

THE GAP BETWEEN TEACHING AND RESEARCH IN LIBRARY
AND INFORMATION SCIENCES (LIS) PROFESSION: THE
BIBLIOMETRICS APPROACH

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Abstract

Academic Libraries have of recent been greatly impacted by ICT. This has resulted in changes to the approach of teaching and research in library and information science. But certain fundamental principles of processing, organizing and utilization of information have not changed such as bibliometrics. The aim of this paper is to explore the gap between teaching and research in this area, pointing out the relationship or inter-relationship between quantitative and citation analysis of journals titles and publications and related data about the sociology of academic publication by university librarians in Nigeria. The paper also point out a wide range of other applications of bibliometrics such as descriptive linguistics, development of thesauri and evaluation of reader usage in academic libraries, its analyse the existing gap in research and make recommendations for bridging the gap.

The true essence of a University is high quality teaching, research and service delivery. Any University wishing to attain global relevance must deepen its approach to these elements using the best academic from any part of the world. As such the past three decades have seen dramatic expansion and changes in all levels of Library and Information Science (LIS) services and education. Academic librarians in Nigerian University Libraries like their counterparts' worldwide perform the traditional academic and professional duties of selection, acquisition, organization, repackaging and

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dissemination of information to support the curricular of the programmes the universities run.

As at 1984 there were only six degree awarding Departments of library science in Nigeria namely at the University of Ibadan, ABU, Bayero University, University of Maiduguri, Imo State University and University of Calabar, As at 1999 we have a tentative list of 37 Institutions and today over 40 appears to want to have a library school, Dike, (2014). According to Aina, (2014), 12 of these institutions offered programmes up to Ph.D. in library and Information Science. As noted by Dike (2014) not only are Post Graduate Programmes expanding rapidly, there is increasing pressure to admit individuals because of their job requirements rather than their capability for research. This proliferation has led to serious concerns about infrastructures and minimum standards as many programmes appear to be seriously understaffed and under resourced and the aftermath is poor quality and products.

Prior to this, LIS education teaching and Research was in the hands of Professional bodies, for instance the Institution Library Association then awarded Associate of Library Association and Fellow Library Association to its graduates and Later technical colleges started awarding e.g. Longborough Technical College, England and then the universities e.g. University College, London. The teaching was in the triads of library, archives and information studies, University of London taught it and the tradition was passed on to its former African University Colleges, including the present day University of Logon, Ghana and University of Ibadan, Nigeria, Ononogbo, (2014).

Prior to 1993 the scene was quite agitating the agreement reached by the academic staff union of universities (ASUU) and the Federal Government of Nigeria in that year gave librarians in Nigeria University the right to enjoy the same privileges as their lecturing counterparts (Nuc, 1993). This agreement and decision brought to an end the case of agitation by the librarians in the university system across the country for academic status. However, this development resulted in their need to demonstrate and in fact convince the academic community by justifying the academic status across them by way of research publication, Omoluabi- Idcodi Bozomin (2012) Before this period, when librarians in Nigerian universities acquired academic status, evidence of academic productivity was not a serious parameter for promotion as was the case for faculty members, Lawal, (2002) and Nkereuwem, (2005). As noted by Edem and Lawal (1999), after this development all librarians in University have been promoted on the basis of their research productivity, e.g., the quantity and quality of the scholarly works they produced. This is where the dictum “publish or perish” has come to play. The phrase

“publish or perish” underscores the importance attached to research productivity in all universities worldwide as research publications are major index of an academic quality and a key determinant of advancement in academic librarians career, Ysusuf, 2005).

It has also been opined that publication count alone is no longer sufficient as evidence of research productivity and the quality of publication are now of significance too. Quality here has been interpreted to mean publishing in an internationally recognised peer-Reviewed Journal (Adomi and Mordi 2003). Though teaching, research and publications have hitherto not been a part of library and information science resume, before the attachment of academic status, there is a paradigm shift in the programme, thus the need to bridge the Gap between Teaching and Research and publishing to meet the challenges of our times and global best practices in the LIS profession.

The reason for the Gap or problems as observed by Ononogbo (2014), falls within the trend of teaching and the contents of the curriculum of LIS education as they are changing very fast. For instance according to the author some universities in UK e.g. City University, University of shetfied and Longbhorugh are gradually dropping the library component of the studies and emphasizing the information Science aspect of it. But in the worlds of Dike (2014) in the case of ICT, which has so dramatically affected almost every aspect of LIS services, actually ensuring integration of ICT content with all courses might be more effective than merely adding new courses in isolation. It has also been observed that some universities are initiating multi disciplinary qualifications in order to meet the challenges of our time. Again with the advent of ICT, there has been a paradigm shift in all aspects of the professions that demands a whole range of new skills as new challenges and opportunities continue to emerge almost on daily basis. For instance, alternative information services and heightened expectation of users have pushed librarians to focus more on enhancing their services, making them more user-centred, and for the community, the added value libraries have to offer through advocacy and marketing, global networking, sharing of local information as well as new opportunities for information entrepreneurship, Dike (2014). All these changes have new emphasis and demands on library education such that requires the gap between the teaching and Research in the profession to be bridged.

Conceptual Definitions

Teaching is an art and a science. Teaching is simply a process of making things known to people Dienye, (1996). It therefore has a learner-entered or student-focused perspective. Teaching is a profession. It is a systematic, rational and organized process

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of translating knowledge, skills, attitudes and values in accordance with certain professional principles. As stakeholders in the educational system we cannot fold our hands and allow untrained people or those who failed to secure the jobs for which they were trained to come and do our job at the end of which we take the blame for producing semi-illiterates.

The teacher can manage the instructional process effectively and efficiently if the teaching profession is made an enviable one.

It is common knowledge today that no educational system can grow above the quality of her teachers. The question then is, who is this “magician” called the teacher? A teacher is a professional who earns his/her professional status. He is not just conferred with the title. A teacher is simply a person that teaches. According to Aristotle, we can understand who a teacher is when we discuss who is not a teacher. Thus:

“The ability to teach is the characteristic making the difference between the man who knows and the ignoramus. This is why we think that art rather than experience is knowledge, for men skilled in an art can teach, while others cannot”.

Therefore, teaching is an art as well as a science. It goes beyond mere experience. The teacher is a person who has the skill and who can thus actualize the potentiality for knowledge already in the student. The teacher can translate knowledge, skills, attitudes, and values in accordance with certain professional principles. If one cannot perform the teaching act in accordance with acceptable professional principles, the person is not a teacher rather, he is a cheater. Ibe Bassey (2002).

The teacher in any given instructional process is a: Mediator of learning, Manager of instruction, planner of instruction, disciplinarian or controller of student behaviour, parent substitute, confidant to the student, judge of achievement, organizer of cure (physiological, emotional, intellectual problems), scholar and research specialist, member of a teachers’ organization, curriculum implementer, etc.

Research is loosely used in everyday life. However, in scientific or scholarly sense it reflects a way of thinking and is conducted to gain a deeper understanding of Phenomena and the governing principles. Best (1983) defined research as the systematic and objective analysis and recording of controlled observations that may lead to the development of generalizations, principles, or theories, resulting in prediction and possibly ultimate control of events. It is a careful, diligent, and exhaustive investigation

of a specific topic having as its aim the advancement of human knowledge. In the process, the researcher discovers new knowledge. In the process, the researcher discourses new knowledge, organises it in an applicable form and invents or creates technologies to solve development problems, (Idem, 2007). Having said this, research therefore is the process of obtaining evidence about the existence of certain information or attributes in an organised way. It involves obtaining of certain attributes or facts which exist in an object in such a way that a meaningful conclusion can be drawn about the existence of such facts. It involves searching further for the facts which are imbedded in the phenomena. Perhaps what is 'original' in research is the fact that somebody else has not done any work on it or that the work done by another person was not complete and therefore further work has to be done, Okpo, (2008). Oxford Advanced Learner's Dictionary defines research as a careful study of a subject especially in order to discover new facts of information about it. Also, it is to study something carefully and try to discover new facts about it. Bishop David Oyedepo sees research as the art of finding out what is true about something --- and it is the first step towards finding solution to any problem'. Research is an art because it involves the adoption of laid down procedures in obtaining the conclusion and anybody who wants to conduct some research will adopt similar approach and may arrive at the same result or conclusion. ASG defines research as original and planned investigation undertaken with the hope of gaining new scientific or technical knowledge and understanding. Research has also been defined a method of studying problems whose solutions are to be desired partly or wholly from facts. The facts dealt with in research may be statements of opinion, historical facts, those contained in records and reports, the results of tests, answers to questionnaires, experimental data of any sort, and so forth. Research is also seen to be a systematic and refined technique of thinking, employing specialized tools, instruments and procedures in order to obtain a more adequate solution of a problem than would be possible under ordinary means. It starts with a problem collects data or facts, Bibliometrics statistical analysis of written publications such as books or articles. The term bibliometrics was first coined by Alan Pritchard in (1969), Pritchard defined bibliometrics as the applied action of mathematics and statistical methods to shed light on the processes of written communication and on the nature and course of development of a discipline (in so far as this is disciplined through written communication) by means of counting and analysing the various facts of written communication.

Fairthorne (1969), Paraphrasing Pritchard also defined it as the "quantitative treatment of the properties of recorded discourse and behaviour appertaining to it. Raisig (1962) in a critical essay on user studies provided a more explicit and practical definition of bibliometrics as "The assembling and interpretation of statistics relating to

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books and periodicals to demonstrate history, movements, to determine the national or universal research use of books and journals and to ascertain in many local situations the general use of books and journals”.

Hawkins (1977), in more recent definition sees bibliometrics as the quantitative analyses of the bibliographic features of a body of literature. has opined by Lawani, (2012) it is in this sense that the term is now used and by this definition user studies based on circulation data are not bibliometric, whereas those on what authors cite fall within the scope of bibliometrics, Lawani (2012).

Theoretical Foundations

It is frequently said that LIS lacks a sound theoretical foundation. This is clearly not true for instance, on the basis of data obtained in his study of the literature of applied Geophysics and of Lubrication; Bradford (1953) formulated his empirical law of scatter as:

“The aggregate number of articles in a given subject, apart from those produced by the first group of large producers of (periodical) is proportional to a logarithmic of the number of producers concerned, when these are arranged in order of decreasing productivity”. For the sake of clarity, this can be stated differently thus: if periodicals contributing to a subject are ranked and then grouped in such a way that each group contributes the same number of articles, the numbers of periodicals in each group increased geometrically. The mathematical formulation of this law by Brookes (1969) is the one that is most easily applied in practical situations in assessing productivity in LIS publications. It is expressed in two parts.

$$R(n) = an^b (1/n^c) \dots s \quad (1)$$

$$= N \log n / (c n N) \dots (2)$$

In the case of the distribution of papers on a specific subject among periodical titles, the parameters have the following meanings (Lawam, 1973).

a is the number of articles contributed by the highest ranking periodical

n is the rank order of periodicals.

R (n) is the cumulative sum of articles contributed by the most productive

n periodicals (i.e the periodicals of rank $i - n$)

b is a constant if the publications considered cover only a short time span, its value is always less than 1

N is the total number of periodicals titles that would be expected to publish papers on the subject. It is given by the slope of the linear portion of the Bradford information Bibliography.

C is the value of n at the point where the curve runs smoothly into the straight line portion of the Bibliography. Periodicals rank $i - c$ constitute the “core” periodicals on the subject.

S is the value of n at the intersection of the straight portion of the bibliography with the long n axis.

As opined by Lawain (2012) these interpretation depend on the kind of study but as noted by Aiyepetu (1976) in a bibliometric study where authors are ranked according to their contribution to a subject will be interpreted differently, individual authors would replace periodic titles.

In summation therefore, the above formulation of Bradford law can be applied to rationalize LIS research and publication work in the following ways:

- (1) Identifying the titles which constitute the core periodicals of a subject in so far as quantity not quality) of papers is concerned.
- (2) Determine the number of periodicals titles required to cover a specified fraction of the total periodicals literature of a given subject.
- (3) Determine at what point substitution of photocopies of relevant papers in periodicals relating to subject is cheaper than subscribing to the periodicals, Brookes, (1970).
- (4) Ascertain that a presumably complete bibliography is in fact complete or that an abstracting or indexing similar that claims comprehensiveness for a subject is indexed so, Lawani (2012).

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Lotka's Law Lotka's Law provides the fundamental theoretical base for studies involving authorship, although as noted by Lawani, (2012) Aiyepku (1976) has shown that on the basis of data collected on geographical literature that Bradfords law can be applied in analysing the productivity of authors. It should be noted that Lotka was interested in determining the part which men of different calibre contributed to the progress of science and to do this, he first considered the volume of production of papers in Chemistry and Physics by individual scientists. He check the decimal index of chemical Abstracts (1907 – 1916) and compared the number of names against which appeared 1, 2, 3, etc entries, the tabulated data for 6,891 names beginning with the later A and B. He similarly checked Auerbaeti's Geschichtafeinder physic which covered contribution by 2,325 physics throughout history up to 1900, He listed only what he considered outstanding contribution, Lawain (2012).Lotka found that on plotting the frequencies of persons having made 1, 2, 3, 4 contributions against these numbers 1, 2, 3, 4, of contributions, both variables on logarithm scale, the points were rather closely scattered about on essentially straight line having a slope of approximately 2, Lawani, (2012). For the chemistry data, the slope was $1,888 \pm 0.007$ and for Averbachs data it was $2,021 \pm 0.017$ as determined by it. He then concluded that the general formula for the relationship between the frequency y of periods making x contribution is: $x^2y = \text{constant} - 3$ and for the special case of $n = 2$ (as his two sets of data) the constant is 0.6079. He summarized his result as follows; in the case examine its found that the number of persons making two contribution is about one points of those making one contribution, the number making contribution is about 1/hr of those making one, and the proportion of all contribution that make a single contribution is almost 60%.

Lotka's Law has been shown by other researchers to hold for the productivity patterns of Canadian Mathematics Ambert (1995) Biologists, Williams, (1944), econometrics (1953), Hunmatic (1979). Schorr (1975) did analysed data from a bibliography he had compiled on map Librarianship and concluded that Lotka's Law applied; though Coile (1977), examined Schorrs data and found that his calculation was erroneous because he had counted joint authors and also had used chi-square test inappropriately. Nevertheless, as noted by Aswani (2002), if general theory of bibliometrics and other cumulative advantage processes holds, it would be predicted that Lotka's Law in its general form would apply to all disciplines of humanities including LIS.

Literature Review the study of research or academic productivity has a long and very rich history in research literature Cole and Eales, (1917), Hulme, (1923), Lotka,

(1926), Gross and Gross, (1927), Pritchard, (1969), Broka, (1969), Alson & Long (1990), Banaccorsi and Daraio, (2003), Lee & Bozeman (2005) and Lawami (2012).

The First Quantitative analyses of the study features of a body of literature (or bibliometric) appears to be by Cole and Eales in 1917. Their study was on the statistical analyses of the literature of comparative anatomy published during the period 1550 to 1860 to show the fluctuations of interest over the period. They also showed the distribution of the literature among countries within periods and by divisions of the animal Kingdom, Lawvani, (2012). This study was followed in 1923 by a statistical analysis of the history of science by E. Wlydlam Hulmre a former Librarian of the British Patent Office. His analysis was based on the Journal entries in the seventeen sections of the International Catalogue of Scientific Literature. He presented in four separate tables the following: the rank order of entries in Physiology Bacteriology, Serology, Biology and other medical sub-disciplines – the rank order of the sciences based upon their output of periodical literature, the number of Journals referred to in the annual issues arranged by subjects and the number of indexed Journal arranged by a country of publication.

According to Lottha (1926), Cartel published the first systematic data collection on scientific publication per author in 1903 and thus provided strong evidence of the existence of large difference across individual researchers. This result was later systemized by Lottha and became recognized as the “Power Law” (Idiodi & Bozome, 2012). In chronological sequence, the forth of such study is that by Gross and Gross published in 1927. According to Lawani, (2012), they counted and analysed the citations appended to articles in a Chemistry Journal and by ranking the Journal titles according to number of citations received, they provided a list of Journal, they considered “indispensable in chemistry education”. Lawan, (2012) observed this as the first recorded study based on counting and analysed citations i.e. citation analysis, Noting that studies by Coles and Eales and Hulmes were based on entries in bibliography not on citation, as citation analysis has now become an aspect of bibliometrics with application in many fields of knowledge.

Bradford’s (1934 & 53) work on the distribution of papers among Journals in Applied Geophysics and in Lubrication Research led to what is now called Bradford’s Law of Scatter. Nevertheless these Pioneers over the years have attracted huge followership. Pritchard (1969) bibliography on Bibliometrics contains 700 items. Also a bibliography on citation analysis compiled by the Institute of Scientific Information in Philadelphia (USA) had over 500 entries. This study over the years has clearly become

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established applications in the history and study of sociology of knowledge, in library and information science. Recently, study by Kaufman and Chevan (2011) Involved 881 physically therapy faculty members, revealed that the average number of papers produced by each of the 881 scientists thought out their publishing life was 8.7 articles each. Moodie (2004), in his result of Australian academic productivity found that on the average an Australian academics published less than paper a year (0.8 paper), institutionally, research productivity per academic staff ranged from 0.20 to 1.67 in the year 2000. Earlier in United States, Hart, (1996) in the study of publication in Pens State University revealed that on the average librarians at Pens State University Published more than nine (9) articles each and with an average of 9 publications over an average of 16 years of full time employment, they have a career average of 0.56 publications per year. Also FOA (2007) in his study of productivity among Canadian Academic Libraries reported that of the 467 questionnaire returns, only 13% could be considered active producers of research work, while 29% were above average 46% below and 11% very low.

Locally, Oyeniye and Bozimo (2004) had observed a career publication rate of 2.24 per author among sorghum researches in Nigerian. Mabawonku (2001) did a study on trends in LIS research in Africa and found out that throughout 10 years Nigerian authors top the list as the most prolific writers in Africa. Also Aina (1991) in a bibliometric survey of librarian literature in three international library science Journals found that Nigerian authors contributed 65%.

Needs for the Study there are powerful reasons for librarians to explore how their academic library can better satisfies the needs of researchers in the new data intensive atmosphere they found themselves and in what research environment has been called the “Fourth-Paradigm” shift of scientific inquiring Hey, Tansely and Tolle (2009). Therefore, to help their institutions grow libraries can actively be involved in providing infrastructure of research and data tools and services. In-fact the ACRL has of recent identified library and librarians’ involvement in research and data creation, including collaboration with other research communities as one of the 2012 top ten trends in academic libraries ACRL (2012).

This trend has so much potential for academic libraries in developing countries like Nigeria as it also intersects with two of the other top ten trends of;

- (i) **Communicating Value and Staffing:** According to ACLR report researchers and data creation offers opportunities for finding new ways to communicate the value of

the skills librarians already possess and in developing roles that were not previously associated with librarians Gore (2010)

A number of library organizations, funding institutions and other stakeholders in the library community have of recent also seen the importance of offering research and data services to other academic researchers. For Instance, Data-one; one of the initially funded partners has a mission to ensure the preservation and access to multi-scale, multi-discipline and multi-national research and science data is helping by providing tools, education and training in the area of data gathering, research and management. According to Michner (2011) to better do so; a priority of Data one is to develop an understanding of users' perception, attitudes and requirement in the search for information in the world of data gathering. Users, or stakeholders, including the researchers themselves but also the libraries and librarians that works with other researchers and research institutions.

One of such ways are conducting baseline and follow-up assessments of research and data-sharing practices and attitudes of multiple stakeholders.

The contents of these services focus specifically on research data gathering services: Research and data services are services that a library offers to researchers in relation to managing data and can include informational services (e.g. consulting with faculty, staff or students on data management plans or metadata standard, providing reference support for finding and citing data sets, or providing web guides and finding aids for data or data sets), as well as technical services (e.g. providing data sets for a repository, deaccessioning or deselecting data sets from a repository, or creating metadata for data sets). Research on data services, are services that address the full data life cycle or bibliometrics.

The Gap: It has been observed that so many factors are responsible for the Gap between teaching and Research in LIS. For instance Aliu (2009) and Omoluabi-Idodi and Bozoumo, (2012) opined that Librarians in Nigerian Universities, Librarians work 40 hours per week, arranged in shifts so that most libraries are open to users for at least 14 hours a day during the week (8am to 10pm) and at least 10 hours a day during the weekend except on public holidays. The aftermath is lack of time for serious intensive work of research.

Also Olorunosola and Ibegbulam (2003) see the lack of "release time" for research as a major reason for the gap. According to their findings, the constant job

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presence required of the librarian in our university system severely limits the ability and remains a major constraint to research activities. Other researchers have also confirmed that librarians complain of having little or no time for research given the nature of the services they provide – Ochai and Nedosa, (1998) Zemon and Bachr (1998).

Another factor responsible for the gap is social contingency factor like health, finance, caring for children and relatives and pregnancy for women, Lertputtarak (2008). Adomi and Mordi (2003) also saw the new factor of “quality publications interpreted to mean publishing in foreign peer reviewed indexed Journal as becoming a problem for librarians in the university system in Nigeria. It has also been observed that lack of training in empirical research because of outdated curriculum have been a contributory factor (Mitchell & Reichel (1999).

Librarians also complain of not having teaching programmes on which to build their research interests Ochai & Nedisa(1998). Abba and Dawah (2009) indicated that factors like inadequate funding, shortage of personnel, lack of written training policy and lack of infrastructures also contribute greatly to the gap between research and teaching in Bibliometrics.

Another reason for the gap is that while the library in conjunction with other research offices on campus are neither ideal centre nor supporting academic research services in LIS education, the library, both in short and long-term have in many cases been found to be lacking. According to Tenopair (2011), one major barrier is lack of institutional guidance and support. In addition, lack of formal data management processes, insufficient or non-existent training and tools, and inadequate funding all these can play into the loss or misuse of research opportunities in library and information science. There is also the problem of outdated curriculum. The building block of LIS education is the curriculum which is an essential part of any education or training. It changes with time to respond to societal demands. As noted by Ononogbo (2014), when the heart of a librarian was bibliographic control, libraries acted as community agent, creating a relationship between libraries and education etc. IFLA rolled out its “standard for library schools”.

The Core Subjects include:

- The role of the library in society as a communication agent;
- Principles and methods of bibliography;
- Principles and methods of organizing library materials (Cataloguing and classification);

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- Principles and methods of reference and reader services;
Principles and methods of selecting, acquiring, and using print and non-print materials;
- Principles and methods of library management;
- Library History;
- Bibliography;
- Principles and techniques of conducting research in librarianship;
- Principles and methods of library automation;
- Principles and methods of documentation and information science;
- Principles and methods of planning, constructing and equipping a library.
(IFLA, 1976)

This curriculum had served many schools but today emphasis is being shifted to the end of Information Capturing, Storage, Conservation, Repackaging, Managing information explosion and the fastest means of communicating information to end users. Now curriculum has to change to accommodate infrastructure materials, digitization, metadata database management, web design management, e-books, e-journals etc.

This curriculum must also include: Internet techniques; Networks and Networking; how to generate and manage electronic resources; how to automate our libraries and information centres; gateway and portal development/database development/and web authoring; how to key into the social media tools and how to use them; Information literacy and all that it entails; Website design and management; Software design and management; database design and management; Management information systems; how to innovate and create new products; Sociology of information, legal aspects of information; how to market our profession/our products and services; and Entrepreneurial (“entrepreneurial”) studies. Finally, there is the challenge of limited number of skilled educators; with the advent of ICT related courses there are limitation to the number of skilled ICT Education available.

Applications

- (1) Bibliometrics has emerged as a viable research technique for the study of the history of knowledge linking the LIS professionally fit into this model by virtue of their training both as educational and information tool managers as LIS professional are prepared for information delivery knowledge integration, and self actualization for both practitioners and clientele.
- (2) Also Garfield, (1973) has shown that the greater value of Bibliographic research as:-

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- (i) that the citation relationships can be of great use in writing the history of science.
 - (ii) that a graphic representation (hectograph) helps to clarify the relationship and give a quick, over-all view of the development in the field.
 - (iii) that relatively large scale hectograph can be provided on a practical basis.
- (3) The hectograph can be used to reduce large number of seemingly unrelated events to a coherent pattern, identify classic papers, to identify break through events within the development of a field, and keep track of how often an event influences later events.
- (4) Also Bibliometrics, Lawni (2012), has been applied in other union ways e.g. communication researching Parker, Paisley and Garret (1967).
- (5) Sociologically, Bibliometrics can be used to assess the quality of individual publications, the eminence of individual researchers and the portage of research departments.
- (6) It can also be used to show research collaborations. In this case the number of authors to a paper is used as an indicator of collaboration and is therefore possible to calculate collaborative indices for a given discipline individual department, organization or even an institution.

Finally, the development of international directory of publishing scientists and scholars in the LIS life, physical, social and applied sciences has opened up a new area of bibliometric with potential application in policy studies, history and sociology.

Conclusions

When stakeholders and users lament about falling standard and poor service delivery of LIS professionals, what they fail to address is that learning is not possible without professional, well trained, well supported with current research findings, accountable and valued teachers. How do we expect quality services under a situation where LIS teachers are poorly trained and poorly supported, often disconnected from research activities and policy decisions that affect them.

It is our belief that once funds are allocated for research and sustainability is maintained, the result will provide what is currently being done and the direction

libraries and LIS educators are taking in the area of research and data services worldwide.

Again it should be noted that research is not necessarily individual efforts unity academic papers or master's dissertation and directorate theses, they are rather well thought of ideas/issues and challenges that are undertaken to address contemporary issues, events and challenges in the profession and society as a whole. It has also been established that a paradigm shift in LIS education has become non-negotiable and calls for re-orientation both by management and the practitioners corporate official Ears or sympathy will do the professional and Researchers much good.

Finally, in reflection, Research does not just occur; something usually causes it to happen. Research activities are set in motion by a felt need or difficulty, followed by a reasoning process which would eventually bring about a solution of the problem identified. In the same vein there must be a reason, purpose, desire and motivation to engage in it.

Recommendations

Evidence shows that for teachers in LIS and others, their professional knowledge and skills are the most important factor for quality education. If this is unquestionable, they must be treated as such. This requires stronger training upfront and continual professional development and support to enhance performance and learning outcomes through research activities.

It is time for the professional association – Nigeria Library Association (NLA), the Librarians Registration Council of Nigeria (LRCN) and the Committee of Librarians of Nigeria Universities (CULNU) to take the bull by the Horn by helping the library schools to update their curricula to reflect contemporary issues ideas, and global best practices. Also LIS educator should from time to time partake in training, and retraining in modern ICT technologies, within and without their institutions to broaden their knowledge on contemporary issues in the profession. The curriculum of our library schools should be restructured to accommodate ICT related courses and global best practices in the profession. Autorum LIS schools to adequately determine what, when and how it activities should be carried out is also a necessary step to reverse this tide. Of course all these cannot be done without adequate funding as availability of funds will enhance requirement of skills, staff and provision of necessary facilities and infrastructures.

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Finally, this broader mission could also be achieved by infusion into LIS Education at all levels through course work, field experience, Seminars and conference attendance, Dike (2014).

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