves up for a changing information world. Studying Bibliometrics enables one to identify growth of knowledge, core authors and most productive journals in a field. Bibliometrics can also be used to provide the trends and future directions of a discipline. It is also very useful for collection development in any library. Sadly, very few library and information science schools have included it in their curriculum in Nigeria today. Hence, this study seeks to present the import of developing and implementing Bibliometrics studies in LIS curriculum in Higher Institutions in Nigeria.

Justification for the inclusion of Bibliometrics in the curriculum of Library and information science schools in Nigeria

Studying Bibliometrics is very important to both library students and librarians. Bibliometrics studies are growing in importance and popularity and thus the need for its study in school/department of Library and Information Science like the one in Delta State University, Abraka. Increasingly, bibliometrics are being used as a measure of research impact or research influence. Bibliometrics analyses quantitative and qualitative data to describe publication patterns within a field of research. This

information can be used to evaluate the influence/performance of a researcher and to provide a comparison between researchers. This type of evaluation is very necessary for LIS students especially when they are writing their research work. More broadly the results also help to determine university rankings and have an impact on university funding.

Similarly, Russel and Rousseau (2010) acclaims that research evaluation and research excellence are by words in today's academic clime. Traditionally, assessment of scientific research has been limited to peer review during the grant giving process or during evaluating for promotions or tenure. Today, bibliometric techniques are increasingly used as an intrinsic component of a wide range of evaluation exercise. Also, Thanuskodi (2011) explained that periodicals are the indicators of literature growth in any field of knowledge. They emerge as the main channel for transmitting knowledge. Due to the escalating cost of the periodicals and lack of adequate library budgets the selection of any particular journal for a library should be done more carefully. Therefore, the library authorities are forced to reduce the number of journal subscriptions. Bibliometric analysis has many applications in the Library and Information science filed in identifying the research trends in the subject, core journals, etc. and thereby framing new subscription policy for tomorrow. These studies will be helpful for librarians to plan a better collection development

Furthermore, library and information sciences make greater use of journals, books, monographs and conferences. Hence, evaluating and analyzing them becomes more necessary. Teaching bibliometrics – a major means of statistically and quantitatively analyzing text enables librarian to guage the importance of one's work. This is a significant part of any librarian or library student. Bibliometric is also a good research assessment tool and its importance to the development of school of Library and Information science cannot be overemphasized. However, Lundberg (2006) writes that research assessment most often need to consider quantity as well as quality. Bibliometrics is one way of getting both quality and quantitative research assessment.

The current wide range of bibliometric studies opens new ways of understanding the scholarly communication process and the structure of science through citation relationship between journals, between scholars and between papers. Bibliometrics has changed in the sense of expanding the number of data sources that can be drawn on. Bibliometric has also changed by expanding the range of task investigated. Citation analysis in conjunction with visualization also help scholars and library and information science students to understand the structure of individual field and is useful for evaluating emerging and rapidly developing research areas (Horwood and Robertson, 2010).

Furthermore, Bibliometric has been embraced by librarians as a core service relating to scholarly communication process. By honing skills in bibliometric analysis, librarians can develop expertise which can be used to help their faculty prove their scholarly contribution and achieve success in their tenure process (Kear & Colbert-Lewis,2011). More so, bibliometric needs to be inculcated into the curriculum of school of library and information science to aid library students in their research. Bibliometric has been used as a research management tool and a tool for research into research management. It would help students in contributing significantly to the research field of bibliometric study and thus could promote further advancement of research.

More importantly, bibliometrics is becoming an important collection development assessment tool for research and academic libraries. Bibliometrics can be used as a tool to evaluate the quality of collections held in a research or academic libraries. Librarians who develop library collections, databases or information services will have difficulties in knowing which material should be included, especially in cases where there is little consensus even among the scientist about the definition of the field. In these cases, bibliometrics can provide a tool for identifying the core for a local collection in such fields. It can even aid librarians in evaluating the effectiveness of their stock. Other reasons/justifications for the inclusion of LIS 805 in the curriculum of Library and information school, DELSU, Abraka are the study of bibliometrics would:

i. Give opportunities to describe the content, structure and development of a research.
ii. Help in the determination of the influence of a single writer.
iii. Help students to describe the relationship between two or more writers or works
iv. Aid students and researchers to establish relationships between authors/librarians, that is, relationship between authors and their works. When one author cites another, a relationship is established.
v. Help students to study the web especially in the technological era. Recently, a new growth area in bibliometrics has been in the emerging field of webmetrics or cybermetrics. Webmetrics can be defined as using of bibliometric techniques to study the relationship of different sites on the World Wide Web. This would enhance an LIS student's knowledge on web and how the web can be used to expand his or her knowledge.
vi. Aid performance assessment which should be a continuous process.
vii. Teach library students who are future librarians and academics how bibliometrics can be used to facilitate the planning, evaluation and advancement of library science education.

All these in the long run would lead to an information rich society.

Factors hindering the study of Bibliometrics in Library and Information Schools in Nigeria

Bibliometrics is growing in importance and popularity, thus the need for its study in tertiary institution. Sadly, a number of factors hinder the study of bibliometrics in library and information science schools in Nigeria. These factors are;

Inadequate Literature: Documents which are suitable and needful for teaching bibliometric in Nigeria are inadequate. Even those available are confusing and rather expensive. Very few scholars publish books and articles on bibliometric scope and techniques rather they publish works bibliometric in nature. For instance, more articles are available on a bibliometric analysis of works/ articles/ journals in a particular field rather on what bibbliometric is and what its entails.

Absence of qualified/ professional bibliometricians: Bibliometrics provides powerful tools for the evaluation of scientific research. The application of bibliometric methods to research in disciplinary areas in which consensus is reached has become almost routine.(Hricks,2005). However, the number of professional bibliometrician is highly limited in Africa. In Nigeria, for instance, there is no school offering bibliometrics as a field of study. It is usually a studied as a course under a given field like Library and Information science. as a result, the avenue to train professional and qualified bibliometrician to teach the course in higher institutions is not ther.

Inadequate training opportunities: As the interest in citation analysis grows and the options for performing the analyses increases, so the demands on academic librarians to keep up to date and provide related services grows commensurately. To this end academic librarians and lecturers need to be provided with a forum for training in practical application of bibliometric tools and techniques as well a the teaching of bibliometrics. Unfortunately, in Nigeria the training forum is not adequate. Although, there are one or two open kit for bibliometric training and one or two workshop for training, most academic librarians and lecturers are not sent for training and re-trianing abroad. Even the in-house workshops organized are inadequate. Questions that come to the mind are; what did the workshop cover? How effective are these workshops?

Low level of technology penetration: Bibliometrics has changed by expanding the range of task investigated (Horwood and Robertson,2010). There are now web-based citation and materials which have posed another challenge for bibliometricians. This challenge is made easier to handle through the requisite Information and Communication Technologies. Sadly, in Nigeria these ICTs are not extensively and adequately available. For effective teaching of the course in tertiary institutions, talk less of carrying out the bibliometric analysis especially on web-based resources.

Consistency in bibliometric laws: There are three most commonly used laws in bibliometrics and its study. There are Zipf's law, Bradford' law and Lotka's law. These laws have guided both the study of Bibliometrics in library and information schools and in bibliometric analysis. However, these basic laws are statistically inaccurate and full of inconstitencies. Other factors hindering the study of bibliometric in library and information science schools in Nigeria are corruption, poverty, financial constraints, laziness, poor reading habits and poor management.

Conclusion

Bibliometric is in course of study in library and information science. It should also be a must- taught course in all library and information schools as its relevance in the field of library and information science cannot be over emphasized. It is growing in importance and popularity as an emerging sub-field in library and information science. As a sub-field of LIS, bibliometric gives opportunities to librarians and lecturers to describe the content, structure and development of scholar communication. Regrettably, a number of challenges affect the study of bibliometrics in Nigeria and definitely needs to be addressed. Nonetheless, bibliometric is still taught, at postgraduate levels in some higher institutions of learning in Nigeria like Delta state university.

Recommendations

The following recommendations are made to help aid the study of Bibliometrics in library and information science schools in Higher institutions in Nigeria.

1. The current curriculum of library schools especially at Post graduate programmes should be reviewed and Bibliometrics added as a core course of study.
2. Only lecturers who are experienced in bibliometrics studies should teach the course.
3. All library schools in Nigeria should have a viable media center and internet connectivity should be made available. This would provide students with access to online materials on bibliometric with little or no cost.

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