Editorial

This current issue of AJLAIS contains seven articles including the editorial feature. The feature article on access and accessibility of information in a digital environment establishes a synergy among the themes of articles published in this current issue. This is followed by an article by Ocholla and others which provides an insight into research publication output and patterns of academic librarians in Southern African public universities. The third article from Ina Fourie looks at research on information behaviour in palliative care of patients with life threatening diseases. This is followed by the fourth article by Anunobi on human capacity building in Nigerian university libraries for national development. In the firth article, Obasuyi and Folajole discuss factors influencing electronic information sources utilised by pharmacy lecturers in universities in South–South, Nigeria. The sixth article by Toteng and others provide an insight into use of electronic databases by law students at the University of Botswana Library. The final article by Odera-Kwach and Ngulube examines the issue of accreditation on university libraries in Kenya.

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Editorial Feature

Information Access/Accessibility in a Digital Environment

Stephen M. Mutula
University of KwaZulu Natal
Private Bag X01
Scottsville, 3209, South Africa
Mutulas@ukzn.ac.za

The subject matter of this editorial is *information access* and *accessibility.* The choice of this subject is informed by the themes covered in the articles published in this issue of AJLAIS. Collectively, the articles focus on *research publications output; iinformation behavior*; *human capacity building in libraries*; *accreditation and university library services*; *use of electronic databases and electronic information sources* from country and organisational contexts. Besides, research on information access/ accessibility in the information science literature seems relegated to the periphery despite their centrality as tenets of the evolving information society. The concepts of access and accessibility are often and inappropriately used interchangeably in the literature. However, access in this context refers to the users finding the information they require and successfully retrieving it. In contrast, aaccessibility (sometimes referred to as *universal access*) refers to a trajectory of equal opportunities by all in the society to access and use information services irrespective of their location and physical abilities.

Access/accessibility is inextricably linked with the subjects of informetrics and bibliometrics, information behaviour, human resource development, and electronic resources use. Oltmann (n.d) observes that information access is implicated in multiple research areas in library and information science (LIS), yet it has received little explicit attention from researchers. The importance of information access is also implicit across several studies within the information sciences and beyond. For example, bibliometric and informetric studies affect the information flow and utilisation patterns within, between and outside institutions and countries. Bibliometric and informetric studies within the library and information science (LIS) field solve problems related to collection development, information retrieval, systems design, user studies, and knowledge organisation, to name a few (Ocholla & Ocholla, 2007). Similarly, information access is embedded in Wilson's (1981) model of information behaviour covering concepts of information need, information seeking, information exchange, and information use. Jaeger (2007:843) is succinct that without access to information, there can be no exchange, use, collection, or management of information. The concept of information behaviour has steadily evolved from information seeking and now focuses on how people interact with information, how and when they seek information, and what uses they make of it (Bates, 2010).

Users often encounter many problems in the process of searching and seeking information, whether in paper form or online. For this reason, they need skills to succeed in the specific acts associated with seeking and locating information. The subject of capacity building in libraries should therefore be seen as closely intertwined with information behavior and any efforts directed at satisfying users information needs. Bates (2010) in his extensive seminal papers in information searching tactics and search techniques noted that greater attention should be paid to the complexities of identifying sources and working one's way through resources to locate the desired information.

The internet has played a catalytic role in the emergence of knowledge and web-based information management. It has helped in the integration of knowledge resources, sharing of information, customisation of knowledge and information to suit individual needs, enhancement of knowledge organisations, and the creation and distribution of knowledge. With the continued growth of internet-

based applications, digital literacy has become increasingly recognised as critical for access and use of e-information sources such as databases that were previously accessible only through intermediaries. Moreover, effective use of various digital resources to locate information, including the internet and online databases, requires skills, competencies and familiarity with natural inquiry, Boolean search strategies, and information organisation and retrieval systems (Mutula, 2007).

While the Internet provides opportunities for one to find publications, locate specialist publications and grey literature that can be difficult to find elsewhere, it poses difficulties to both novice and expert users in locating the relevant information for decision making. Existing search tools such as search engines frequently produce extensive lists of search results, requiring users to spend inordinate amount of time examining a great number of irrelevant and often incomprehensible citations in order to find a ew pertinent hits. The need to organise Internet resources to enhance access and use is crucial. When properly organised, materials on the Internet should, in the same way as a catalogue, provide a bibliographic description of library record; enable the user to know what the library has on a given subject and author; and also enable access to external resources.

Information generators and providers must therefore be prepared to offer the users an enabling environment that is conducive and friendly for seeking and using information. The SADC E-Readiness Task Force (2002) provides a framework that is illuminating on how information providers can create an enabling environment to assist the user in their information seeking tasks. The framework provides variables of readiness in digital environments that include, among others, human factors to enable technology to be used, such as education and training, ICT skills and application of different technologies. Similarly, e-Europe Action Plan (2004) emphasises digital literacy; ICT skills development, and lifelong learning to enable the users to cope with the vast amount of information being generated. The World Bank (2002) also adds its voice in recommending human resource skills development.

The WSIS declaration of principles makes it explicit that in the information society certain actions are needed to facilitate access and accessibility. Such actions include capacitating all people to enable them to access information using ICT; developing human capacity to exploit the benefits of ICT; building public awareness of ICT capabilities; putting in place education and training programmes in ICT; and eliminating illiteracy and enhancing ICT literacy (WSIS, 2003). Digital literacy is increasingly being recognised worldwide as a panacea for functioning. Lor and Britz (2008) note that development of human intellectual capability is one of the most important factors that facilitate further development and sound economic growth in the era of globalisation. They argue that, if developing countries do not invest more in education they will be excluded from the global knowledge pool. Citing Norris (2000:59), the duo point out that it is of little use to have access to relevant information but not the educational infrastructural support, including R&D facilities, to enable people to create new knowledge.

Efforts to enhance access should be cognisant of common misgivings about the quality of information found on the Internet as well. While one of the articles in this current issue of AJLAIS focuses on the impact of accreditation on libraries in terms meeting national education standards, work on quality assurance should extend to cover the qualitative aspects of information infostructure.

Information security is another factor that has important ramifications for access/accessibility. Information security as used in this article refers to the security of information transmitted between the information provider and the user (Guenther, 2003). Information security also refers to the protection of data from accidental or malicious modification, destruction or disclosure. An information secure environment inspires in the user confidence in information access, sharing and use. It also contributes to the accuracy, reliability, relevance, adequacy and timeliness of information.

Lor and Britz (2007) examine the role of physical infrastructure in promoting access to information. They assert that a prerequisite for successful participation in the Knowledge Society is a well-developed, well-maintained and affordable information and communication infrastructure. A well-developed and well-maintained information infrastructure is not sufficient unless it can provide access to relevant information needed.

Al Sayed (2008) notes that People with disabilities (PWD) face lots of geographical and social

barriers. He avers that there is need to find alternative solutions, which can use the ICT (Information & Telecommunications Technology) to meet the access and service needs for PWDs. To promote such access, he recommends accessible design (or design for all) by using technical standards, adaptive hardware and software, and multi-modality architecture. Furthermore, access/accessibility to PWD can be accomplished by using appropriate educational and administrative infrastructure, encouraging the design of ICT equipment production, promoting the development of technologies, encouraging the research on the information society including innovative forms of networking, and by adapting ICT infrastructure, tools, and applications.

Access to information is one of the key pillars of WSIS Action Line 10 on ethical dimension of the information society. In this regard. Britz (2008), points out that increased censorship in many parts of the world, especially in China, together with high levels of illiteracy, high cost of specifically scholarly publications, and limited access to the Internet in most developing countries, has severely limited the creation of equal opportunities for participation in the global information society, especially by the poor. He points out that having to rely on the knowledge of other people creates asymmetric power relationships and puts them at risk of exploitation or exclusion.

Finally, in an information society where it is presumed that every individual should have access/ accessibility to information without distinction, efforts should be made at policy and practical level to facilitate information service providers through the following interventions:

- Getting right the information needs of users
- Capacity building, especially with respect with digital literacy and techniques of searching information
- Building robust ICT infrastructure
- Ensuring quality information (accurate, relevant, reliable, adequate, useful, etc.)
- Upholding rights of users (freedom of expression, security of information and that of users)
- Ensuring accessibility by people with disabilities.

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Stephen Mutula is Professor in the information studies programme and also the academic leader for Development Cluster at the University of KwaZulu Natal. He holds a PhD (University of Johannesburg), B. Ed & PGD. Comp Sci (University of Nairobi) and Masters in librarianship (University of Wales UK). He researches and publishes in the areas of e-government, ICT4D, information poverty, information ethics, information society and knowledge management among others. He is a rated scholar by National Research Foundation of South Africa.

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Insight into Research Publication Output of Academic Librarians in Southern African Public Universities from 2002 to 2011

Dennis Ocholla and Lyudmila Ocholla
University of Zululand
KwaDlangezwa, South Africa
Ochollad@unizulu.ac.za,locholla @pan.uzulu.ac.za

and

Bosire O. Onyancha
University of South Africa
South Africa
onyanob@unisa.ac.za

Abstract

This article reports on the research and publication patterns of librarians working in university libraries in Southern Africa. Lists of countries and names of public universities in the region were obtained from the Southern African Regional Universities Association (SARUA) website, while names of the librarians were obtained from the 60 university websites and the Europa World of Learning. The study confined its scope to publications produced within the last 10 years (2002-2011). Informetrics through content analysis was used as the primary research method. The documents sourced for content analysis were mostly obtained from the Library and Information Science and Technology Abstracts (LISTA) database, which is the largest abstract database in library and information science, while impact was measured through citations obtained from Google Scholar. The results revealed that: a minimal number of items have been published over the last ten years; many universities do not place staff lists of librarians on their websites; not all senior university librarians' (e.g. university librarians/directors/executive directors, etc.) publications appeared in the databases; most academic librarians preferred publishing individually; and the most published type of document was journal articles, predominantly short articles, followed by conference proceedings. Further in-depth analyses and comparisons with a related study conducted in Eastern Africa are provided and discussed to unravel hidden publication patterns and trends that influence research visibility. We suggest the need for debate on tying the promotion of university librarians to scholarly research output and argue why such linkage is necessary. We strongly recommend that full lists of all library staff, their titles, and qualifications (where possible) should be made available on university library websites for the benefit of improved library information services and research.

Key words

Academic librarians, librarians, research output, research pattern, informetrics, Southern Africa, research visibility, public universities

Introduction and Conceptualisation

In this article, we define research to be a way of finding answers to unknown or lesser known problems emerging from natural and artificial phenomena within our environment through a systematic, logical, and verifiable process. What motivates individuals and organisations to conduct research is not uniform across the board. The ideal and perhaps main reasons (Ocholla, 2011) are to find solutions to challenges or problems affecting humanity that stem from natural and artificial phenomena; confirm, contest or refute theories or hypotheses; develop scientific and professional practices; and to develop creative, analytical and rational thinking for informed decision making. On a more practical basis, research is done to fulfil learning, domestic and career needs; to satisfy curiosity; for

egoistic reasons, such as recognition and visibility; for career-related rewards, such as promotion, securing tenure or permanent appointment; and for self-development or growth, among other reasons. Aceto (2005) suggests that the career rewards of research are countless, ranging from an increased ability to attract highly qualified and motivated members of staff (both nationally and internationally) to having a greater advantage over competitors in gaining and maintaining research funds, better chances of 'rubbing shoulders' with the very best, and the opportunity to create a more stimulating work environment for all involved.

Due to the significance attached to research and publication across all sectors of their institutions, academic librarians in public universities should also be expected to conduct research and publish their research results in scholarly outlets. It may be surprising to those who are unfamiliar with librarians' qualifications and information service activities and requirements to expect them to engage in research. But Verzosa (2007) and the Research Libraries Consortium project in South Africa, funded by Carnegie (Kuhn, 2008) believe that it is very important for librarians to engage in research because it adds value to librarianship. Rosemary Kuhn explains that the vision of the Carnegie project is to produce "a new model of proactive librarianship in which librarians will understand research, will be supported by the access tools provided by the latest technologies, as well as access to content that can be aggregated, organised and personalised. This seamless access to information will be underpinned by individualised and targeted support services". Unfortunately, there is a shortage of research–oriented librarians, a fact noted by a number of authors (Verzosa, 2007; Marjorie, 2000; Sitienei & Ocholla, 2010; Ocholla, Ocholla and Onyancha, 2012), despite an abundance of well educated librarians. Research and research publications complement each other, meaning that academic librarians should not only engage in research, but also publish the outcome of their research because it is important to do so.

The scholarly community is in general agreement that scholarly research output should be of high quality; published through a solid peer-review process in an acceptable format; and accessible in the form of recorded sources in print and electronic formats, such as books (monographs), chapters in books, conference papers and proceedings, articles in scholarly journals, theses and dissertations, patents and trademarks, and creative works, such as performances and exhibitions of the arts, among others. The Australian Government Department of Innovation, Industry, Science and Research, Higher Education Research Data Collection (HERD) specification for the collection of 2010 data (DIISR HERDC, 2011:par.1.3.12) defines research publications as:

> ....books, book chapters, journal articles and/or conference publications that meet the definition of research, and are characterized by: substantial scholarly activity as evidenced by the discussion of relevant literature; an awareness of the history and antecedents of the work described; a format (in terms of presentation) that allows a reader to trace the sources of the work through citations and footnotes; originality, portrayed by not being a compilation of existing works; content that increases the stock of knowledge; a form that enables the dissemination of knowledge; and an attempt to improve the quality of publications.

Closer to home, research output has been described as "textual output where research is understood as original, systematic investigation undertaken in order to gain knowledge and understanding"

Problem and Purpose of the Study

Bibliometric and informetric studies are widely used to inform policies and decisions in political, economic, social and technological domains that affect the information flow and utilisation patterns within, between and outside institutions and countries. Although Library and Information Science (LIS) studies of this nature solve problems related to collection development, information retrieval, systems design, user studies, management, knowledge organisation, and research evaluation, to name a few, bibliometric studies are limited, and those focusing

on research output are even more so. The exceptions are a few studies reported on LIS research output in Africa by Onyancha (2007) and (mainly) by West African scholars such as Aina (1998), Aina and Mabawonku (1997), Aina and Mooko (1999), Alemna and Badu (1994), Alemna (1996; 2001), Kadiri (2001) and Mabawonku (2001). A few studies on LIS research have also emerged from Southern Africa in the last 23 years (Boon and Van Zyl, 1990; Ocholla, 2000, 2001; Ngulube, 2005a, 2005b; Ocholla & Ocholla, 2007; Sitienei and Ocholla, 2010; and Ocholla, Ocholla and Onyancha, 2012) that provide an awareness of the overall research output from within the library and information science discipline in Southern Africa, which is largely based on the publication count and citation analysis of peer-refereed articles appearing in national and international LIS journals. There has not been a bibliometric study focusing on research output by academic librarians in Africa (known to us), save for a recent study by Sitienei (2009) and Sitienei and Ocholla (2010) that analysed public universities in Eastern and Southern Africa from 1990 to 2007 using the LISTA and WORLDCAT (a union catalog which records the collections of over 72,000 libraries in 170 countries/territories which participate in the Online Computer Library Center (OCLC) system) databases, and a study by Ocholla, Ocholla and Onyancha (2012) that focused on private and public universities in Eastern Africa using the LISA database to analyse research publications by librarians.

We argue that while academic librarians support members of the academic community, including students, researchers and academic staff/faculty, by managing, organising, evaluating and disseminating the information that this community needs, they can do this with greater empathy and sympathy and better knowledge and confidence if they conduct research and publish. There are other arguments as well. Publishing or creating information has not been a part of academic librarians' key performance areas. Stover (1996:par.2) believes that it is vital for academic librarians to be involved in publishing in order to support the scholarly communication process. Gregory and Medford (2006:par.1) maintain that academic librarians would also benefit a great deal from publishing because it allows them to maintain their status as academic staff, be awarded promotions, and gives them the opportunity to add to the body of knowledge that goes into creating our literature. Our discussions with LIS colleagues from Tanzania and Nigeria, for example, suggest that the promotion of academic librarians to senior library management positions is linked to research output. Bahr and Zemon (2000:411) and Hart (1996:455) have observed that academic librarians in the West publish relatively more than others, and in some institutions, publication is actually a requirement for promotion. In Africa, however, not much is presently known about the nature and pattern of publishing by academic librarians. Yet there is a frequent appeal/ demand by academic librarians to be accorded academic status within universities in the region and, where academic status still does not exist, to be placed under an academic management structure where 'publish or perish' is still the order of the day. Would the issue of research and publication by librarians become important in supporting such appeals?

Thus, this study sought to establish and compare the research and publication patterns and output of academic librarians in Southern Africa from 2002 to 2011 in assessing current research output. The following research questions are answered in this study:

- Do academic librarians publish, and to what extent?
- Is there a link between the seniority of librarians and their research publication patterns?
- What is the publication trend of university librarians from 2002 to 2011?
- In which sources do librarians commonly publish their research findings?
- In which subject areas/domains do they publish?
- To what extent does LISTA, LISA, WORLDCAT and Google Scholar index research publications by the librarians?
- What is the impact of their publications?
- What are the nature and the types of research collaborations?

Research Method and Procedure

The study confined its scope to publications produced between 2002 and 2011. The descriptive bibliometric technique of content analysis was used as the primary research instrument method. Documents sourced for content analysis were obtained from the Library and Information Science and Technology Abstracts (LISTA) database, which is one of the largest database indexing records in the domain**.** A list of 60 public universities from 13 Southern African countries was obtained from the Southern African Regional Universities Association (SARUA) website. University librarians' names were obtained from the 60 university websites and Europa World of Learning 2012 where possible, and used as keywords for retrieving data. Although almost all the universities have websites, slightly more than 50% (almost 100% in South Africa) have listed their library staff on their websites. A list that largely consists of university librarians/directors and a few deputies was available in Europa World of Learning. A total of 185 authors (academic librarians and other collaborators) were included in the study. As far as the libraries were concerned, the study focused on academic libraries belonging to public universities in Southern Africa. The study covered the following countries in Southern Africa: Angola, Botswana, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe. Co-authorship of publications was used as an indicator of research collaboration. This is the most widely employed technique in the measurement of the extent, degree, and nature of collaboration in research (see Onyancha, 2009:88). In order to assess the nature of collaboration, we classified the publications according to the number of authors per paper, i.e. one-author, two-author, three-author papers, and so on. The co-authorship social network maps presented in Figures 2 and 3 were generated using UCINET 6 for Windows software's analytic technologies (Borgatti, Everett and Freeman, 2002), which included the Pajek program. These network maps were generated in order to identify the existing research networks of academic librarians in Southern Africa. Microsoft Excel was also used to analyse and present the quantitative data, supplemented by qualitative analysis (as reflected in the next section). Other computer-aided software that was used to analyse data includes: Bibexcel, developed by Olle Persson (1986) its helpful guidelines (Persson, Danell and Schneider, 2009) were used to generate frequencies of occurrence of various indicators, such as authors and sources in which librarians publish; Notepad, used to clean the data as well as prepare a list of authors so that it was compatible with the Bibexcel program; and TI, which was used to prepare a co-occurrence matrix that was, in turn, used to generate the social networks shown in Figures 2 and 3. The author citation and impact analysis (measures the impact of an author's publication) was performed by using 'publish or perish' software (Harzing, 2007) that "retrieves and analyses academic publications" by using raw data from Google Scholar.

Results and Discussions

The results are presented in the eight sections below.

Publication Output by Country and Institution

The leading country was South Africa, with an output of 159 publications -over 65% (i.e. two-thirds) of the total number of publications produced by the 6 countries in Southern Africa. In second position was Botswana, which yielded a total of 31 publications (i.e. 13%), followed by Zimbabwe (21; 9%). The rest of the countries produced less than 10 publications each.

With respect to institutions, the University of Cape Town (UCT) produced the highest number of publications (38; 16.24%), followed closely by the University of Botswana (UB) (31; 13.25%). Other institutions that yielded a relatively high number of publications include: Stellenbosch University (21; 8.97%), University of Zambia (21; 8.97%), University of Pretoria (UP) (20; 8.55%), University of the Witwatersrand (14; 5.98%), University of South Africa (13; 5.56%), and the University of KwaZulu-Natal (11; 4.70%). A total of 26 institutions contributed to the publication of documents by librarians, and 17 of them were South African universities/institutions out of 23 public universities in the country. Besides the aforementioned universities, the geographic distribution of the other contributing institutions was as follows: South Africa-Cape Peninsula University of Technology (CPUT), Central University of Technology Bloemfontein

(CUTB), Durban University of Technology (DUT), Nelson Mandela Metropolitan University (NMMU), North West University, University of Zululand, and the University of the Free State; Lesotho -National University of Lesotho; Namibia- University of Namibia; Swaziland -University of Swaziland; and Zimbabwe - National University of Science and Technology (NUST), University of Zimbabwe, Bindura University of Science Education, and Midlands State.

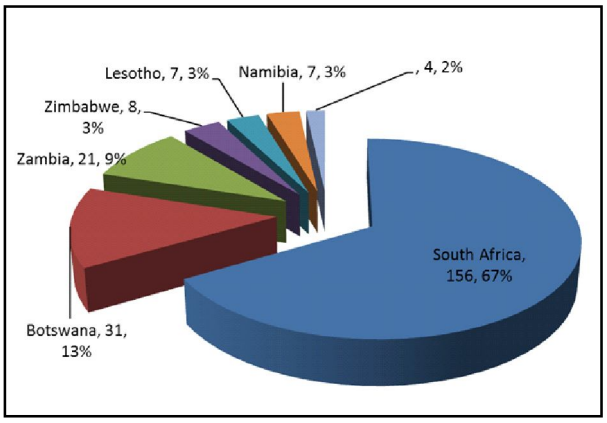

Figure 1: **Publications output by country (N=234).**

Most Active Academic Librarians

It was difficult to secure an authoritative list of all the academic librarians in universities in the region, a limitation very much like one we faced in a related study focusing on Eastern Africa (Ocholla, Ocholla and Onyancha, 2012). The names and titles of the librarians were not readily available on many university (library) websites, while the Europa World of Learning only captured the names and titles of the top two (e.g. director/university librarian and deputy university librarian/director) or three senior library managers. In order to create a usable list of librarians for the study, we checked the publication records in the LISTA database for the names of librarians, from assistant librarians to university librarians/directors, except in cases where library positions/titles were not provided. In such cases, we first indiscriminately checked all the library personnel who appeared or were available in the university websites; of the approximately 1,100 names checked, priority was given to those names with professional library service titles. Further selection was based on any individual/librarian (185) who had published one or more papers indexed by LISTA for the duration of the study. A total of 184 authors (i.e. published librarians amounted to 94 without collaborators) participated in the publication of 234 documents. Topping the list of the contributing authors was Kanyengo CW, who produced 14 articles, followed closely by Raseroka, K. (13), and Raju, R. (12). Table 1 also reveals that a total of 8 authors published between 5 and 10 articles each, namely Tise, E.R. (9), Dean, C.E. (7), Pienaar, H. (7), Barben, T. (6), Darch, C. (6), Mswazi, P. (6), and Thomas, G. (6).

In terms of the contributions by the rank or position of the librarians, it was evident that the most productive librarians were those in leadership positions, meaning that they also probably had a long history of library service. However, only 25 (less than 30%) of the directors/university librarians and deputy directors/university librarians from the 60 public universities (many of the universities have more than one deputy director/university librarian position) had research publications indexed in the database (see also Table 5). Of the 60 universities, research publications retrieved from the database only originated from 16 (26.6%), as listed in section 4.1.

Table 1: Distribution of publications by academic librarians in LISTA (N=234)

	Name	*Position or Rank*	*No of Publications*
1	Kanyengo, Christine Wamunyima	Deputy University Librarian	14
2	Raseroka, Kay	Director of Library Services	13
3	Raju, Reggie	Director, ICT	12
4	Tise, Ellen R.	Senior Director	9
5	Dean, Caroline E.	Librarian	7
6	Pienaar, Heila	Deputy Director	7
7	Barben, Tanya	Senior Librarian	6
8	Darch, Colin	Senior Information Specialist	6
9	Muswazi, Paiki	Deputy University Librarian:	6
10	Thomas, Gwenda	Executive Director	6
12	Arko-Cobbah, Albert	Head	5
13	Kuhn, Rosemary	Information Services	5
14	Smith, Ina	Digital Research Repository	5

Most Popular Publication Sources

Many related studies (e.g. Ocholla, 2007; Ocholla and Ocholla, 2007; Onyancha, 2007; Sitienei and Ocholla, 2010; Ocholla, Ocholla and Onyancha, 2012) report that journals are leading sources of scholarly publications. Scholarly journal articles are normally peer refereed, but there may also be other publications, e.g. communication or reviews (often quite general or short in nature), published in such journals as well. Publication in scholarly conference proceedings is also gaining recognition, particularly in proceedings that are very highly valued and rated (e.g. those indexed by ISI). We noted that publications in conference proceedings came second after journal articles. Table 2 reveals that journals (see total aggregate) were the most commonly used publications to disseminate information published by librarians. The leading source was IFLA Conference Proceedings, which published a total of 30 articles, followed by the South African Journal of Libraries and Information Science *(*29), IFLA Journal (22), Innovation (16), Information Development (10) and the African Journal of Library, Archives & Information Science (10). It was observed that other than publishing internationally in subject-specific journals or proceedings, librarians (mostly from South Africa) made use of journals published in South Africa, namely: the South African Journal of Libraries and Information Science, Innovation, Mousaion and Cape Librarian. Otherwise, the majority of the documents were published in 'foreign' or 'international' journals. The only journal published in Africa and outside Southern Africa that made it to the top 10 was the African Journal of Library, Archives and Information Science (the only ISI indexed LIS journal in Africa), which is published in Nigeria.

Table 2:Distribution of publications by sources (N =229)

Name of Journal	No of Publications	Percentage
IFLA Conference Proceedings	30	13.10
South African Journal of Library & Information Science	29	12.66
IFLA Journal	22	9.61
Innovation	16	6.99
Information Development	10	4.37
African Journal of Library, Archives & Information Science	10	4.37
Mousaion	9	3.93
Quarterly Bulletin of the National Library of South Africa	9	3.93
Cape Librarian	6	2.62
Library Management	6	2.62
Electronic Library	5	2.18
International Information & Library Review	5	2.18
Focus on International Library & Information Work	4	1.75
Library Hi Tech	4	1.75
Library Review	4	1.75
IATUL Annual Conference Proceedings	3	1.31
Journal of the Medical Library Association	3	1.31
Libri: International Journal of Libraries & Information Services	3	1.31

Research Trends between 2002 and 2011

The trend of research output is usually measured by examining the publication of research articles by year or over a period of time. Figure 1 shows that there was a consistent upward trend or growth in publications from 2002 to 2007, and thereafter a continued decline/fall up until 2011. From a mere 12 publications in 2002, the output increased to peak at 43 in 2007, a percentage increase of 258%. Since IFLA does have some influence on the research publications of librarians in the region (see Table 3), it follows that the IFLA conference which was held in Durban, South Africa, in 2007, could have influenced the publication trend in the region. In fact, the number of research publications fell immediately after the conference, and it is worrying to note that since 2007, the number of publications has continued to decline. The cause of this trend could only be speculated from the data that we obtained. For example, we can consider the decline between 2009 and 2011 to be at least partly caused by the indexing gap (the gap between the publication of a document and when it is indexed by/in a database) that might have resulted in the fewer publications witnessed in that period. However, it is unlikely that this is the only factor at play in the drop in publications in 2008, and partly in 2009.

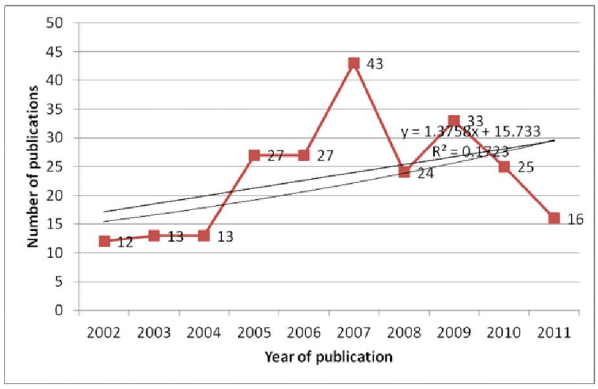

Figure 2: **Publication trend, 2002 - 2011**

Most Researched Subjects (Descriptors from LISTA)

According to the findings reflected in table 3, the subject term *libraries and archives* yielded the highest number of publications (i.e. 99), followed by *South Africa* (69), *information services* (33), *libraries* (32), *academic libraries* (28), *access to information* (19), *colleges, universities, and professional schools* (19), *Africa* (18), and *books – reviews* (18). It therefore follows that the key area of research focus or publication was *libraries*, more particularly, *academic libraries in Africa* and more specifically, *academic libraries in South Africa*. It was also observed that book reviews featured prominently, implying that not all publications originated from research. Besides *information services* and *access to information*, other subjects of publication include *information literacy*,

information resources, information technology, internet, and *information retrieval.* The presence of *conferences and conventions* among the top subject terms is in line with the fact that some of the publications were also published in conference proceedings.

Table: 3 Distribution of publications by subject (N=234)

	SUBJECT	No of Publications	Percentage
1	LIBRARIES AND ARCHIVES	99	42.31
2	SOUTH AFRICA	69	29.49
3	INFORMATION SERVICES	33	14.10
4	ALL OTHER INFORMATION SERVICES	32	13.68
5	LIBRARIES	32	13.68
6	ACADEMIC LIBRARIES	28	11.97
7	ACCESS TO INFORMATION	19	8.12
8	COLLEGES, UNIVERSITIES, AND PROFESSIONAL SCHOOLS	19	8.12
9	AFRICA	18	7.69
10	BOOKS – REVIEWS	18	7.69
11	UNIVERSITIES & COLLEGES	17	7.26
12	INFORMATION LITERACY	16	6.84
13	LIBRARIANS	16	6.84
14	NON-FICTION	16	6.84
15	INFORMATION RESOURCES	15	6.41
16	INFORMATION SCIENCE	15	6.41
17	INFORMATION TECHNOLOGY	15	6.41
18	LIBRARY SCIENCE	13	5.56
19	CONFERENCES & CONVENTIONS	13	5.56
20	ZAMBIA	12	5.13
21	CONVENTION AND TRADE SHOW ORGANIZERS	11	4.70
22	INTERNET PUBLISHING AND BROADCASTING AND WEB SEARCH PORTALS	11	4.70
23	INFORMATION RETRIEVAL	11	4.70
24	ELECTRONIC INFORMATION RESOURCES	11	4.70
25	INFORMATION RESOURCES MANAGEMENT	11	4.70

We also examined the most common title words in order to identify the subjects or topics of research or publication by librarians in Southern African countries. The assumption is that title words normally end up being used as indexing terms for the documents. It should, however, be noted that not all title words can be used to index a document, as some of the indexing services employ a controlled vocabulary to conduct the indexing of documents within their databases. The table below reveals that, as was the case with subject terms, the most common words in the titles include *library* (or libraries), *information, South, Africa, university, African, academic, services, access,* etc. A combination of two or more words will also produce compound subject terms, some of which were used to index the documents, e.g. *access to information, academic libraries, library development,* etc.

Table 4: Most common single title words

No	Title word	No. of records	No.	Title word	No. of records
1	Library	78	21	Experience	11
2	Information	66	22	IFLA	11
3	Africa	38	23	Resources	11
4	South	36	24	Service	11
5	University	36	25	Challenges	10
6	African	29	26	Literacy	10
7	Libraries	22	27	Reference	10
8	Academic	20	28	Conference	9
9	Case	19	29	Health	9
10	Development	18	30	Students	8
11	Services	18	31	Collection	7
12	Study	17	32	Distance	7
13	Access	15	33	Librarians	7
14	Botswana	14	34	Cape	6
15	Education	13	35	Communication	6
16	Research	13	36	Higher	6
17	Electronic	12	37	Needs	6
18	Knowledge	12	38	Skills	6
19	Zambia	12	39	Congress	5
20	Digital	11	40	Developing	5

Publication Representation by Database

In the past, we have noted (Onyancha and Ocholla, 2008) that despite all its limitations, Google Scholar (GS) is better than ISI and Scopus for indexing research output that emerges from developing countries in the humanities and social sciences, because of the coverage, number, and variety of documents that GS indexes. This level of indexing seems to be closely comparable to WorldCat for LIS scholarly publications. Google Scholar will also index non-LIS publications. LISTA and Library and Information Sciences Abstracts (LISA) also index a substantial number of LIS publications, although less than GS and WorldCat in most cases. We note some disparities, sometimes significant, in the number of indexed publications in the four databases that call for attention and caution when deciding on which database to rely upon when selecting a publication for various purposes. The peer review display (see Table 5, column 9) in WorldCat is useful for determining the quality of the publications. As displayed, Christine Wamunyima Kanyengo (24), Colin Darch (16) and Kay Raseroka (11) had the most peer refereed publications.

Table 5. Publication by databases

COUNTRY	UNIVERSITY	AUTHOR	POSITION	LISTA	LISA	GS	WorldCat	Peer-rev
Zambia	UNZA	Kanyengo, Christine	Deputy University Librarian	14	12	13	25	24
Botswana	UB	Raseroka, Kay	Director of Library Services	13	6	17	22	11
South Africa	Stell University	Raju, Reggie	Director: Information Technology	9	7	16	12	3
South Africa	Stell University	Tise, Ellen R.	Senior Director	8	5	19	15	5
South Africa	UCT	Dean, Caroline Elizabeth	Librarian	7	3	1	2	1
South Africa	UP	Pienaar, Heila	Deputy Director	7	6	22	5	5
South Africa	UCT	Barben, Tanya	Senior Librarian	6	5	2	7	1
South Africa	Wits	Muswazi, Paiki	Deputy University Librarian	6	9	10	11	6
Botswana	UB	Oladokun, Olugbade	Senior Librarian	5	4	9	11	8
South Africa	UCT	Darch, Colin	Senior Information Specialist	5	4	21	36	16
South Africa	UCT	Thomas, Gwenda	Executive Director	5	3	6	26	5
South Africa	UFS	Arko-Cobbah, Albert	Campus Librarian	5	3	9	6	4
Botswana	UB	Nfila, R.B.	Acting Deputy Director Resource	4	4	7	9	5
Botswana	UB	Lumande, Edward	Senior Librarian	4	4	5	4	
Namibia	Univ of Namibia	Namhila, Ellen Ndeshi	University Librarian	4	1	4	6	2
South Africa	CPUT	Chiware, Elisha R.T.	Director, CPUT Libraries	4	4	5	5	3
South Africa	UCT	Thomson, Ingrid	Information Services Librarian	4	2			
South Africa	UNISA	Mbambo-Thata, Buhle	Executive Director	4	1	12	9	3
South Africa	UNISA	Raubenheimer, Jenny	Director: IR Content Distribution	4	2	4	4	3
South Africa	Wits	Ubogu, Felix N.	University Librarian	4	2	8	6	3
South Africa	UZ	Ocholla, Lyudmila	Information Librarian	4	2	6	3	3
South Africa	UKZN	Kuhn, Rosemary	Information Services	4	3	4	4	4

Research Impact of the Librarians in Google Scholar

Research impact is still a controversial area in measuring research performance. Qualitative measures of research output are criticised because of their subjectivity. Quantitative measures are not free from flaws, but are more objective and even more preferred, particularly when used together with qualitative measures. In this study, we have used 'publish or perish' (Harzing, 2007) software that relies on raw data from Google Scholar for research impact analysis to establish, among other things, the number of papers, number of citations, years of citation, citations per year, citations per paper, citations per author where multiple authors occur, paper per author, and the h-index for measuring author/journal impact over time. We have sampled authors and librarians who published 4 or more papers arbitrarily, as displayed in table 6, by using the variables in the columns. In a study by Onyancha (2007), the average citation per paper in the humanities and social sciences was 2.6.

Most citation rates in this study are below average for the social sciences, except for Nfila (6.71 citations per paper). The h-index that determines the impact of the papers is below 4, with most authors obtaining a h-index below 2. Using quantitative measures, this may suggest that the papers or some papers are less cited and have a lower impact, thereby implying low international impact exhibited by librarians from the region under investigation that can be debated.

Table 6: Research impact of the librarians

Names	Papers	Citations	Years	Cites_Year	Cites_Paper	Cites_Author	Papers_Autho	Authors_Pape	h_index
Kanyengo, C W	21	35	6	5.83	1.67	24.75	13.28	2.24	4
Raseroka, Kay	17	34	10	3.4	2	31	13.07	1.82	4
Raju, Reggie	16	15	9	1.67	0.94	9.67	8.17	2.38	2
Tise, Ellen R	19	4	9	0.44	0.21	2.67	15.42	1.53	2
Dean, Caroline Elizabeth	1	1	5	0.2	1	0.5	0.5	2	1
Pienaar, Heila	30	78	10	7.8	2.6	50.66	19.33	1.8	4
Barben, Tanya	2	1	8	0.13	0.5	1	2	1	1
Muswazi, Paik	10	12	11	1.09	1.2	11.5	8.67	1.6	2
Oladokun, Olugbade	9	11	11	1	1.22	10.5	7.5	1.33	2
Nfila, R B	7	47	11	4.27	6.71	24.67	4.83	1.71	2
Lumande, Edward	5	24	11	2.18	4.8	11	2.33	2.2	3
Namhila, Ellen Ndeshi	4	5	9	0.56	1.25	5	3	1.5	1
Chiware, Elisha R.	5	8	8	1	1.6	7.5	4	1.4	2
Thomson, Ingrid									
Mbambo-Thata, Buhle	12	0	6	0	0	0	9.83	1.42	0
Raubenheimer, Jenny	4	3	11	0.27	0.75	1.5	2.5	1.75	1
Ubogu, Felix N	8	15	10	1.5	1.88	13	5.37	2.13	3
Ocholla, L	6	11	6	1.83	1.83	5.5	3.7	2.17	1
Kuhn, Rosemary	4	0	3	0	0	0	1.67	3	0

Nature of Collaboration among Academic Librarians

Research collaboration is highly recommended because of its benefits, specifically: i) Research collaboration enables researchers to share skills and techniques and is one way of transferring knowledge (especially tacit knowledge); ii) Through clashing views, collaboration may bring about the cross-fertilisation of ideas, which may in turn generate new insights or perspectives that individuals, working on their own, would not have grasped; iii) Collaboration provides intellectual companionship within a practising community; iv) Collaboration plugs the researcher into a wider contact network in the scientific community; and iv) It enhances the potential visibility of the work (Katz and Martin, 1997). Despite all these benefits, research collaboration in Africa is weak (Onyancha, 2007; Ocholla and Ocholla, 2007; Ocholla, 2008; Mutula, 2009). However, it has been observed that collaborative research output is relatively low in the library and information profession (Ocholla, 2008) and hindered by a number of factors in Africa, some of which have been discussed by Mutula (2009). Among them is a lack of willingness to collaborate, poor networking, and a lack of collaborative research funding. This study found that most publications were singly authored (57.26%), with fewer co-authored publications. For instance, it was observed that the average number of authors per article was 0.8, implying a relatively low degree of collaboration in research by librarians. A much larger figure could have meant a higher degree of collaboration.

This pattern is evident when analysing the number of authors who author *n* number of articles each. The number of articles which were authored by one author each was 134, accounting for 57.26% of the total 235 articles, while those authored by two authors each were 68. The distribution pattern of the other publications was as follows: three authors (21), four authors (4), five authors (3), six authors (2), and seven authors (1). There was only one publication authored by more than seven authors (i.e. 14 authors).

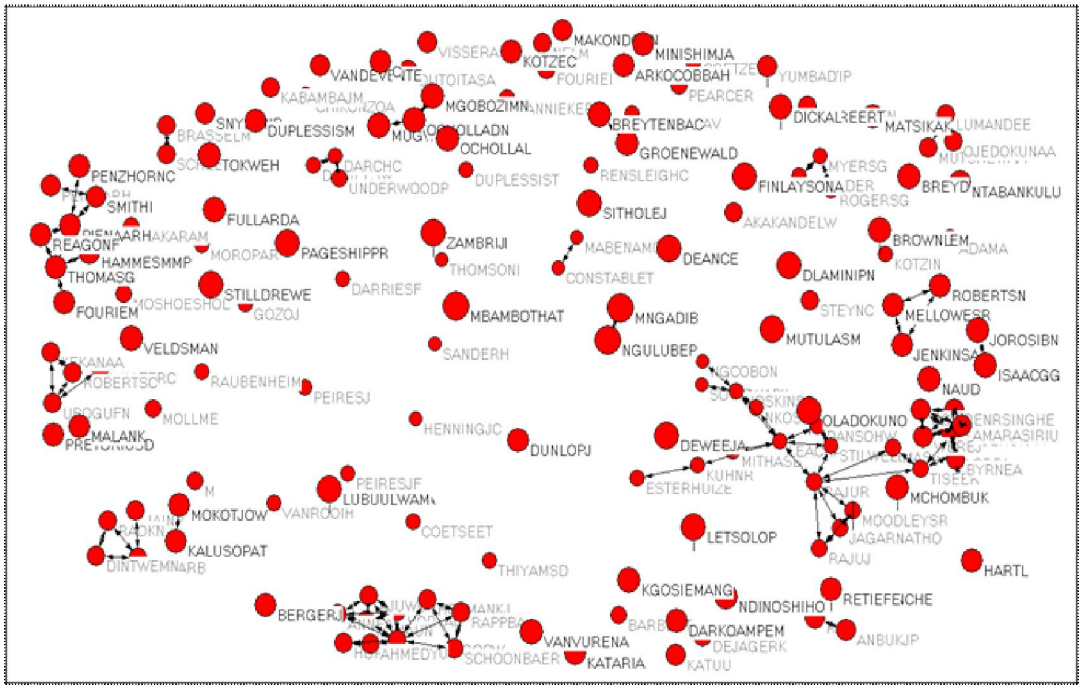

Figure 3: **Collaboration networks of librarians in Southern Africa (with labels)**

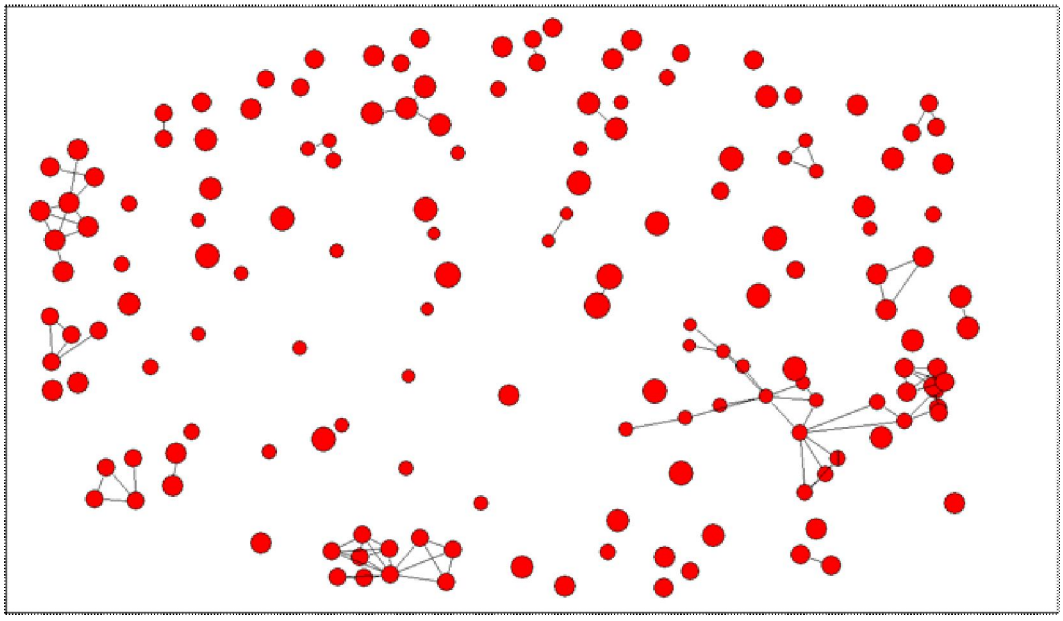

Figure 4: **Collaboration networks of librarians in Southern Africa (without labels)**

An analysis of the collaboration networks revealed that librarians largely co-authored their publications with teaching staff. Figures 3 and 4 demonstrate the collaborative networks that exist among librarians in Southern Africa.

A total of 14 networks, comprising two or more authors, were realised in the analysis of research collaboration. The biggest network (located in the bottom right-hand corner of Figures 3 and 4) consisted of 15 nodes representing authors. A close look at that network reveals that there are actually two parts joined together with one node. Figure 3 reveals that the node represents Raju J. As mentioned earlier, Figures 3 and 4 also reveal nodes or persons who are not linked to any other node or person, implying single authorship and therefore non-collaboration in research.

A further analysis of the degree of collaboration through the calculation of the strengths of collaboration (measured by the cosine values) revealed that the highest co-efficient occurred between Thomas, G. and Fourie, M. (i.e. 0.91), implying that the two collaborated in almost all the publications that they authored. The other 'high' strengths of collaboration (yielding 0.8 or higher values) were as follows: Ojedokun, A. A. and Lumande, E. (0.87), Kekana, A. and Ubogu, F. N. (0.87), Roberts, C. and Ubogu F. N. (0.87), Jagarnath, O. and Raju, J. (0.82), and Moodley, S. R. and Raju, J. (0.82).

Conclusion and Recommendations

Research in Africa is facing many challenges (Mutula, 2009). The conclusions of this study are quite similar to the conclusions in a related study focusing on Eastern Africa (Ocholla, Ocholla and Onyancha, 2012). This study found that many academic librarians from the region do not publish in visible scholarly outlets such as those indexed by LISTA, and even less so in peer-refereed journals, as attested to by the WorldCat indexed journals (table 2). Publications from the 13 countries and 60 university libraries were found to originate mainly from South Africa (65%). The University of Cape Town (16.24%) and the University of Botswana (13.25%) were at the helm of the 16 universities that contributed publications. The most active librarians, with one or more publications during the study period, also originated from South Africa. We assume that the leading role of South African universities has more to do with the relatively sound research policy and support systems in the country and the research culture in universities, than with a requirement linking research publications to the tenure/career growth of the librarians, as recommended in some studies (e.g. Stover, 1996; Gregory and Medford, 2006: par 1; Verzosa, 2007).

There was no link between the seniority of a librarian and research publication output, as less than 30% of the analysed senior library staff (directors, deputy directors, university librarians, deputy university librarians and those acting in such positions) had publications reflected in the databases. This suggests that the promotion of academic librarians to top library management positions in the library does not require research publications in most universities in the region, when in fact such positions should be occupied by those claiming academic status within the university and responsible for the enormous research information services that the libraries do provide. Journals are still the most popular publication source for librarians. The popularity of scholarly journals for research dissemination is confirmed in several studies, including recent related studies in Africa mentioned in Section 2. In contrast to studies that report that African scholars publish mainly outside Africa, we found significant publication output occurring in African journals, particularly South African journals. We argue that scholarly publications would occur within a country or a region (such as Africa) if scholarly journals were available, of good quality and within reach, as is the case in South Africa, which has 200 scholarly journals, including six LIS journals.

The publication trend over the period does not provide a consistent or steady growth pattern, with highs (2007, 2009) and lows (2008 and 2010) that were not predictable. We can, however, associate the low publications in 2009 and 2011 with the publication interval, specifically the time it takes before a journal article is indexed by a database. We also assume that the rise in 2007 could have been influenced by the convention of the IFLA conference in South Africa, where most papers from the region were published in the IFLA conference proceedings and IFLA journal.

Unlike the Eastern Africa study (Ocholla,

Ocholla and Onyancha 2012) where information technology was the most researched subject along with information seeking and services, the majority of studies in Southern Africa focused on different types of libraries and information access and services. We also observed that place names, such as country names (e.g. South Africa, Africa and Zambia), dominated subject descriptions. Interestingly, case studies also dominated, suggesting that this was the most commonly used research method in these studies. While both LISTA and LISA are important for searching LIS research publications, the coverage of WORLDCAT and Google Scholar was found to be equally impressive (see Table 5). Searching Google Scholar through 'publish or perish' yielded desirable results. We noted with surprise that although LISTA lists bibliometrics as one of the topics covered in its database, it does not index ISSI Conference Proceedings, which are peer-refereed and normally of good quality. There could be other peer-refereed conference proceedings which are not included in LIS databases.

In the absence of authority name file, searches in all four of the databases for research output by author name were found to provide misleading results, especially where common names were involved. Therefore, care should be taken when conducting searches to use the correct author name, or name combinations.

Research impact by analysing journal and author impact is quite trendy in measuring research output, particularly in journal articles. The display in table 6 provides important information for measuring research output by using 'publish or perish' that draws its data from Google Scholar, which is known (Onyancha and Ocholla, 2008) to provide favourable results for social sciences and humanities research, as well as coverage of all forms of research output that favour developing countries. Librarians in academic libraries can use this tool to measure their own research output and, more importantly, help academic scholars see where they stand in terms of research output.

We noticed that electronic publications that are accessible through open access are the most accessed and used publications. They also appeared to generate higher citations and achieve a higher impact. As the number of single authored articles was 57.26% while the rest were co-authored, we consider the level of research collaboration to be acceptable but not necessarily sufficient given the benefits that such collaboration introduces, as explained by Katz and Martin (1997) and summarised under item 4.8. The visibility of librarians was also obscure as most universities did not provide the names, titles and responsibilities of their library staff on their websites, which is often the case in South African universities (Sitienei and Ocholla, 2010). Without a staff list that includes librarians on a university website, the librarians' visibility is blocked, and research focusing on their activities is made extremely difficult, as was also evident in the study covering Eastern Africa (Ocholla, Ocholla and Onyancha, 2012).

We suggest that the promotion of university librarians to senior library positions should be tied to research output and publications, as librarians serve a vibrant academic community whose research requirements and services can best be achieved by people who not only conduct research, but also disseminate research results through scholarly publications. Such librarians would fully understand the complexities of scholarly research publications, such as the preparation of a manuscript, information retrieval, peer-review, referencing, plagiarism, contractual agreements between author and publisher, open access (OA), conference presentation requirements, etc. – and effectively support the author. We believe that the nature of the modern library profession has changed a great deal because of the increased use of ICT and social media. Most academic librarians are involved in teaching information literacy to the university academic community, such as students and staff, where themes related to e-resources, open access, and information ethics are increasingly common. It is important that the publications by librarians - who are at the forefront of information services, especially in emerging areas - focus on the aforementioned themes and share their experiences widely with the LIS community through quality publications

The library profession is not well understood by many, including the academic community, because people do not know about their many different roles and responsibilities, how qualified they are, or what their career status in the library is in order to understand and respect the profession. We therefore strongly recommend that full lists of all library staff,

their titles, and qualifications (where possible), should be made available on university library websites for the benefit of improved library information services and research. Although some of the errors with author names stem from the authors, LIS databases should be more accurate with authors' names. They (databases) should provide a service similar to 'author finder' provided by Thompson Reuters (ISI), which helps rapid distinction to occur between authors with the same name when an author's name is captured/ recorded differently.

Some of the limitations of this study have to do with the problem of accessing all the librarians, knowing their positions and qualifications, and selecting and using the correct names during searching in order to recall the maximum number of records/publications from the database, and being sure that the database has indexed all the publications by an author. Ultimately, the data provided in this study may not be used to count the total number of publications by an author for the selected period with maximum accuracy. However, it does provide useful information for understanding the dilemma of research publication output by academic librarians and scholars.

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Dennis N. Ocholla is Professor and Head of the Department of Information Studies at the University of Zululand South Africa. He is qualified with PhD and MLIS in Library and Information Science from Kiev/St Petersburg/Leningrad in 1988 and Krasnodar 1983 respectively(both in the former USSR). His teaching and research areas include: LIS education and training, bibliometrics/Informetrics, Information seeking, ICT4D, information ethics, knowledge management-IKS, scholarly communication, research methods and inforpreneurship.

Lyudmila Ocholla is Part-time/Adjunct Lecturer (in the Department of Information Studies) and Information Librarian, at the University of Zululand Library. She is qualified with an MBibl (Krasnodar) from Krasnodar State University of Arts and Culture (formerly Krasnodar State Institute of Culture, USSR). In the Department, she teaches information retrieval/cataloguing and classification. Her research interests include: organisation of knowledge, bibliometrics/Informetrics and information literacy.

Omwoyo Bosire Onyancha is Professor and Chair of Department at the Department of Information Science, University of South Africa. His areas of research interest include informetrics, information resources management, knowledge management, information searching and retrieval, informatics, and research evaluation.

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Review of Research on Information Behaviour in Contexts of Palliative Care with an Indication of Some Research Gaps

Ina Fourie
Department of Information Science
University of Pretoria,
Pretoria, South Africa
Email: ina.fourie@up.ac.za

Abstract

An increase in the number of people diagnosed with life-threatening diseases and affected by palliative care, as well as an increase in studies on information behaviour including information seeking, can be noted. With this in mind, the paper briefly reviews reports on research on information behaviour in palliative care in terms of: target groups and participants, settings, research methods and methods of data collection, components of information behaviour, and the factors influencing information behaviour. For each, some research gaps are noted. A few key findings on information behaviour in palliative care are highlighted. The intention is not to offer a comprehensive review; it is merely an overview to stimulate research in information behaviour in palliative care and to offer a point of reference. There are numerous research opportunities preferred.

Keywords

Information behaviour, palliative care, research, scholarly communication, information seeking, palliative care information needs

Introduction

An increasing number of people are affected by palliative care often associated with life threatening or life limiting diseases such as cancer, HIV/AIDS, chronic obstructive pulmonary disease and renal failure (Fourie, 2008; Veinot, 2009). With more people preferring to die at home, there is also an increase in reliance on communities to care for patients (Abernethy, Wheeler and Bull, 2011).

Research on information behaviour in palliative care is required to improve information systems and services for patients, as well as healthcare professionals (Abernethy, Wheeler and Bull, 2011; Johnson and Nelson, 2008; Sanderson and Tieman, 2010; Street and Ottmann, 2007; Wilkes, White and O'Riordan, 2000), to improve the quality and appropriateness of information provided to patients (Payne, 2002), and to empower patients through information (Zambrano, 2011). Timely and appropriate information can also help patients and families in dealing with dying and preparatory grief, and to take part in decision-making (Tomlinson, Burker and Soden, 2012). It can help with patient empowerment through information; especially if healthcare professionals take responsibility in determining what information is available and in identifying appropriate channels and means to share such information (Wilkes, White and O'Riordan, 2000). While we strongly focus on what is to be gained from information provision, we too seldom argue in terms of what is lost if information needs are not met.

Although there is a growing body of literature on information behaviour and palliative care, there are also many research gaps that need to be identified and filled, and which might be interpreted as a research agenda in this field.

Information Behaviour

Acknowledging a spectrum of definitions of information behaviour as portrayed by amongst others, Case 2007;:2012 and Fisher and Julien, 2009, this paper accepts the interpretation of information behaviour as ' active information seeking (directed, undirected, purposive, problem-based, conscious efforts), passive information seeking (unconscious

efforts, which may include encountering information, serendipitous discovery of information, glimpsing, information exposure), browsing, semi-directed information seeking, scanning, information foraging, information discovery, information giving, information sharing, information use, information transfer, choice of information sources, preferences for information sources/channels, information avoidance and ignoring information needs (Case, 2007; 2012; Courtright, 2007; Wilson, 1999). It is "the totality of human behavior in relation to sources and channels of information" (Wilson, 1999:249).

Palliative Care

The definition of palliative care proposed by the World Health Organisation (WHO) and widely accepted (Doyle, 2003; Fourie, 2008) is "…an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual". The WHO also stresses that palliative care should address patients and their caregivers and ensure that they are supported throughout illness and death (Bee, Barnes and Luker, 2009).

Fourie (2012) citing a discourse analysis by Pastrana *et al.* (2008) summarises the several elements of interrelated conditions applying to palliative care. She points out that of 37 English and 26 German definitions revealed, no consensus on definitions of palliative care, only overlapping categories and common elements. These include the following: one or more problems, such as diagnosis with a life-threatening disease, and various sub-issues, such as pain and symptoms that require treatment; different phases of the disease, such as the time of diagnosis, progression to a more advance stage, moving from curative care to palliation, the terminal phase, and days before dying; specific purposes, objectives, and goals of palliative care, which are mostly related to palliation – relieving pain and aiming for quality of life and dignity in dying; tasks associated with palliative care, such as management of symptoms and comprehensive care; processes related to palliative care, such as dying and grieving; target groups affected by palliative care, including patients, their relatives and healthcare workers; a multi-disciplinary team approach drawing on physicians, nurses, social workers, councillors, dieticians, etc.; specialist expertise and skills, e.g. in breaking bad news and grief counselling; a specific setting to which patients are confined, e.g. hospice, cancer hospital ward or home care; elements of palliative care, such as ethics, disclosure, confidentiality, and palliative care structures, such as legislation on euthanasia and treatment policies.

How the WHO's definition of palliative care, the inter-related conditions for palliative care and other definitions and descriptions of palliative care can be used to conceptualise palliative care as context for studies of information behaviour is currently under investigation by the author. This can have an important impact on the scope and demarcation of research studies, data collection and the interpretation of participants' responses. It is very important that researchers working on information behaviour in palliative care are clear about their interpretations and that they check the interpretations of people participating in their studies.

Research on Information Behaviour in Palliative Care

The following sections will give a brief review of the *status quo* of research on information behaviour in palliative care as reflected in reported studies. The intention is not to be exhaustive or to offer a systematic review, but merely to stimulate interest in the field and to offer a point of departure.

Target Groups and Participants

Studies of information behaviour in palliative care mostly focus on the information needs and information seeking of patients (Clayton and Tattersall, 2005; Fourie, 2008; Innes and Payne, 2009; Johnson and Nelson, 2008).

An increasing number of studies are also reported on the information needs of families. This include, studies on the information behaviour of parents of children (Davies, Contro and Lason, 2008; Davies, Larson and Contro, 2007), and children of parents who are patients (Kennedy and Lloyd-Williams, 2009). The interpretation of "family" has, however, been noted to be problematic (McClement and Woodgate, 1998). Some studies include a variety

of family members (depending on who is available to participate), and some also include more than one family member in the same study (Fourie, 2008). Although such studies can collect richer data, there is also the danger of getting contradictory views. Studies combining patients and family members – and even caregivers, are also noted (Kirk, Kirk and Kristjanson, 2002; 2004). Fourie (2008) also reports on the South African context, while Lin and Tsao (2004) report on family caregivers in Taiwan. They are highly involved in their ill family member's symptom management and must stay at the bedside to share the nursing and care giving tasks in the palliative care unit. The six domains for which family members participating in their study needed specific information included the basic tenets of care giving, the disease, the social welfare of the patient, psychosocial issues, palliative care, and spirituality/ religion. Wilkes, White and O'Riordan (2000) report on the support needs of families (primary needs), which might be interpreted in terms of (secondary) information needs.

An increasing number of studies are reported on informal caregivers (Bee, Barnes and Luker, 2009; Fukui, 2004; Lin and Tsao, 2004). The information needs of informal caregivers are especially important in ensuring that they receive sufficient support. Mazanec, Ferrell and Prince-Paul (2011) report on the experiences of distant caregivers of parents with advanced cancer.

Only a few studies have been reported on the information behaviour of healthcare professionals including the work by Sanderson and Tieman (2010) on information for general practitioners. Clayton *et al*. (2005) worked on the needs of patients and their caregivers. Fourie (2008) also involved patients, families and healthcare professionals; the emphasis was, however, on healthcare professionals' perceptions of the information behaviour of patients and families.

Some of the studies address not information behaviour, but issues underlying information behaviour. Clayton *et al*. (2005), for example, report on the discussion of end-of-life issues with terminally ill cancer patients and their caregivers.

More research is especially needed on the information behaviour of other stakeholders forming part of the multidisciplinary team taking care of patients in palliative care such as social workers and social councillors, religious/spiritual advisers, and medical aid workers. Research on the information behaviour of employers and colleagues might also shed light on the supporting infrastructure for patients. These people can play an important role in meeting the information needs of patients, and in supporting their information behaviour. They can also act as information intermediaries in giving and providing information to patients and families and also in patient education. They furthermore can fulfill an advisory role and they can also do proxy searching on behalf of patients.

Settings

Although a variety of settings feature in studies of information behaviour in palliative care, most studies focus on hospices (Johnson and Nelson, 2008). Studies of patients in home care (Bee, Barnes and Luker, 2009) are also reported. Lin and Tsao (2004) and Tomlinson, Barker and Soden (2012) report on palliative care units, Mazanec, Ferrell and Prince-Paul (2011) on a comprehensive cancer centre.

Considering that the setting such as a hospice might influence patients' and families' awareness of an illness and pending death, there seems a need for more cross-sectional comparisons between different settings. This can be combined with studying patients from various backgrounds and ethnic groups (e.g. how many patients from different ethnic groups are treated in hospice care), and alternatively in home care. Cross-country comparisons might also be useful such as reported by Kirk, Kirk and Kristjanson (2002).

Research Methods and Methods of Data Collection

Both quantitative and qualitative research methodologies feature in research on information behaviour in palliative care, with an increase in mixed methods or triangulation, using both methodologies. LaDonna (2011) also argues for the value of qualitative research. Good examples of qualitative research include the study by Clayton *et al*. (2005). The latter offers an excellent report on culturally-sensitive information-sharing in paediatric palliative care, and how the parents of children in palliative care are affected. Reading the words of parents

made me realise how strong the voices of people can be to reflect their lived experience. The following is but two examples: "The doctors would tell you exactly what was happening. They talk to you, but they don't explain… telling me [only] facts means 'that's it,' [that's all] they can do. That doesn't make you feel better."

During a month's stay, a Spanish-speaking mother of a child in palliative care washed in her child's bathroom sink because she received no orientation regarding available facilities. She feared asking questions. "I didn't know. I thought if I asked someone they would answer me in English, and I wouldn't be able to communicate".

Questionnaires are frequently used, and often these are standardised instruments from the health sciences such as questionnaires on needs, information needs, well-being, quality of life, and experiences of pain. Questionnaires can be distributed by hand, or by means of email or online via a website. Although questionnaires are mostly self-administrated, there are also studies where a structured questionnaire is used to guide interviews with participants. In such cases, the questionnaire is completed by the interviewer, and the interview is recorded with consent from the participant(s). Fourie (2008) reports a study where structured interviews were conducted by an oncology social worker with a Master's degree in Medical Social Work. Tomlinson, Barker and Soden (2012) report the use of focus groups, followed by inductive, thematic analysis. Focus group interviews were also used by Clayton *et al*. (2005), and Tomlinson, Barker and Soden (2012). Examples of studies based on individual interviews include Clayton *et al*. (2005). Bee, Barnes and Luker (2009) report on a systematic review of informal caregivers' needs in providing home-based end-of-life care to people with cancer.

Tomlinson, Barker and Soden (2012) report on participants' views on an issue such as written information, their experiences, and their thoughts on the value of the written information. Chassignol (2008) argues for a participatory approach to palliative care and providing Information: "The participatory approach allows the global care of patients and takes into account the suffering of healthcare professionals"… "This participatory approach to palliative care, which includes the process of keeping patients informed, is not possible without a service proposal that includes a system of care centred on patients, the role of intercommunication forums, anticipation and ethical decision-making."

Participation is also evident in the reports by Street and Ottmann (2007) on participatory action research in the design of a portal to meet information needs in palliative care. To deepen understanding of the complexity of information behavior, a combination of quantitative and qualitative methods is necessary. Although quantitative methods can deepen our understanding of the numbers of people affected (e.g. in hospice care) or involved (e.g. using the Internet as their main information source), qualitative methods can deepen our understanding of "lived experiences" through the eyes, hearts and voices of the people. In particular, we need more very large scale quantitative studies – over a spectrum of target groups and settings. Expert statistical help can be called in for this. It would also be useful if post-doctoral researchers would be willing to engage in larger scale qualitative studies to gain findings that lend themselves more to generalisation. The value of quantitative and qualitative research methods, as well as different methods of data collection when studying information behaviour in palliative care, thus needs to be considered in their own right. As for methods of data collection, I would like to suggest that the potential of narratives and storytelling (including digital storytelling) is investigated. Some studies are labelled as exploratory and descriptive (Fourie, 2012). Too many such studies can hinder research progress in the field of information behaviour. However, if followed-up by full-scale studies building on findings and insights gained, it can turn out to be very valuable in expanding research approaches and scopes. Ethical issues are very important in research in palliative care and need to be dealt with, with great sensitivity. Kvåle (2007) offers good advice on this.

Components of Information Behaviour

The components of information behaviour as discussed in this section are noted against a wide interpretation of information behaviour. At present, studies of information behaviour in palliative care mostly focus only on information needs in general (Lin and Tsao, 2004), or information needs in combination with a specific element or condition of

palliative care. Krik, Kirk and Kristjanson (2002) report on whether we are meeting the information needs of palliative care patients and their families. McConigley, Kristjanson and Nikoletti (2001) address information and support needs. They identified four trial information related needs: understanding foundational information, conflict of interest issues and financial implications of trial participation. For many studies on information needs participants are questioned on their information needs, without acknowledging the inability of participants to recognise information needs (i.e. dormant information needs as explained by Wilson 1999), or to adequately explain information needs. Problems with the latter, are captured in Taylor's (1968) seminal article on questions and answering where he notes four levels for the expression of information needs: visceral, conscious, formalised and compromised needs.

Many studies focus on information seeking where the emphasis is often on preferences for sources such as preferring doctors or nurses, or intimate personal circles or social networks. A few studies on using the Internet have also been reported, including Willis, Demiris and Oliver (2007) reporting on Internet use by hospice families and providers. Zanchetta (1998) reports on self-determination and information seeking in cancer recurrence. Hardly any studies refer to "information behaviour" as the umbrella concept as depicted in the definition by Wilson (1999) and the discussion of Savolainen (2007) who also introduces the concept "information practice" into the terminological debates of information behaviour. Examples of studies explicitly referring to information behaviour are Fourie (2008; 2010; 2012).

A substantial number of studies report on the needs and preferences of patients and families to be informed (Clayton *et al*., 2005; Kirk, Kirk and *Kristjanson, 2004)*. How patients have been informed and their awareness of the disease prognosis and pending death may have an influence on their information behaviour.

The need and preferences to be informed is mostly not emphasised in definitions of information behaviour, or as the focus of studies conducted in Information Behaviour as a sub-discipline to Information Science and related to Library Science. There are studies, however, reporting on the preference of some people to avoid information and especially "bad news"; these also apply to health in general (Brasher, Goldsmith and Hsieh, 2002; Lambert, Loiselle and MacDonald, 2009). There is increasing recognition of the importance of good communication between healthcare professionals and patients facing cancer or end of life (Friederichsen, Strang and Carlsson, 2000; Kennedy and Lloyd-Williams, 2009; Turner, Payne and O'Brien, 2011). An extensive body of studies on information communication with regard to advanced diseases, cancer and palliative care can be noted such as De Haes and Teunissen (2005). The focus is mostly on the need for excellent verbal communication within the palliative care setting (Tomlinson, Barker and Soden, 2012). In addition, there are many studies reporting on communication in disease phases such as near the end of life (Clayton, Butow and Tattersal, 2005). Mazanec, Ferrell and Prince-Paul (2011) report on the lack of communication and control experienced by distance caregivers of parents with advanced cancer, while Turner, Payne and O'Brien (2011) report on mandatory communication skills training for cancer and palliative care staff, asking "Does one size fit all?".

Effectiveness of communication with general practitioners regarding palliative care is addressed by Taubert and Nelson (2010) exploring information exchange and communication issues, while Mazanec, Ferrell and Prince-Paul (2011) report on a lack of communication and control, and providing written information in palliative care; according to them this leads to a gap between the legislation and the nature of the physician-patient relationship in palliative care. Studies reported on patient education imply "information giving", a component of information behaviour which seldom features in studies labelled as information behaviour or outside the healthcare disciplines. In the healthcare literature, reports on patient education and providing or giving information to patients and families, are, however, not linked to information behaviour as sub-discipline. Tomlinson, Barker and Soden (2012) report on the experiences of cancer patients in palliative care and their preferences for the provision of written information. In addition to the current studies of a spectrum of information- related activities captured in the concept of information behaviour, what seems to be required

are studies focusing specifically on the searching and retrieval of information, i.e. the search terms, search strategies and interaction with electronic information sources such as search engines. Studies on searching for images and using social media such as blogs might especially be useful. Studies are also required about the role and manifestation of browsing, foraging, information use, information sharing, collaborative information seeking, and information encountering in palliative care.

Factors Influencing Information Behaviour

Many factors that can influence information behaviour have been noted in reviews of the research field e.g. Case (2006; 2007; 2012), Courtright (2007) and Fisher and Julien (2009). These include age, education, gender, ethnic group or culture, and experience. With regard to palliative care the following can be highlighted as factors influencing information behaviour that have been studied with regard to palliative care (some of these factors feature explicitly in the titles of studies):

- Role, such as care giving (Fuiki, 2004; Lin and Tsao, 2004). Mazanec, Ferrell and Prince-Paul (2011) explore the complex phenomenon of distance care giving regarding an advanced cancer population.
- Relationship, e.g. spouse, parent, child (Davies, Contro and Larson, 2008; Wilkes, White and O'Riordan, 2000).
- Cultural/ethnic group. Davies, Contro and Larson (2008) offer an excellent report on giving information to Latino and Chinese families in paediatric palliative care.
- Type of palliative care, e.g. paediatrics (aimed at children) or geriatrics (aimed at elderly people) (Davies, Contro and Larson, 2008).
- Country specific differences. Fukui (2004) reports on Japanese family caregivers, and Kirk, Kirk and Kristjanson (2002) on a comparison between the perspectives of Canadian and Australian palliative care patients and their families. McConigley, Kristjanson and Nikoletti (2001) report on information and support needs in palliative care in Western Australia.
- Setting, such as hospice, hospital, or home care (Bee, Barnes and Luker, 2009). The impact of "setting' is also addressed in an earlier section.
- Disease such as HIV/AIDS (Veinot 2009) and chronic neuromuscular disease (LaDonna, 2011).
- Disease stage such as advanced cancer (Innes and Payne, 2009; Mazanec, Ferrell and Prince-Paul, 2011). Zanchetta (1998) reports on cancer recurrence. There are also reports on the terminal phase (Fukui, 2004).
- Disease location such as different types of cancer has also been studied with regard to information behaviour.

More studies are, however, needed on a cross-analysis of various factors such as role, setting and coping style; or culture and age. Studies are also needed on the Internet as orientation tool in supporting information behaviour in palliative care. In multilingual and developing communities, the impact of mother tongue and the medical terminology used by healthcare professionals and the information provided to patients and families can be studied. Although health information in countries such as South Africa is mostly available in English, the country in fact has eleven official languages. For the majority of South Africans, one of these is their mother tongue; often this is not English – the language in which health information is mostly made available. Multiple languages might also be a problem in other African countries.

Key Findings

Although a spectrum of findings are noted by studies on information behaviour, we are still touching only the surface of a complex phenomenon (information behaviour) in a very complex context (palliative care). I am mentioning only a few findings in order to stimulate interest in the research field:

- Although there are some commonalities, information behaviour in palliative care is very diverse, and very individual: one size does not fit all (Fourie, 2008). In particular,

tensions are often revealed in the wishes of patients for general advice versus specific information (Payne, 2002).

- When receiving or finding information relevant to their information needs, patients and families often still experience a need for contextualisation (Fourie, 2008). Various preferences for receiving information have been noted, and preferences may frequently range between a preference for no information, to some information, to a preference for as much information as possible (Innes and Payne, 2009; Kirk, Kirk and Kristjanson, 2004; Payne, 2002). Research findings with regard to preferences for receiving information especially focus on the time of diagnosis. In addition, preferences with regard to receiving information on the prognosis also feature strongly. Clayton *et al*. (2005) compare the needs of terminally ill cancer patients versus those of caregivers for information regarding prognosis and end-of-life issues. Clayton *et al*. (2005) explain: "Discussing end-of-life issues is of key importance to terminally ill cancer patients and their families, and a challenging topic for both healthcare professionals and patients/carers."
- Differences in the information behaviour of people in the same palliative care situation have been noted, e.g. differences between the information behaviour of patients and their spouses or caregivers. It does not seem possible to predict the nature such behaviour may take (Fourie, 2008).
- According to Wilkes, White and O'Riordan (2000), families often only become aware of needs for information at the time when a crisis occurs.
- The information needs of patients and families change and diverge as illness progress and communication between them becomes less verbally explicit.

Comments on a Research Agenda for Information Behaviour in Palliative Care

Although considerable progress has been made with regard to research on information behaviour in palliative care, and although this paper is putting some issues on the table, I am not feeling quite ready to propose a research agenda for studies of information behaviour in palliative care based on this. For the moment, there are, however, some first steps I think should be taken. These include:

- A conceptualisation of palliative care (as defined in the Health Sciences).
- A conceptualisation of context (as defined in information behaviour literature) that can be taken with a conceptualisation of palliative care to conceptualise context of palliative care as framework for research on information behaviour in palliative care.
- A next step would be to consider contexts in specific environments/spheres/situation(s), as well as specific incidents/moments, and to consider a diversity of multiple, overlapping contexts (Fourie, 2010; 2012).
- Systematic reviews reflecting the *status quo* on various issues related to palliative care e.g. issues related to specific diseases, treatment and quality of life (at end-of-life); this might also help to reflect research gaps.
- Mapping the research settings/locations of palliative care in terms of population groups receiving palliative care.
- Mapping the multi-disciplinary team that participates in palliative care.
- Mapping the people affected in and by palliative care.

Before-mentioned issues might shape research on information behaviour in palliative care, and might help to gain a better picture of the *status quo* before moving on to theories and models that can direct research.

Conclusion

Although a wide spectrum of issues is covered in research on information behaviour in palliative care, there seems to be much that requires further

understanding. Following an argument by Fourie (2010, 2012) to consider multiple, overlapping contexts of palliative care such as "context of awareness", "contexts of pain", and "context of informing", it seems as if publications on palliative care in general such as textbooks on palliative care, as well as publications on key issues such as books and articles on quality of life (Yang and Mahon, 2011), might shed light on issues to address in research if being read through an information behaviour lens.

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Dr Ina Fourie is Professor in the Department of Information Science at the University of Pretoria, which she joined in July 2001. She obtained her doctorate in 1995 from the then Rand Afrikaans University. She also holds a Post-graduate Diploma in Tertiary Education from Unisa. Before joining the University of Pretoria she lectured at Unisa, a major South African distance teaching university.

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Human Capacity Building in Nigerian University Libraries: An Imperative for Academic Libraries' Contribution towards National Development

Chinwe V. Anunobi
Festus Aghagho Nwako Library Nnamdi Azikiwe University Awka, Nigeria
chiinobis@yahoo.com

Abstract

The place of the academic library in national development cannot be underestimated. Despite its central role in nurturing tomorrow's leaders, it preserves for posterity a country's intellectual heritage in the form of indigenous resources and provides for education and research. This responsibility was carried out with print until the turn of century which ushered in ICT. Consequently, the intellectual heritage becomes ubiquitous without being bound to space and time. Further to that, the role of academic libraries still remains the same fundamentally but is changed in the ways and means of actualisation. By implication, the human capacity needed for such changing roles changed. Hence, a survey was carried out to determine the efforts of Nigerian university libraries towards ensuring staff capacity with focus on the availability of policy for staff development in Nigerian university libraries, the extent of the policy implementation, the challenges to these efforts and ways of ensuring sustainable policy development and implementation. Questionnaire responses from twelve federal university libraries show that they have well developed staff capacity development policies which are implemented especially in the areas of justification for training, responsibility for training, category of staff to be trained, type of training, method of training, documentation of training, as well as the location of training. Finance and lack of professional collaboration are considered the major challenges to effective capacity building needed for the libraries to assume their rightful place in national development. Recommendations are made based on the findings.

Keywords

Capacity building, academic libraries, national development, staffing, Nigeria

Introduction

Progression in the life of a human being termed growth and development is determined by inherent and environmental factors. One important environmental factor – formal education, with its apex as the university brings about complete citizenry who contribute to a nation's development. The university library plays a significant role in university education through its function of processing and dissemination of information. The turn of 21st century brought the information society characterised by changes in information resources packaging to electronic form, citizenry who need information in varying format and pedagogical changes in education delivery from chalkboard/paper platform to e-learning. Consequently, university library operations and services are expected to shift from the traditional print format so as to remain relevant. To ensure continuing relevance in the services of university community which is a very important catalyst of national development, university libraries must ensure that their staff possess the necessary competences for the 21st century information services. This can be achieved through university library staff capacity development.

Despite the changes and expected follow up in information service delivery, the rate at which the new information services are developed and provided leaves much to be desired, especially in the area of automation, institutional repositories and digital libraries. One important driving force for the expected service delivery is competency enhancement. Based on that, the study sought to determine the efforts of Nigerian university libraries towards ensuring staff capacity needed for national development.

Literature Review

In his book, Nyerere (1974) argued that though development is measured in terms of productivity for economic growth, it is all about development of people which tools include improved roads, buildings, increased crop output, etc. Along that line, UNESCO (2000) and Lundu (1995) presented human development as the yardstick of development. This involves the increase in people's opportunities to acquire knowledge and access resources needed for a healthy, gainful and dignified life. To achieve this, emphasis should be on the human sustainable development as presented in the global development strategies such as the World Bank, Millennium Development Goals and New Partnership for Africa's Development (NEPAD) Goals (United Nations, 2002).

Sustainable development has been defined as a development that meets the needs of the present without compromising the ability of future generations to meet their own needs (International Institute for Sustainable Development and World Business Council for Sustainable Development, n.d). It has been advanced that the network of challenges to sustainable development ranging from severe poverty and disease control to climate change and ecosystem vulnerability can be addressed through knowledge and skills from a range of disciplines (International Commission on Education for Sustainable Development, 2008). Expertise from these disciplines is mostly drawn from one important agent of development – the university, whose functions among others include the pursuit, promotion and dissemination of knowledge, person-power development and provision of intellectual leadership (Ifidon & Okoli, 2002). Achievement of these functions is dependent on the support provided by the university library through the provision of materials for teaching, learning, research, and personal development (Nok, 2006).

Libraries are also of immense benefit to the development of a nation. On economic terms, Keyes (1995) and Griffith & King (1993) found that libraries produced 51.5% annual return on investment while McGlure et al. (2000) using cost benefit analysis found that the benefits derived from library services outweigh the cost of providing them. United Nations Economic and Social Council (2003:2) reaffirmed that "where library services are non–existent, the costs in terms of lost long-term productivity are infinitely high." Furthermore, they summarised library's roles in sustainable development as harnessing information and knowledge by applying its professional processing, storage and dissemination competencies in the information and knowledge world; assisting learners (Information literacy) which is crucial in the development of intellectual capacity for a community. Libraries also play the role: of social inclusion, cohesion participation and empowerment (CILIP, 2002); as civic centre and community information services (Mcchue et al., 2000; Walzer & Gruidi, 1996); as essential element of physical development (Albenese, 2001; CILIP, 2002 and Mcclure et al., 2000). United Nations Economic and Social Council (2003) emphasised that libraries generally empower citizens through the provision of access to information of all kinds needed to improve their skills thereby becoming responsible and informed participants in democracies. As a result of these benefits and others, they agreed that the library plays a significant role in bridging the digital divide. For libraries, making information available reduces information poverty which is often the basis for economic poverty.

Mindful of the changes in the university system environment which demands increased investment in electronic infrastructure and connectivity as well as e–learning (Rosenberg, 2005) which aids in bridging the digital divide, the way, manner and platform of library support to university system have changed. Further to the changes is the agitation from employees, students and other users; evolving technologies and the transparency with which information is communicated and the need for the state – of the– art– services (Kigongo–Bukenya,

1999). Lei (1996) also noted that the developments in computing and telecommunication presented library staff with the environment of providing users with information resources in various formats.

Given the changing library responsibility to universities in particular and for national development in general, it is pertinent that libraries in universities should be fully equipped to discharge their duties, thereby ensuring sustainable development. One important way of doing this is by enhancing critical competencies of the workforce so as to respond to the emerging demands of users (World Business Council for Sustainable Development, n.d). This confirms the position of McNamara (n.d) that workforce enhancement by way of training is necessary when performance appraisal indicates that improvement is needed, as part of professional development programmes, as part of succession planning, and to test or pilot the operation of a new performance management system. Further justification for enhancing competences by Nigerian university libraries as indicated by Ajidahun (2007) and Oketunji (2001) is to increase use of ICT for automation, repositories and digital libraries.

Training has been described by Chandan (2000) as a short term process which uses systematic and organised procedure to enhance the knowledge and skills of personnel. Training is needed for managerial and non–managerial staff of any profession (Ajidahun, 2007) though very essential for none managerial staff who constitute a large portion of the total employees in an academic library (Mort, 1982; Kao, 1998 & Zhang, 2004). Training has been described to be of immense benefit to employers in general and library staff in particular due to the following benefits:

- Enhanced productivity (Chandan, 2000; Yesufu, 2000);
- Improved job performance and management efficiency (Ojiambo, 1992; Stoner, 2002);
- Reduction in cost of production;
- Fast decision, morale boosting; and
- Reduced supervision, personnel growth and organizational stability (Silver 1981; Ojiambo, 1992; Chandan, 2000; Stoner, 2002).
- McNamara (n.d) also noted that the benefits of training include increased strategies and products, increased efficiencies in process resulting in financial gain, increased capacity to adopt new technologies and methods, as well as reduced employee turnover.

One effective way of ensuring training of employees, especially in the library, is through the development of a training policy. Brandt (2002) described a training policy as a written purpose, scope and composition of a programme which shows a detailed perspective of administrators limited to how much training programmes to be undertaken, staff members' boundaries and expectations, and staff participation. He noted that a training policy should contain:

- a mission statement and/or purpose;
- goals that indicate the direction a policy takes;
- objectives of what will be undertaken; and
- the overall guiding principles,

Responsibility for training should be handled by a section of the organisation like the personnel, human resources or staff development units; or be considered as a separate unit of its own (Brandt, 2002). The method/technique and areas of training of library staff have been identified by many authors. Rosenberg (2005) noted that the method of training should be diversified and made appropriate to the training needs of individual libraries. Some of the identified methods/techniques include conferences, continuing education courses, on the job training, seminars and workshops, vestibule training, case studies, case histories, self study, electronic teaching media, simulation games and role playing. Others include internship, apprenticeship, modeling, study visits to developed libraries, and industrial attachment (Lei, 1996; Rosenberg, 2005; Burton & Thaku, 1997; Ajidahun, 2007; Silver, 1981; Akhigbe, 1997; Ugbokwe, 1998).

The areas in which library staff could be trained depending on the need, include management leadership and communication, computer skills and e-mail management; CD-ROM use and information technology skills, management of IT skills in library, electronic publishing, personnel management skills and programmes that will lead to fulfilling the role of librarians in the education process (Ajidahun, 2007;

Workforce Economy, 2001; Kao, 1998). Considering the place of libraries and librarians in sustainable development of the nation, the changing environment and citizens' demands, especially the university community which libraries serve, as well as the need to leverage librarians' skills so as to justify their roles in national development, it becomes pertinent to determine the efforts of Nigerian university libraries to ensure staff relevance in the national development. One way of doing this is through the study of human capacity development implementation in Nigerian university libraries. Specifically the study sought to:

a. find out the availability of policies for staff development in Nigerian university libraries;
b. determine the extent of the policy implementation;
c. ascertain the challenges to staff training policy implementation, and
d. find ways to enhance staff capacity implementation.

Research Design and Method

The study adopted a survey research design which utilised a questionnaire to collect data from all 23 federal university libraries in Nigeria excluding the newly established nine universities. The questionnaire was sent by e–mail and the university librarians were telephoned as a follow up. The self-administered questionnaire consisted of two parts: A – the Library profile; and B – Extent of staff training and development.

Though it was difficult to convince the university libraries to respond to the questionnaire, twelve university libraries (52.2%) completed and returned their questionnaire. Others did not return the questionnaire. It is likely that those who did not return may not have training policy or some are of the view that the data will be prying into their library capacity development privacy. Conviction to continue the analysis was based on the fact that the returned questionnaires represented all four generations of Nigerian university libraries, as well as the six geopolitical zones in Nigeria, namely: North East, North West, North Central, South East, South West and South-South. The list of university libraries which returned their questionnaire is presented in Table 1.

The results are organised to reflect the objectives of the research which include the

Table 1: Nigerian Federal University Libraries whose Data was used for the Analysis

Generation	Name of Library	Year Established	Location
1st	❖ Kenneth Dike Library University of Ibadan.	1948	South West
	❖ Kashim Ibrahim Library Ahmadu Bello University Zaria.	1960	North West
	❖ Nnamdi Azikiwe Library, University of Nigeria.	1960	South East
	❖ Hezekiah Oluwasanmi Library, Ile-Ife.	1962	South West
	❖ University of Lagos Lagos, Library	1962	South West
2nd	❖ John Harris Library, University of Benin	1970	South-South
	❖ University of Jos Library	1972	North Central
	❖ Abdullahi Fodiyo Library, Usman Danfodiyo University Sokoto	1975	North East
3rd	❖ Federal University of Technology Owerri Library	1981	South East
	❖ University of Abuja Library	1988	North Central
4th	❖ Festus Aghagbo Nwako Library, Nnamdi Azikiwe University Awka	1992	South East
	❖ National Open University of Nigeria Library, Lagos	2002	South West

availability of staff capacity development policies, the extent of policy implementation, the challenges to the implementation and the ways of enhancing staff capacity development. Frequency counts, percentages, ratio and graphs were used to analyse the results. Where decisions are required based on score, 50% and above are interpreted to be positive.

Results and Interpretation

The results and their interpretations are presented below, based on the specific purpose of the research.

Availability of Staff Capacity Development Policy

The result shows that there were 1,767 staff working in the 12 federal university libraries. Figure 1 shows that 365 (21%) were professionals; 432 (24%) were paraprofessionals; 358 (20%) were senior non–professionals, while 612 (35%) were junior non–professionals. Professionals here represent university graduates of library and information science. This implies that the studied federal university libraries in Nigeria have the greatest number of their staff as junior non–professionals. Surprisingly, the professional staff responsible for the real professional duties had the second least representation with 21%. The paraprofessionals (Ordinary National Diploma and Higher National Diploma holders in Library and Information Science) also had low representation (24%). The duty of non–professional senior staff (20%) calls for a further study to justify their number.

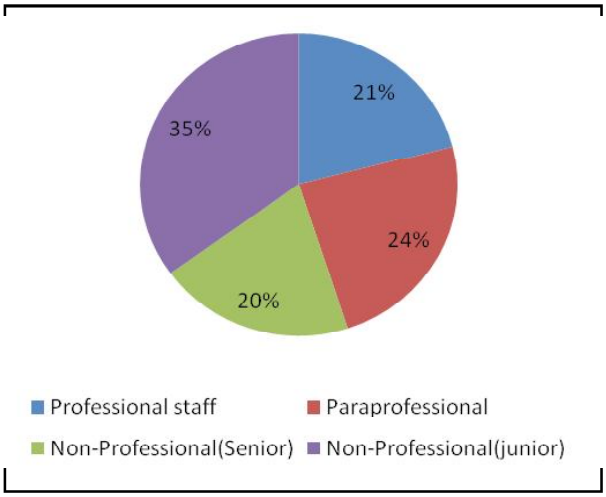

Figure 1: **Staff distribution in Nigerian federal university libraries**

The result shows that 10 (83%) of the twelve libraries which responded to the questionnaire had staff development policies while 2 (17%) had none. This means that the studied Nigerian university libraries have staff development policies.

Content of the policy

Responses on the content of the policy are presented in table 2.

Table 2: Responses on the content of University Library Staff Development Policy

Policy Content	Responses n = 10	%
Statement of Aims & Objectives of Training	9	90
Details of Responsibility for Training	8	80
Statement of the Various Types of Training	8	80
Information on Procedure & Records of Training	8	80
Information on the Training Follow-up	6	60

The result considering the 50% bench mark shows that Nigerian libraries that responded to the questionnaire have well developed policy. Further response on the content of library policy are presented in table 3.

Table 3: Expanded content of library staff development policy

Policy Content	Responses n= 10	%
Justification for Training	8	80
Type of Staff to be Trained	8	80
Type of Training to be Provided	9	90
The Place or Location of Training	6	60
The Length of Training	8	80
The Financial Support to be Provided	6	60

The result further shows that other detailed information concerning staff capacity is contained in the policies of all the libraries that responded as the responses are above 50%. It is therefore apparent that federal university libraries in Nigeria that responded have well developed staff capacity development policy containing the statement of objectives, statement of responsibility, the type of staff to be trained, the type of training to be provided, location of the training, as well as the financial support to be provided for staff.

Extent of Staff Capacity Development Implementation

All the ten university libraries indicated that they implemented the policy to ensure capacity development of staff. The two libraries which did not have capacity development policy further indicated that they engaged their staff on training.

Responsibility

Their responses on the unit responsible for staff capacity development indicated that greater number of the libraries five (41.7%) had their training located in a distinct unit called Research, Development and Statistics, four (33.3%) had it as part of the Office of the University Librarian. The other three libraries had the responsibility under the ICT unit, Circulation & Cataloging; and Readers Services & Automation Units respectively. Having a distinct unit for staff capacity development is a sign of a focused effort.

Justification for Training

As part of policy implementation efforts, the libraries were required to indicate their justification for staff training. The result presented in figure 2 shows that all the reasons presented spur libraries to initiate capacity building for staff. Though technology (100%) was given prime attention, the libraries gave the scheduled period for training a score of 53.3%.

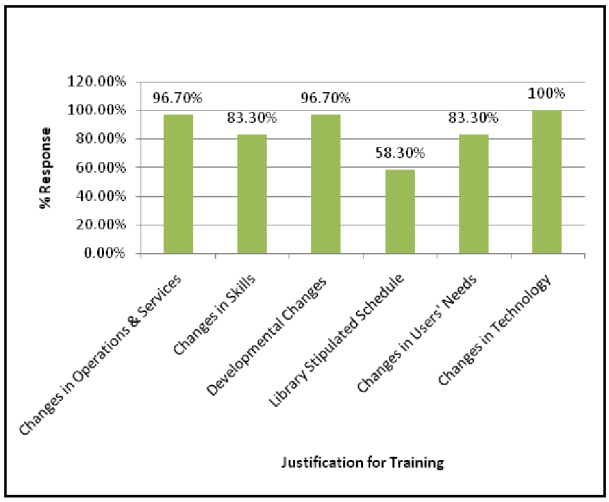

Figure 2: **Justification for staff capacity development in Nigerian federal university libraries**

Type of Staff and Training

In terms of the implementation, the libraries were required to indicate the number of training sessions, the type of staff, as well as the type of training provided in the last ten years. Ten years ago was considered the turn of 21st century which ushered in the information society. Only six libraries of the twelve had full documentation of the number of training sessions their staff had engaged in. The staff of the six libraries had been exposed to 11.25 training sessions for ten years resulting in an average of 112.50 training sessions per year and 187.5 per library. The distribution of the trainings for the various categories of staff is presented in Figure 3. It shows expectedly that greater percentage (46.13%) of the training was provided for the professional staff. Paraprofessionals who play the next professional role received 19.55% of the training. As the category that does the house keeping job in the library, it is not surprising that 17.77% of the training was provided for the non-professional junior staff more than the 16.53% provided for the non-professional senior staff.

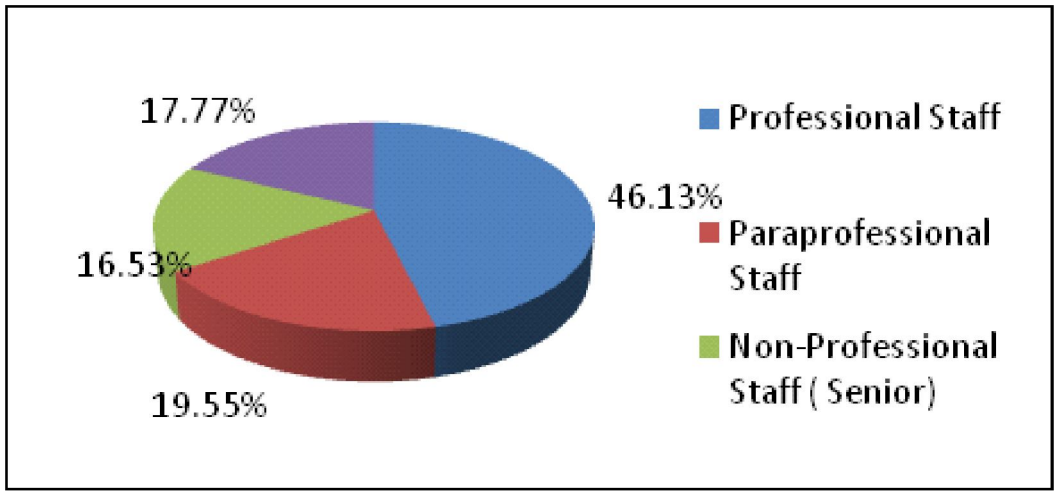

Figure 3: **Distribution of staff training by category in six Nigerian federal Universities libraries for a period of 10 years. n=6**

The ratio of the various categories of staff to the number of training for the past ten years is presented in Table 4.

Table 4: Ratio of various categories of library staff to the number of training for the ten years in six universities

Staff category	Number of Staff	Number of Trainings in Ten Years	Ratio of Staff to Training
Professional	155	519	1:3.3
Para- professionals	103	220	1:2.1
Non- Professionals (Senior)	139	186	1:1.3
Non- Professionals (Junior)	383	200	1:0.5

Table 4 shows that apart from the junior non-professional staff, all the staff in the libraries had opportunities of not less than one training session in the past ten years. However, the professional and the paraprofessional staff had as many as three and two training sessions in ten years respectively.

Types of Training

The libraries were required to indicate the types of training they had exposed their staff to in the past ten years. Their responses are presented in figure 4. It shows that the libraries rely more on formal training, workshops and conference in the development of staff capacity. The easily accessible capacity development method of in–house training narrowly scored above the benchmark. Exchange was not considered as a popular method adopted by the library since it received 25% response.

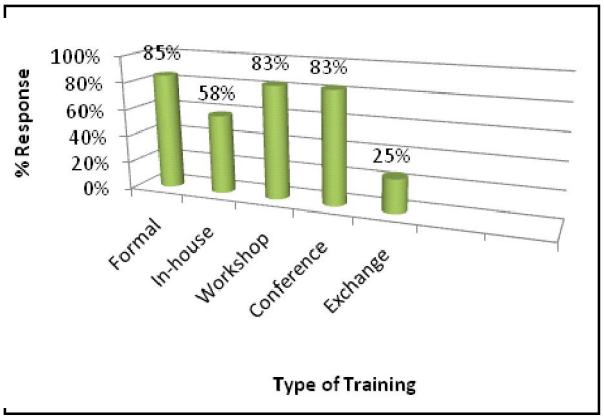

Figure 4: **Nigerian university libraries response to types of trainings provided for staff. n=10**

Location of the training

The responses of the libraries as regards location of training show that 93.3% of the trainings took place in Nigeria while only 6.7% was provided outside Nigeria. This confirms the low response to exchange programmes which in most cases take place outside Nigeria.

Areas of the training

The libraries were asked to indicate the areas of training to which their staff were exposed to. The result is presented in Table 5.

Table 5: Responses to areas of training provided to Nigeria university libraries staff n=10

Training areas	% Response
ICT in libraries	100
Automation	91.7
Preservation	75
Library Security	66.7
Reference Services	58.3
Electronic thesis/Dissertation/ Institutional Repository	58.3
Collection Development	50
Library Administration	41.7
Web 2.0	41.7
Serial Management	25

The result showed that all the libraries have exposed their staff to training on ICT. They had been exposed to trainings on automation, preservation and library security, having attracted responses of 91.7%, 75% and 66.7% respectively. Though 58.3% of the libraries had exposed their staff to training on reference services and electronic thesis/dissertation/ institutional repositories, which are very important to library operations and services needed for development, it is of concern that Web 2.0 which translates to Library 2.0 services and library administration has not attracted the interest of these libraries as regards training.

Challenges to Staff Capacity Development Policy Implementation

The result showed that staff capacity development in Nigerian university libraries was challenged by inadequate finance to send staff on training (100%). Where training had been provided, 50% indicated that there are no facilities to implement the acquired skills. Other challenges included trained staff migrating to other institutions on completion of training (41.7%), source of training being difficult to come by (25%), lack of awareness of the importance of the training and difficulties choosing the beneficial training from the commercially motivated training outfit which scored 8.3% each respectively.

Ways of enhancing library staff capacity development policy implementation

Ways of enhancing library staff capacity development policy implementation was sought from the libraries. The result shows that all the libraries (100%) were agreeable that libraries should organise in–house training for its staff and source for linkages, as well as exchange programme (91.7%). Eighty three point three percent (83.3%) of the libraries indicated that staff capacity development policy implementation would be enhanced if universities set funds aside for annual training of the staff, provide adequate facilities to enable trained staff to implement the acquired skills, and if trained staff provide a report of their training to the university authority. As a way of encouraging staff capacity development policy implementation, 67% of the libraries indicated that professional bodies should periodically re-certify university libraries through compulsory training.

Discussion of Findings

Though literature has revealed that university libraries play an important role in a nation's sustainable development, it has also demonstrated that this role can be performed effectively if library staff are equipped through capacity development with a view to meeting the demands of the present information society.

The result of the research has revealed that professional library staff that are responsible for the professional duties of the library are not well represented in the university libraries. This suggests that professional operations and services will be handled by the non–professionals, thereby supporting the findings of Mort (1992) and Kao (1998) that the non-professional staff whom they termed support staff constitute 2/3 of total staff in academic libraries, and they need to be trained since they possess little or no professional skills for effective library operations.

The availability of staff capacity development policies in 80% of the libraries that responded implies that they are aware of its importance of the role played by the library in national development, as well as for the smooth running of a system (Brandt, 2002). The results of the research further demonstrate that Nigerian federal university libraries that responded have well developed training policy as presented in the content of a library training policy by Brandt (2002) and Ajidahun (2007).

Provision of a separate unit to handle staff capacity development, by 41.7% of university libraries further confirms the importance attached to staff capacity development, and reinforces the suggestion by Brandt (2002) for a separate training unit for library staff training. It may not be out of place to argue that university libraries which have their training activities subsumed into other units may not give prime attention to staff capacity development.

The responses on the reason for training further justify the importance of library staff capacity development imperatives for natural development. This confirms the suggestion by Ajidahun (2007), Nzotta (1984), Kigongo–Bukenya (1999) and Sawaya, et al. (2009) on the justification for library staff training. Again, the low response (53.3%) to libraries regarding staff capacity at a stipulated period confirmed that training is not scheduled but only happens when necessary.

The unavailability of complete records of training in 50% of the libraries that responded suggests that the libraries are not implementing the records of training regarding the training policy as suggested by Brandt (2002). It also suggests that less attention is paid to statistics which is important for decision making and policy formulation.

Though an average of 112.5 staff training per year and 18.75 per library suggests a good performance the ratio of training to the categories of staff shows a very low capacity development. Apparently from the result, the provision of approximately three training sessions per professional staff in ten years and one for a non-professional staff (Table 4) is grossly inadequate, given the role they play in national development, as well as environmental changes which increase the degradation of library skills (Ajidahun, 2007; Ojiamba, 1992).

It is worrisome that the university libraries do not explore the cheap opportunity provided by in-house training considering its low rating. This is contrary to suggestion by Rosenberg (2005) that African libraries should exploit the benefits of in-house training of staff. Their reliance on formal training, workshops and conferences could be

attributed to the sponsorship opportunities provided by Education Trust Fund to Nigerian universities. The low utilisation of exchange programmes for capacity development is an indication that Nigerian university libraries are not utilising the global networking opportunity for collaboration.

Though the areas of training follow the suggestion of World Business Council for Sustainable Development (2005) that workforce skills must be enhanced to respond to changing demands of the society and the way people live and work, it is worrisome that training for library administration and Web 2.0 needed for interactive libraries was neglected.

The 100% affirmation on the inadequate finance as a major challenge to staff capacity development policy implementation underscores the central role finance plays in staff capacity development policy implementation and provision of facilities for acquired skills implementation. Unutilised skill does not translate to development. Staff migration upon acquisition of skills suggests that the condition of service for library staff needs to be looked into at the universities.

Conclusion

From the survey to determine the staff capacity development efforts in Nigerian federal university libraries as way of ensuring that libraries take their rightful place in the national development, it was evident that federal university libraries in Nigeria that responded to the survey have well developed staff capacity development policies which are implemented in the following ways: many have the research, development and statistics units being responsible for capacity development; the justification for every training session was based on changes in technology and skills needed to satisfy the needs of the society rather than as a periodic event. Records of training sessions as required by the policy were not kept thereby jeopardising the availability of statistics for decision making and policy formulation; the number of training sessions provided for staff of different categories for the past ten years are grossly inadequate, though professional and paraprofessional staff benefitted more than others; staff were exposed more to formal training, workshops and conferences in Nigeria to the detriment of cheap in-house training and international exchange programme; and though the libraries expose staff to trainings for societal needs, library administration and Web 2.0 needed for today's effectiveness were not given the prominence they deserve.

Despite the extent of the policy implementation, finance needed to sponsor training as well as acquire state-of- the-art facilities to utilise acquired skills has been identified as the major challenge to library staff capacity development in Nigeria. Enhanced library staff capacity development needed for national development can be achieved if libraries utilise the cheap opportunity provided by in-house training, sources for available linkages and exchange programmes through professional networking and encouragement of staff to provide report of the training received, as well as funding bodies setting funds aside for trainings.

Recommendations

The following recommendations are made:

- Nigerian university libraries should ensure the availability of staff capacity development policy as a way of ensuring staff competency enhancement;
- University libraries should ensure that policy content is implemented and documented effectively to aid decision-making and policy formulation;
- University libraries should maximise the use of in-house training and professional networking to attract linkages/exchange programmes as a way of enhancing staff development; and
- Given the role libraries play in national development, funding bodies should set funds aside for staff capacity development and facilities enhancement in university libraries.

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Chinwe V. Anunobi is Digital Librarian and Associate Professor at Festus Aghagho Nwako Library Nnamdi Azikiwe University Awka, Nigeria. She holds P.hD. She was formerly at the Federal Universiy of Technology Library, Owerri, Nigeria.

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Factors Influencing Electronic Information Sources Utilised by Pharmacy Lecturers in Universities in South-South, Nigeria

Luke Obasuyi
John Harris Library
University of Benin
P.M.B. 1154, Benin City,
Edo State, Nigeria
lo.obasuyi@uniben.edu

and

Stella Folajole Usifoh
Faculty of Pharmacy, University of Benin
P.M.B. 1154, Benin City,
Edo State, Nigeria.
sfusifoh@uniben.edu

Abstract

This study is a comprehensive investigation of key factors influencing the utilisation of electronic information sources (EIS) by pharmacy lecturers in both government and private universities in South-South Nigeria. This study aims at identifying the significant factors that influence the usage of EIS in order to provide remedies to increase their utilisation. Survey research method was adopted using questionnaire as an instrument for data collection from the population by simple random sampling. Results indicate that awareness level of EIS among the lecturers was moderate and usage was high. There is no significant difference in the level of awareness of EIS across the five universities. There is no significant influence of academic and gender status of respondents on the usage of EIS. Awareness of EIS, computer and Internet literacy skills and competence of pharmacy lecturers in using EIS were found to be key factors that significantly influence the utilisation of EIS.

Keywords

Electronic information sources, pharmacy lecturers, Nigeria, electronic resources usage, e-resources

Introduction

The mandate of pharmacy lecturers is to produce pharmacists who are responsible and useful citizens worthy of character and knowledge, and competent in the areas of hospital, community, administrative, industrial, academic and applied pharmacy practice. These lecturers by the nature of their professional callings require a lot of quality, current and up-to-date information found in books and journals in order to accomplish the above objectives. The libraries have critical roles to play in providing access to these varieties of information sources. To this end, Udoh, Ukpak and Iwot (2011) assert that the role of pharmacy libraries is to acquire and organise its collections to meet the needs of pharmacy scholars. However, the information needs of most faculty lecturers in universities in Nigeria are not adequately met by their supporting libraries due to lack of current print pharmacy journals in these libraries.

In this era of globalisation, information access is not limited to the libraries alone. The need to use EIS as research tools to supplement the print-based resources found in pharmacy libraries becomes imperative (Egberongbe, 2011). Angello (2010) and Okiki and Asiru (2011) defined EIS as any library or information resources in a digital format such as diskettes, CD-ROMs, DVDs, online public access catalogues (OPAC), bibliographic and full-text databases, electronic journals, scholarly databases, information gateways, e-books, Internet, as well as other resources accessible via the computer and the Internet. EIS provides access to information in tertiary institutions worldwide and pharmacy lecturers are exploiting these resources for their academic and research pursuits.

Due to the great importance of EIS to pharmacy lecturers, federal, states, and private universities (South-South universities) located within the six states (Akwa Ibom, Bayelsa, Cross River, Delta, Edo and Rivers) that make up South-South geopolitical zone in Nigeria are making frantic efforts to provide access to EIS for the use of their faculties and students. Also, improved access to Internet resources has provided unrestricted access to the use of electronic resources by pharmacy lecturers on the Internet. Based on the improved access to EIS, its use to bridge the information gap currently besetting them became necessary. However, the rate of utilisation of EIS among these lecturers is low due to several factors (Rehman and Ramzy, 2004, and Bashorun, Isah and Adisa, 2011). Electronic information resources are new information technologies quite different from the paper version that most lecturers are used to and there is usually user's resistance to use new information technology. Davis (1993) posits that lack of acceptance has long been an impediment to the success of new information systems, and certain factors influence users whether to use such information systems or not. Such factors include awareness, academic status, gender, computer and Internet literacy, competence and more. This study seeks to find out which of these factors will significantly influence the use of EIS by pharmacy lecturers in South-South universities in order to render adequate EIS services in the universities.

Statement of the Problem

Efforts by Nigerian university libraries to provide current and up-to-date e-print pharmacy journals have been on the increase. The proliferation of ICT facilities like the computers, laptops, mobile phones, and Internet modems have also enhanced access of pharmacy lecturers in south-south universities in Nigeria to personally seek for information on the Web. Despite the availability of these resources, utilisation of EIS by this group of users is still low. For increased utilisation of these e-resources, certain factors such as awareness of EIS, academic qualification, gender status, computer and Internet literacy skills, and competence of pharmacy lecturers in using EIS may influence the effective utilisation of these resources which this study seeks to find out.

Objectives of the Study

The general objective of this study is to find out those factors that influence the utilisation of EIS by pharmacy lecturers in advancing pharmacy practice in South-South universities in Nigeria. Specific objectives are to:

- establish the influence of awareness of EIS by these lecturers on the utilisation of the resources;
- determine whether academic and gender status of the lecturers influence their usage of EIS;
- find out if their computer and Internet literacy skills influence their use of EIS, and
- ascertain if their competence in using EIS influences their utilisation of the resources.

The findings of this study would help to identify the strengths and weaknesses of the lecturers in the use of EIS in order to provide interventions that will promote maximum use of EIS.

Research Hypotheses

The research tested the following null hypotheses:

Ho1. There is no significant influence of awareness on the use of electronic information sources by pharmacy lecturers in South-South universities in Nigeria.

Ho2. There is no significant difference in the level of awareness of electronic information sources by pharmacy lecturers across the five South-South universities in Nigeria.

H03: There is no significant difference in the awareness of the various electronic information sources used by pharmacy lecturers across the five South-South universities in Nigeria.

Ho4: Academic status will not significantly influence the use of electronic information sources by pharmacy lecturers in South-South universities in Nigeria.

Ho5. There is no significant influence of gender on the use of electronic information sources

by pharmacy lecturers in South-South universities in Nigeria.

Ho6. There is no significant influence of both computer and Internet literacy skills on the use of electronic information sources by pharmacy lecturers in South-South Nigeria universities.

Ho7. There is no significant influence of competence of pharmacy lecturers on the use of electronic information sources in South-South universities in Nigeria.

Literature Review

Awareness is a critical factor in using any information service or resources. The use of library services can be affected by users' awareness and relevance of the service. Supporting the above assertion, Rehman and Ramzy (2004) reported that it is a widely held view that low awareness and poor skills are among the primary reasons for underutilisation of electronic resources. Their investigation at Kuwait University revealed that time constraints, lack of awareness, and low skill level were the constraints for utilising electronic resources by health faculty in the university. In the medical field, Asemi and Riyahiniya (2007) study of medical sciences awareness and use of digital resources in Isfahan University, Iran concluded that when a user is aware of one resource, it leads to more use of that resources. Kumar and Kumar (2008) also conducted their study on awareness, and their findings indicate that students and faculty are aware and use electronic information in support of their study and teaching. In Australia, Hepu (2010) study revealed that the usage of electronic resources is common in higher education in Australia, and its use depends on the user and the purposes for using them.

Awareness and the quality of the e-resources are two important factors for the effective and efficient utilisation of electronic resources. Recent investigation by Shukle and Mishra (2011) revealed that all research scholars at Banaras Hindu University Institute of Technology (BHU IT), India were aware of e-resources and they all use it with 64% of them preferring it to print for their research work. Furthermore, Tyagi (2011) found that awareness of the availability of online journals at IIT Roorkee Library was highly satisfactory and the journals were mostly used for research. Similarly, Tyagi (2012) survey also showed that the level of awareness among scientists and pharmacopoeia associates in India was highly satisfactory, and the online journals were mostly used for research and current and comprehensive information. In Tanzania, Angello (2010) investigation concluded that livestock researchers who are information literate are aware of a wide range of e-resources and they are able to search and effectively use the e-resources. However, Omotayo (2010) opined that awareness of electronic resources is not a proof of use. In this regard, Renwick (2005) survey revealed that faculty members had high awareness of the electronic resources but usage was low. Bashorun, Isah and Adisa (2011) reported that the use of EIS by academic staff of the University of Ilorin was low, due to lack of time, awareness and searching skills. From the above analysis, awareness is a critical factor for EIS usage. Academic status is another key factor that may influence EIS utilisation. Shahmohammadi (2012) study reported that on-line electronic journals used at the Islamic Azad University Karaj Branch by its faculty showed that there was no statistical difference in the application due to years of experience or academic qualification of the academic staff. Similarly, Tahira, Alias and Ameen (2011) reported that there were no significant differences in terms of the importance and use of subscribed and open access electronic sources by respondent's designations at Punjab University, Pakistan while Dangani and Mohammed (2009) discovered that there was no significant relationship between academic qualification of the academics and their ICT literacy level in Ahmadu Bello University, Zaria, Nigeria.

The use of EIS can also be influenced by gender status of users, and several researches have been done in this area. At Daystar University, Karimi (2010) study indicated that gender was not significant in academic performances of students in the university, and Manda (2008) study of gender analysis in Tanzania found that gender did not influence sexual reproductive health information access and use. Bakkabulindi (2011) investigated individual characteristics on ICT use in Makerere University and findings indicate fair levels of use of ICT, and gender was not significant in the use of ICT. On the

contrary, Nsibirano (2009) reviewed literature on gender differentials in ICT in different parts of the world, and findings revealed that there is a clear gender differential in access and use of ICT. In information seeking by men and women in Slovakia, Steinerova and Susol (2007) findings indicated that men prefer individual information seeking while women seek collaborative information use. Women declared less experience in the use of electronic resources and publishing in Slovakia. Also, Zhang, Ye and Liu (2011) survey of electronic resources at seven universities in China showed that men users surpassed female ones slightly. In Nigeria, Bassi and Camble (2011) investigated gender differences in the use of electronic resources in university libraries in Adamawa State, Nigeria and the study revealed that there is a statistical difference between male and female students with mean value of male greater than female. Moghaddam (2010) reported a world view of IT use and found that there was gender gap to access and use of IT among all nations without exception. The above studies have shown that the influence of gender on EIS utilization varies.

The level of computer literacy varies with different groups of information users and this has implications for EIS utilisation. Angello (2010) study revealed that lack of information literacy skills among most of livestock researchers in Tanzania was found to limit their access and use of e-resources. Conversely, Renwick (2005) survey found 82% computer literacy level of faculty in medical sciences at the University of West Indies. In another study, Ansari and Zuberi (2010) study of electronic digital library resources usage among academics at the University of Karachi revealed that majority of the study population had computer skills and were able to use computer independently. They use EIS for research and for preparing lectures, but lack of knowledge and lack of facilities of e-resources were main reasons for not using electronic resources. This goes to show that more than computer skills will be needed to effectively use electronic information sources. To effectively provide and implement electronic information services in the pharmaceutical library system, the library staff has to be knowledgeable in the use of computer and related electronic systems. This prompted Singh and Sharma (2010) study which concluded that it is essential to recruit library staff and professionals having up-to-date knowledge and skills in computer operations to manage the services.

The role of users' competence is another factor that influences EIS usage. Competence, confidence and self-efficacy are interrelated concepts used in this study. Hong et al. (2002) investigation found that users who have higher levels of confidence in using computers in general are more likely to find digital libraries easy to use, while knowledge of search domain was also found to have a positive effect on perceived ease of use. In India, Tyagi (2011) investigation revealed that self-perceived ability to use the computer for electronic information sources by Pharmacopoeial Laboratory for Indian Medicine scientists was quite high. On the other hand, Obaje and Camble (2008) study concluded that majority of staff and students using CD ROM facilities of the University of Jos Library did not have enough confidence in using the database and were not very effective in the choice of search terms. Abdullahi and Haruna (2008) also found that lack of basic knowledge of ICT was the second major constraint in using ICT for information service delivery in three University libraries in Adamawa State, Nigeria. Dangani and Mohammed (2009) found that majority of academics at Ahmadu Bello University, Zaria, Nigeria were not fluent in database. This means that they may not be able to interrogate online databases to perform searches. Adegbore (2011) review of recent literature of electronic resources use by University faculty showed that e-resources had been widely and rapidly accepted, accessed and ably used by academics for both teaching and research, among other uses. They were satisfied with their use and continued to use them. Despite these results of acceptance of EIS usage, users' behaviour differs from one profession to another and from one country to the other. Therefore, the need to investigate the influence of these factors becomes imperative.

Methodology

The survey research design method was adopted in this study. A survey questionnaire titled "Awareness and utilisation of Internet and EIS by pharmacy lecturers in South-South Universities in Nigeria" was the instrument used to gather data from faculty members in pharmacy departments in five universities. The questionnaire consisted of 30

questions in 4 sections eliciting information on respondents' demographic data, computer and Internet literacy, awareness and usage of EIS and training needs. The questionnaire was pretested and validated. The universities under study –University of Benin (UNIBEN), University of Port Harcourt (UNIPORT), University of Uyo (UNIUYO), Niger Delta University (NDU) and Igbinedion University Okada (IUO) – were chosen because their pharmacy programmes have been accredited by the National Universities Commission (NUC), the regulatory body responsible for accreditation of academic programmes in Nigerian universities. The number of pharmacy lecturers in the five universities as at 2011/2012 academic session was 201. Simple random sampling was used to select a sample of 160 (80%) respondents across the universities and the questionnaire was administered to them, out of which 103 (64.3%) usable response was obtained. Data collected were tabulated in a frequency table. Percentage, chi square and correlation statistics were used to analyse the data using SPSS version 16.

Results and Discussion –Demographic Data

Table 1: Demographic profile of respondents

Demographic variables	Frequency	%
Designation		
Professor	6	5.8
Asso. Professor	9	8.7
Senior lecturer	18	17.5
Lecturer I	17	16.5
Lecturer II	29	28.2
Asst. Lecturer	20	19.4
Graduate Asst.	4	3.9
Gender status		
Male	72	69.9
Female	31	30.1
Academic qualification		
PhD	32	31.1
Postgraduate diploma/master	65	63.1
Bachelors	6	5.8
Awareness level		
High	22	21.4
Average	50	48.5
Low	31	30.1
Usage level		
High	58	56.3
Average	40	38.8
Low	5	4.9

Demographic data in table 1 revealed that all the various cadres of pharmacy lecturers from professor 6 (5.8%) to graduate assistant 4 (3.9%) were covered in the study. Majority of the respondents were within the range of senior lecturer 18 (17.5%) and assistant lecturer 20 (19.4%), with the highest being lecturer II 29 (28.2%) and they were mostly male (69.9%). Data on academic qualification showed that majority (63.1%) had postgraduate diploma/master qualifications and were followed by those with PhD (31.1%) while 15 (14.5%) were in the professorial cadre. This goes to show that pharmacy lecturers in South-South universities in Nigeria are qualified to teach and practice.

Influence of Awareness on Electronic Information Sources (EIS) Usage

Awareness is not a guarantee that EIS can be used (Omotayo, 2010). However, there is a general belief that when information users are aware of the existence of an information technology, the tendency or possibility to use that information system will be high. Result presented in table 1 revealed that pharmacy lecturers had varying levels of awareness and usage levels of EIS. However, majority of the lecturers possess average level of awareness and high level of EIS usage.

Test of Null hypothesis 1: There is no significant influence of awareness on EIS usage.

Chi square test of independence result presented in table 2 indicates that the calculated X^2 value of 36.089 was obtained and is greater than table value of 5.99 at alpha 0.05. The null hypothesis is therefore rejected and the alternative upheld that awareness of EIS influences the actual usage of the resources. This result is similar to Hepu (2010) findings that awareness is an important factor influencing effective and efficient utilisation of EIS in higher education in Australia.

Table 2: Effect of awareness on EIS usage

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	36.089[a]	2	.000
Likelihood Ratio	38.805	2	.000
N of Valid Cases	206		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 18.00.

Test of Null hypothesis 2: There was no significant difference in the level of awareness across the five universities.

Table 3: Awareness of EIS across the five universities

Universities	High	Average	Low	Total
UNIPORT	3	7	8	18
UNIBEN	5	20	4	29
UNIUYO	9	13	8	30
NDU	4	5	6	15
IUO	1	5	5	11
Total	**22**	**50**	**31**	**103**

Since awareness influenced EIS usage, data in table 3 was subjected to further analysis. Result in table 4 revealed that there is no significant difference in the level of awareness of EIS across the five universities as X^2 test of significance result was 11.439 against table value of 15.5. The null hypothesis is not rejected. This result implies that awareness level of EIS in the five universities is the same, and that their work places did not significantly influence their level of awareness.

Table 4: Chi square result of awareness level across the five universities

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.439[a]	8	.178
Likelihood Ratio	11.719	8	.164
N of Valid Cases	103		

a. 5 cells (33.3%) have expected count less than 5. The

Since earlier result in table 1 indicates average level of awareness of EIS, there is need for libraries in these universities to develop strategies to create more awareness of EIS resources beneficial to the lecturers.

A further analysis of the awareness of six major e-resources used by pharmacy lecturers in table 5, indicate that over eighty seven percent, of them were aware of the World Wide Web (WWW) 90(87.3%) and E-journal (EJ) 87(84.4%) while 68(66%) were aware of online databases (OD). This result is encouraging as it goes to show that the lecturers are in tune with current wave of EIS blowing across universities. The use of clinical information service should be encouraged due to its low result.

Test of Null hypothesis 3: There is no significant difference in the awareness of the various electronic information sources used by pharmacy lecturers across the five universities.

Table 5: Awareness of EIS by respondents across the five universities

VAR00001 * VAR00002 Cross tabulation

Count		VAR00002						
		CD	CIS	EB	EJ	OD	WWW	Total
VAR00001	IOU	5	3	4	11	10	10	43
	NDU	6	2	10	14	10	11	53
	UNIBEN	22	11	19	27	23	26	128
	UNIP0RT	5	2	8	12	7	15	49
	UYO	11	7	15	23	18	28	102
Total		49	25	56	87	68	90	375

The result of chi square test of significant across the five universities revealed that there was no significant difference in the awareness of the various EIS by pharmacy lecturers as calculated X^2 value of 10.04 was obtained against table value of 36.42, the null hypothesis is not rejected implying that the lecturers have equal knowledge of the various EIS that they use. Overall, there is no significant difference in awareness status of EIS of pharmacy lecturers in government and privately owned universities in South-South Nigeria.

Table 5: Chi square result of awareness of EIS across the universities

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.041[a]	20	.967
Likelihood Ratio	10.122	20	.966
N of Valid Cases	375		

a. 3 cells (10.0%) have expected count less than 5. The minimum expected count is 2.87.

Effect of Academic Qualifications on Usage of EIS by Pharmacy Lecturers

Academic qualifications of information users can influence their EIS usage. Result of the levels of EIS usage as per academic qualifications presented in table 6 revealed that most of the lecturers 53 (51.4%) are expert users of EIS, followed by those with average level 42 (40.7%) of usage and 8 (7.2%) low users.

Table 6: Academic qualification and levels of EIS usage

VAR00001 * VAR00002 Cross-tabulation

Count		VAR00002			
		Averag	Expert	Low	Total
VAR00001	BSc	2	4	1	7
	PGdip/ master	28	30	6	64
	PhD	12	19	1	32
Total		42	53	8	103

Test of Null hypothesis 4: There is no significant influence of academic status of pharmacy lecturers on their use of electronic information sources.

On the influence of academic qualifications on actual usage of EIS, data in table 7 was analysed.

Table 7: Influence of Academic qualifications and usage of EIS

VAR00001 * VAR00002 Cross tabulation

Count		VAR00002			
		Average	High	Low	Total
VAR00001	ACADEMIC QUALIFICATION	42	53	8	103
	USAGE LEVEL	40	58	5	103
Total		82	111	13	206

The result of X^2 test of independence in table 8 shows a value of .966 against table value of 5.99. So the null hypothesis is therefore not rejected meaning that academic status has no influence on EIS usage. All pharmacy lecturers irrespective of their academic qualification use EIS because they need it to perform various tasks. This result agreed with Shahmohammadi (2012) that on-line electronic journals used at the Islamic Azad University Karaj branch by its faculty showed no statistical difference in the application due to academic qualification of the academic staff.

Table 8: Influence of academic status on EIS usage

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.966[a]	2	.617
Likelihood Ratio	.973	2	.615
N of Valid Cases	206		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.50.

Influence of Gender Status on EIS Usage

There has been varying impact of gender on EIS usage among different users groups. The use of EIS by gender was tabulated, and results in table 9 revealed that both sexes are expert users 54 (52.4%) of EIS while 42 (40.7) are moderate users. While 38 (36.8%) male lecturers are expert users of EIS, 16 (15.5%) female are also expert users. Therefore, the female are not lacking behind their male counterpart as there is no significant difference between male and female levels of EIS usage.

Table 9: Gender status and levels of EIS usage

Gender status	Expert	Average	Low	Total
Female	16	13	2	31
Male	38	29	5	72
Total	54	42	7	103

Test of Null hypothesis 5: There is no significant influence of gender status of pharmacy lecturers on their use of electronic information sources.

Data in table 10 was analysed to determine the influence of gender on EIS usage.

Table 10: EIS usage and gender levels

VAR00001 * VAR00002 Cross-tabulation

Count					
		VAR00002			Total
		Average	Expert	Low	
VAR00001	Gender	42	54	7	103
	Usage	40	58	5	103
Total		82	112	12	206

Result of X^2 test of independence table 11 shows it was not significant as the calculated X^2 value obtained was 0.525 against table value of 5.99. The null hypothesis is not rejected, meaning that EIS usage is not influenced by gender status of the lecturers. Similar findings by Bakkabulindi (2011) indicated no significant gender difference in ICT use in Makerere University in Uganda. However, Bassi and Camble (2011) found gender differences in the use of EIS in university libraries in Adamawa State, Nigeria as the study revealed statistical difference between male and female students. These differences may be due to cultural background of users and their level of accessibility to ICT.

Table 11: Influence of gender on EIS usage

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.525[a]	2	.769
Likelihood Ratio	.527	2	.769
N of Valid Cases	206		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.00.

Influence of Computer and Internet Literacy on Electronic Information Sources Usage

Computer and Internet knowledge is necessary to use EIS. Data in table 12 indicate that most of the lecturers possess average computer and Internet literacy skills. This result has great implication for EIS utilisation. To test if computer literacy levels have any significant influence on the use of EIS, data in table 12 was subject to correlation analysis.

Table 12: Levels of computer and Internet literacy skills and EIS usage

Variables	High	Average	Low	Total
Level of computer literacy	27 (26.2)	72 (70.0)	4 (3.8)	103 (100%)
Level of Internet literacy	16 (15.6)	85 (82.5)	2 (1.9)	103 (100%)
Level of EIS usage	58 (56.3)	40 (38.8)	5 (4.9)	103 (100%)

Test of Null hypothesis 6: There is no significant influence of computer and Internet literacy of pharmacy lecturers on their use of electronic information sources.

Table 13: Influence of computer and Internet literacy skills and EIS usage

Correlations

		Level_of_EIS_Usage	Level_of_computer literacy	Level_of_internet_literacy
Level_of_EIS_usage	Pearson Correlation	1	.499	.335
	Sig. (2-tailed)		.668	.783
	N	3	3	3
Level_of_computer_literacy	Pearson Correlation	.499	1	.984
	Sig. (2-tailed)	.668		.115
	N	3	3	3
Level_of_internet_literacy	Pearson Correlation	.335	.984	1
	Sig. (2-tailed)	.783	.115	
	N	3	3	3

From table 13 above, there is a positive correlation of level of computer literacy (0.499) and level of Internet literacy (0.335) with the level of EIS usage. However, in terms of strength, the level of computer literacy (approximately, 0.5) is moderately correlated to the level of EIS usage while the level of Internet literacy (0.335) is weakly correlated to the level of EIS usage. This result implies that computer and Internet literacy has both individual and combined influence on the use of EIS with computer literacy more. This result is not unlikely to be so, as most EIS are available on the Internet and computer is required to use them. Not all the lecturers are computer and Internet compliant. This deficiency needs to be improved upon. Computer and Internet literacy skills have been problems of effective utilisation of ICT in developing countries including Nigeria. Based on the current level of EIS usage, there is need to train pharmacy lecturers in South-South universities in Nigeria on computer and Internet literacy skills to adequately equip them to use EIS effectively and maximally. Mastery of computer and Internet use enhances EIS usage. Pharmacy lecturers in these universities must therefore update their computer and Internet literacy skills.

Level of Competency in Using Electronic Information Sources

Competence is the ability to do something well. Competence is different from skills possessed. In this context, competence is the ability of pharmacy lecturers to apply their skills to use EIS adequately. The lecturers were asked to rate their levels of competence in using EIS. Result in table 14 indicates that majority of pharmacy lecturers possess moderate level of competence in using EIS.

Table 14: Effect of competence on electronic information sources usage

Variables	High	Average	Low	Total
Competence levels	15	82	6	103
Usage levels	58	40	5	103

Though this result though is encouraging; there is room for improvement if maximum result is required. Data in table 14 was further analysed to determine the influence of competence on EIS usage.

Test of Null hypothesis 7: There is no significant influence of competency of lecturers on EIS usage.

Result of calculated X^2 test of independence obtained in Table 15 was 39.8 against table value of 3.84 thus rejecting the null hypothesis and accepting the alternative that competence of the lecturers influences their usage of EIS. This area of deficiency needs to be improved upon also by providing the lecturers with information literacy training to improve their competency skill in using these resources.

Table 15: Influence of competence on EIS usage

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	39.879[a]	2	.000
Likelihood Ratio	41.895	2	.000
N of Valid Cases	206		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.50.

The level of utilisation of EIS by pharmacy lecturers in South-South universities in Nigeria is encouraging. It has been observed that the lecturers are determined to use these resources to meet their information needs. Their level of expertise and usage is not quite different from what obtains in other developing countries where Internet and computer literacy is low. Despite these drawbacks, usage of EIS across the universities is high irrespective of their academic qualifications and gender status. The areas that need to be tapped are the use of electronic databases and electronic portals in the various subject areas of pharmacy practice. This will go a long way to provide current and qualitative information sources for this group of users. Identified problem of computer and Internet literacy skills is common to all the lecturers, and therefore common solution can be proffered towards solving these problems.

Conclusion

Based on the results obtained in this study, it can be concluded that academic qualifications and gender status have no significant influence on the utilisation of EIS. However, awareness, computer and Internet literacy skills influence pharmacy lecturers' utilization of EIS across the South-South universities in Nigeria. The lecturers possess average levels of awareness of EIS, computer and Internet literacy skills in utilising EIS which is encouraging but there is need to strengthen their computer and Internet literacy skills in order to increase their level of awareness and competency to use EIS resources.

Recommendations

Librarians in these universities should provide EIS in pharmacy that are relevant to their users' needs for the faculty members. Adequate computer and Internet literacy skills on the effective utilisation of EIS should be organised for the lecturers to enable them use the resources maximally, as similar recommendation was given by Isabella and Esmail (2012) that awareness and training programmes should be given to academic community of Pharmacy College in Chennai City, to optimally utilise e-resources. Faculty members should improve on their level of competence by constantly using the e-sources.

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Mr. Luke Obasuyi is Principal Librarian at John Harris Library, University of Benin, Benin City, Nigeria. He is a Chartered Librarian of Nigeria (CLN) and a member of the Nigerian Library Association (NLA). He received his B.Sc (Ed.) Library Science degree from Delta State University, Abraka and Masters in Library Studies (MLS) from the University of Ibadan, Nigeria. He was the former Librarian of the Nigerian Institute for Oil Palm Research (NIFOR) before joining the services of the University of Benin. He is currently Faculty Librarian (Agriculture, and Life Sciences) University of Benin. His research specialities are in the areas of bibliometrics, library automation and information users' studies.

Dr (Mrs) Stella Folajole Usifoh is a Pharmacist. She holds a B.Pharm degree from Obafemi Awolowo University, Ile-Ife, a Masters in Health Planning and Administration as well as PharmD degrees from the University of Benin, Benin City, Nigeria. She is a lecturer with the Department of Clinical Pharmacy and Pharmacy Practice.

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Use of Electronic Databases by Law Students at the University of Botswana Library

Bosha Toteng
University of Botswana Library
Private Bag 0022
Gaborone, Botswana
totengbo@mopipi.ub.bw

and

Ruth Hoskins and Fiona Bell
Information Studies
University of KwaZulu-Natal,
Private Bag X01 Scottsville, 3209
South Africa
hoskinsr@ukzn.ac.za, bellf@ukzn.ac.za

Abstract

This paper is based on a study of Masters dissertation carried out at the University of KwaZulu Natal which investigated the use of electronic databases by undergraduate law students at the University of Botswana Library. The study aimed to establish whether law students used the electronic databases, which databases they used and the frequency of such use, to identify problems students encountered when using the databases and how the students became aware of the databases. The study population consisted of 362 undergraduate law students. Data was collected by means of a questionnaire and an interview schedule was used to obtain background information from the two law librarians. The study results showed that the undergraduate law students did use most of the electronic databases that the library subscribed to. The databases that the students used most were: OPAC, Juta Publications and EBSCOHost. A number of problems that the students experienced when using the databases were identified.

Keywords

Botswana, electronic databases, law students. electronic databases usage, e-resources

Introduction

The rapid emergence of information and communication technologies (ICTs) has brought revolutionary changes in service and information provision in libraries. Through the use of these resources, it is possible for libraries to make information more accessible to users than before (Okeke, 2008:12). The University of Botswana (UB) has made great financial investments to offer online access to prestigious databases for most disciplines including that of law. The databases can be accessed via the University Library's website (only within the campus). Electronic databases are new ways of gaining access to a large volume of information through which users can satisfy their information needs. These databases consume an increasing percentage of library budgets, but are often underutilised when users are unaware of their existence. It is of great importance for the library to know how the students become aware of these databases, how often the students use the databases and the manner in which they use them.

The library can use evidence of effective use as justification for acquiring or providing access to these resources. On the other hand, underutilisation of electronic databases is a matter of concern for the library, and factors contributing to that should be investigated and suggestions for improving usage found. Since most universities receive funding from their governments, they have a duty to account for the money they spend. This requirement is well described by Nicholas, Huntington and Watkinson (2003:42) who stated that: "Libraries and their host organisations (mainly universities) have to justify their considerable investments in providing massive and unbridled digital access."

The University of Botswana Library has existed since 1971, when it was established as a constituent college library of the former University of Botswana, Lesotho and Swaziland. The Library was first housed in an unused church building in Gaborone Village. In

1982, the Library moved to the main campus in Gaborone, the capital of Botswana (Silas, 2007). After a few years, the library building could not accommodate the fast growing collection and the growing numbers of students. Plans were therefore made to construct a larger library. In 1986, the first phase of the planned new building was started. The state-of-the-art building was completed in June 2001. The building was designed to hold over 220 PCs for students, with a seating capacity of 4,000 readers and shelving space for 850,000 volumes. The library has integrated workstations and dedicated OPAC terminals on five of the six library floors (Mutula and Makondo, 2003).

The law collection is on the first floor and is housed separately from other business and social science materials. It comprises books, print journals, law reports of Botswana and other jurisdictions. According to Radijeng (2007), the law section subscribes to the following electronic databases:

- SAe-Publications;
- LexisNexis;
- EBSCOHost;
- Juta Publications; and
- Westlaw.

The library also has access to other databases which are freely available on the Web such as FindLaw; JSTOR and Southern African Legal Information Institute (SAFLII).

The UB Library has made great financial investments to purchase a significant number of online databases for various disciplines, including for the field of law (Radijeng, 2007). The mission of library services in the age of computer and electronic technologies is to provide accurate information at the moment of a user's need. However, despite the libraries' efforts to subscribe to reputable electronic databases, students continue to "Yahoo and Google their way into a vast sea of data" (Low, 2003:30). The majority of undergraduate students seem to choose Websites that include full-text, often without regard to how appropriate the sources are for their assignments (Tenopir, 2003:616).

However, there is a perception amongst librarians and academic staff at UB that the databases are underutilised by students. The statistics on the use of some of the electronic databases for the year 2009 as provided by the periodicals librarian were as follows:

- LexisNexis: 306;
- SAe-Publication: 109; and
- JSTOR: 407.

These statistics show that the databases are not being effectively used, as would be expected to justify the high cost of subscriptions. The purpose of the study was to investigate the use of electronic databases by undergraduate law students at the UB. The results of the study should inform library management of the changes and improvements that need to be effected to promote and improve the use of the databases. The study was therefore guided by the following research questions:

- Do law students use electronic databases?
- Which electronic databases do law students use?
- What is the students' perceived importance of these databases?
- How often do law students use these electronic databases?
- How do law students learn about the availability of electronic databases?
- Do law students have sufficient skills to access the electronic databases?
- What barriers, if any, do law students encounter when consulting the electronic databases?

The study was limited to undergraduate law students at the UB in their second, third, fourth and fifth years of study. At the time data were collected, first-year students had just been admitted to the programme, therefore they were excluded from the study because of their limited knowledge and experience of the library. Due to time limitations, postgraduate students of the Law Department were also not included. The study did not include "use" statistics from the vendors, as these do not identify individual users and it would be impossible from the

statistics to determine the use of electronic databases by law students only.

Literature Review

A number of surveys on the use of electronic resources in academic libraries have been carried out in the past. In some of these studies, the participants were students (Mawindo, 2005; Soyizwapi, 2005), whilst others involved academic staff (Bar-Ilan, Peritz and Wolman, 2003). Studies on students targeted their awareness of the availability and use of electronic resources. The current study investigated the same factors, but with regard to undergraduate law students at the UB. Some of the studies in African universities were based on other forms of electronic resources, for example, the internet (Luambano and Nawe, 2004; Ojedokun, 2001; Tella, 2007). Morupisi and Mooko (2006) examined how undergraduate students at UB used the OPAC.

Students need to be able to access the electronic databases whenever they need them. It was noted by Rosenberg (2006) that, even though electronic resources were available in most African universities, what is still lacking is facilities for access. The university is obliged to put adequate facilities in place, as was emphasised by Arms (2000). He stressed that access to and use of electronic content is dependent on a number of types of specific and general purpose electronic equipment and facilities. In supporting the point that provision of and use of databases requires more facilities, Forsman (1998) mentions that access is only as good as the resources that can be afforded. Such resources include the number of computers, the existence of network systems, and a network infrastructure that supports rapid and convenient connections. Most electronic databases emphasise authentication and authorisation, which is a process of checking the users' identity and rights to enable them to use the system. Users are expected to provide user names and passwords. Most students in a study by Jagarnath (2004) had stated that the password requirement was one of the hindrances to the use of electronic databases.

Williamson (1999) conducted a study at the Law School at De Montfort University (DMU) in the United Kingdom to investigate students' use of electronic information. The Law School had 40 computers for students and, in addition to that, there was a Computer Resource Centre, with 30 computers to access Butterworths books on screen, including the All England Law Reports, the World Wide Web, LexisNexis and e-mail. The DMU Library had 300 computers with CD-ROM databases, Internet, law reports, journals and printed books. Printing facilities were offered freely to students. Findings of the study revealed that about 32% of the students spent their time doing word processing, 35% used the Web, 27% for e-mailing, 4% used the All England Reports and 1% used LexisNexis. Findings of the study showed that even though the students were fortunate that their institution had state-of-the-art information technologies they did not utilise them effectively, but rather conducted other tasks such as e-mailing, which at times are not done for academic purposes but for socialising. The underutilisation of library electronic databases presents a challenge to librarians to ensure that the students are adequately trained to allow them to use all the library resources effectively.

A longitudinal study was performed between the years 1998 and 2000 by Rogers (2001). The aim of the study was to justify the budget spent on subscribing to electronic journals. The participants were the academic staff and students of Ohio State University. There was a high use of journals in biological and medical sciences and a relatively low use for business, humanities, law, food and agricultural sciences, business and the arts.

In an attempt to measure students' adoption of electronic resources, Bravy and Feather (2001) conducted a study at Georgetown University Law Library. Students who were admitted to the University were reported to be computer literate and owned laptop computers. Since the students could access a wide variety of legal materials through the electronic databases and the library's Web pages using their computers there was no need to regularly visit the library, physically. The library also provided free of charge printing. The authors stated that the purpose of the study was not to promote either a print or electronic format, but to investigate the perception echoed by most studies that the generation of university students are more comfortable using electronic resources than print materials, as their primary source of information. A similar study was conducted by Valentine (1993) in Waldman (2003), which revealed that students looked for the fastest

way that would lead to satisfactory results when doing research and therefore consulted electronic information sources first.

Bravy and Feather (2001) detailed statistics on photocopying, shelving and student circulation. The findings revealed a decline in shelving and student checkout transactions. However, the statistics for photocopying rose dramatically. The explanation for this was that students were accessing electronic resources, downloading and printing them regularly. The results revealed that students at Georgetown University wholly embraced and used electronic resources mostly for their academic work.

Meredith's (2007) study at Oxford University investigated which resources law students used and the frequency of such use. The study reports on the findings of two studies done in 2004 and 2006. It was found that students increasingly used networked computers as their primary information source. Most of the students used legal databases to find cases, statutes and articles. In 2004, the percentage of students who reported to be using electronic databases, at least fortnightly, was 62%, and it rose significantly in 2006 to 78%. As regards those students who did not use the electronic databases, there was an indication that databases were gaining popularity, as their numbers decreased from 22% to 9%. Other findings of the study were that students did not only use databases frequently but numerous databases. Many also used the Internet. Due to frequent use, the students' skills developed rapidly and they proved to be good at citation-searching in several databases.

A study which aimed at examining the extent and pattern of use of electronic resources at the University of Nigeria was conducted by Ekwelem, Okafor and Ukwoma (2009). The study revealed the students' preference for the Internet, rather than for any other electronic resource. The library's subscription databases and CD-ROM were not that popular among the students. Although they did perceive these other electronic resources as useful, students were hindered by problems such as inadequate skills, inadequate bandwidth and unstable power supply.

At the University of Dar es Salaam in Tanzania, Luambano and Nawe (2004) set out to determine the purposes for which students used the Internet and investigated the problems the students had in use. The study revealed that very few students used the Internet since there were few computers with Internet access. The few students who managed to access the Internet were not using it for academic purposes but mainly for chatting or socialising with friends. Students did not have adequate training to enable them to effectively use the Internet for academic purposes.

Nyika (2004) investigated how students and academic staff in two Tanzanian universities used electronic resources provided by the libraries. The two universities were Sokoine National University of Agriculture and the University of Dar es Salaam. The findings showed low usage of electronic resources by students. Some students showed a positive attitude towards the electronic databases and visited the library for electronic information. However, it was reported that at the Faculty of Law, the attitude of users was different. Law students and lecturers had a preference for print publications. Findings further revealed that respondents noted their inadequate knowledge of using the Internet prevented them from using the electronic databases. To address the situation, librarians offered training workshops on how to search for information using the electronic databases.

Mawindo (2005) conducted a study seeking to evaluate students' use of print and electronic resources at the Malawi College of Medicine. The survey was done on 179 undergraduate students. A self-administered questionnaire was distributed to the students and an interview held with the College Librarian. The results of the study revealed that print resources in the form of books were the most-used followed by newspapers and short loan materials. Students who used electronic resources accessed them through search engines and Websites. There was a low level of usage of electronic resources. Some of the problems that the students highlighted in the use of electronic resources were: slowness of the Internet, limited access to computer terminals, frequent failure of the server, lack of computer skills to search and retrieve information and the unavailability of staff to offer assistance. The study showed that some of these problems of accessing electronic resources contributed to their low usage and preference for print sources.

The current study was influenced by the study conducted at the University of KwaZulu-Natal,

Pietermaritzburg, by Soyizwapi (2005). The study population comprised postgraduate students in the Faculty of Science and Agriculture. Soyizwapi had set out to investigate the extent of use of electronic databases by students in that Faculty. She also investigated which databases the students used and why those databases were preferred and problems the students encountered in their use. The findings revealed that two-thirds of the studied population used the databases. Problems highlighted in the study included, among others, the following: slow connectivity, slowness of the network and lack of off-campus access (Soyizwapi, 2005:78).

Sibanda (2004), a law librarian, at a conference for law librarians, highlighted the following problems encountered by undergraduate law students at the University of Zimbabwe: shortage of hardware and software, connectivity problems, inadequate knowledge on the use of the electronic resources.

In 2006 Morupisi and Mooko, conducted a survey aimed at assessing the use of OPAC by undergraduate students at the UB. The study aimed at establishing the type of search strategies the students used, the problems they encountered during searching and the level of satisfaction with the outcome of the searches. Findings indicated that most respondents searched the OPAC, but were mainly confident in author, title, subject and keyword searches. What was gratifying was that users were able to access and search other databases through the OPAC. The problems encountered were mostly in connection with access rather than with use. Problems highlighted were: lack of Internet connection and inadequate computers, some students occupied computers for long periods, denying others the opportunity to access the resources.

Another study on Internet use by students at the UB was conducted by Ojedokun (2001). The findings of the study were that 23% of the students were not using the Internet. One of the problems identified by the study was that there were not enough computers with Internet facilities, which resulted in denying many students an opportunity of access.

Tella (2007) carried out a survey on undergraduate students at the UB. The researcher wanted to investigate the purposes for which the students used the Internet and how often they accessed it. His intention was to investigate how the use of the Internet affected the students' academic performance. The results showed that students accessed the Internet from one to five hours per week and the main reason for seeking information was to support their academic research. It was revealed that Internet use positively affected the performance of the students.

A study by Radijeng (2007), on 45 academics and students of law at the UB, aimed at establishing how they appreciated electronic resources in their field. It sought to investigate whether they used legal electronic resources and the challenges they encountered. Even though the majority of respondents alleged to be computer literate, they were not making effective use of computers. The challenges identified in Radijeng's study were insufficient infrastructure, connectivity problems, lack of printing facilities and lack of access to computers due to cost constraints. The objective of the current study was to investigate if the undergraduate UB students were faced with similar challenges when they used the electronic databases.

Research Methodology

The study employed a combination of quantitative and qualitative approaches. The quantitative approach involved a survey and the instrument used to collect data was the self-administered questionnaire. The questionnaire was designed to elicit views about the use of electronic databases by undergraduate law students of the UB and consisted of both closed and open questions. The qualitative approach used an adapted semi-structured interview schedule to gather data. The purpose for the interview schedule was to establish background information regarding legal electronic databases at the UB Library. Two law librarians were interviewed to provide this background information to support the student questionnaire. The population for the study was second, third, fourth and fifth year undergraduate law students registered at the UB. There were 362 second, third, fourth and fifth year registered undergraduate law students in the academic 2009/ 2010 year. Given the size of the population of study, it was not necessary to do any sampling. The entire population was studied. Out of the 362 registered students, 244 received and completed the

questionnaire, yielding a response rate of 67.4%. This response rate was deemed satisfactory, as Punch (2003:42) indicated that response rates of 60% and above is good, since they diminish the chance of bias and are representative of the population. The questionnaire was pre-tested on seven undergraduate law students of the University of KwaZulu-Natal (UKZN) in Pietermaritzburg. The population for the pre-test consisted of three second-year students, two third-year students and two fourth-year students.

Data were analysed using SPSS, as it is useful for creating frequency tables for each of the variables (Bell, 1999:173). A coding matrix was made and data entered into SPSS for analysis. Responses to the interview for the librarians and some of the open questions from the questionnaire were analysed qualitatively. They were analysed using thematic content analysis.

Results and Discussion

The results and the discussion follow the order of the research questions:

Law Students' Use of the Electronic Databases

Students were asked to indicate if searching was done through an intermediary or independently. The results are shown in figure 1.

N=244

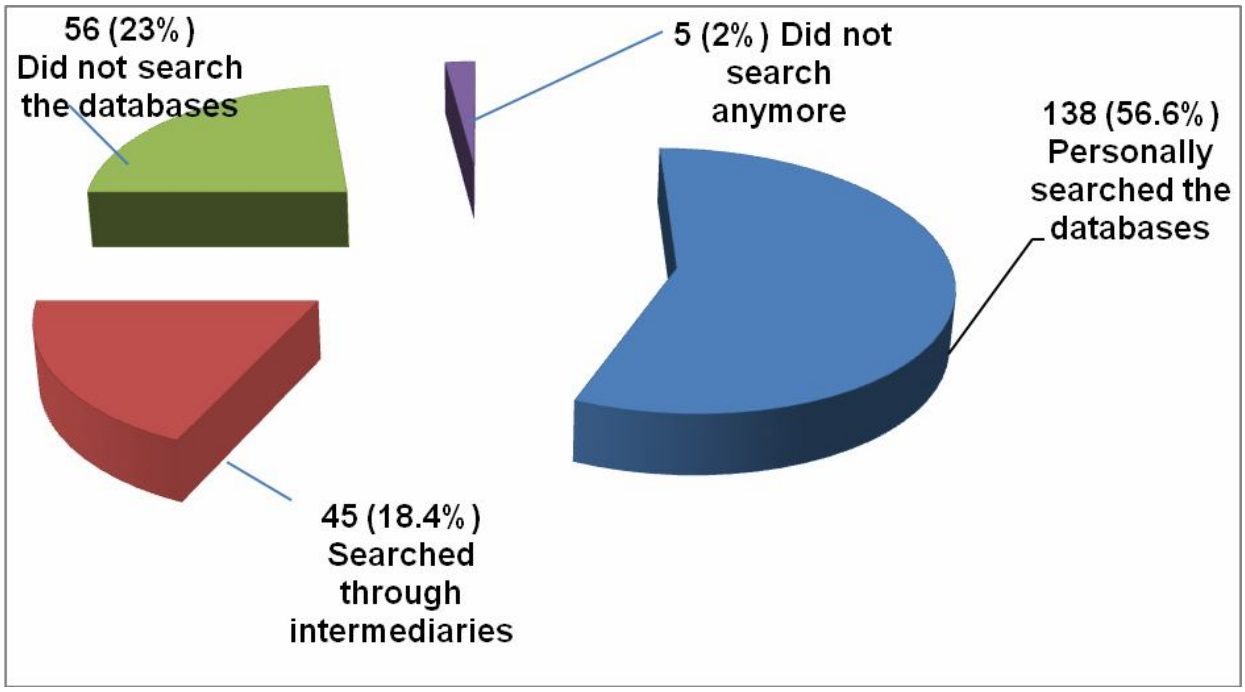

Figure 1: **Searching of databases**

More than half of the respondents (138 or 56.6%) indicated that they searched the databases independently, while 45 (18.4%) searched through intermediaries. It is encouraging to learn that most of the respondents (183 or 75%) were able to search the databases, either independently or through an assistant. Sixty-one (25%) respondents did not search the databases while 183 (75%) students searched the databases. The findings of the current study were similar to those of Meredith (2007), who found that the number of students at Oxford University who allegedly used the databases was 78%.

The students who did not use the databases provided various reasons. Not having access to the computers, not knowing how to search and not being aware of the presence of databases were the three major reasons given by the students. During the interview, the law librarians pointed out the problem of lack of access to enough computers. However, there was a difference of opinion regarding awareness of the presence of the databases.

Electronic Databases Students Used

A list of databases was provided from which students had to make a selection of the databases they used. The list included the following: OPAC, EBSCOHost, JSTOR, LexisNexis, Westlaw, SAe-Publications and Juta Publications. Results are shown in figure 2.

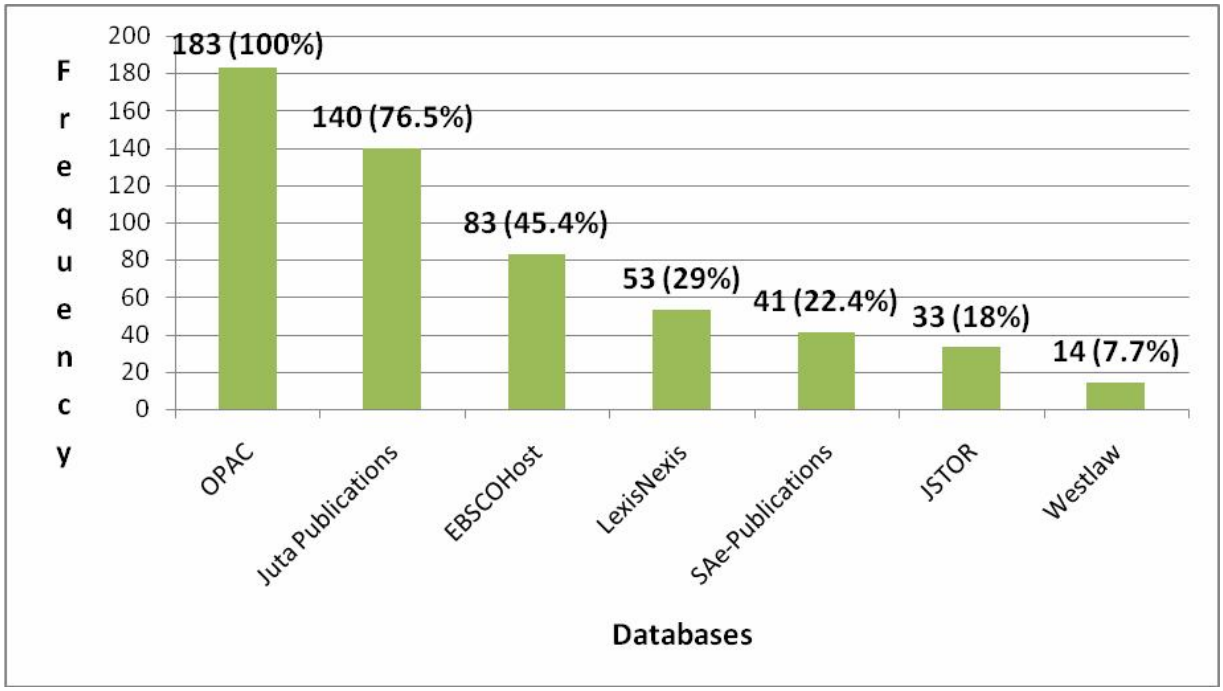

Figure 2: **Databases used N=183**

The OPAC was the only database that was searched by all 183 students who used the databases. The next most popular database after OPAC was Juta Publications, which was used by 140 (76.5%) respondents. EBSCOHost was searched by 83 (45.4%) of the students. Fifty- three (29%) searched LexisNexis and 41 (22.4%) used SAe-Publications. The database which had the lowest usage was Westlaw, with 14 (7.7%) students. Respondents were asked to indicate other databases that they used but were not listed. The students indicated that they also used the following databases:

- Black Hall publishing (six or 3.3%);
- Botswana Law Reports (six or 3.3%);
- SAFLII (six or 3.3%); and
- Findlaw (one or 0.5%).

Morupisi and Mooko's (2006) study found that the OPAC was the most heavily used electronic database. It is significant that the subject specific law databases, such as LexisNexis and Westlaw, were used by few students. The low use of LexisNexis could have been due to the difficulties of its complicated interface. Low usage of the LexisNexis database was also found in Williamson's (1999) study.

One of the advantages of using the databases was that they could be accessed anywhere through computers with an Internet connection. Respondents were asked to specify the places from which they accessed the electronic databases. These included the library, faculty laboratories or any other place. The results are illustrated in figure 3.

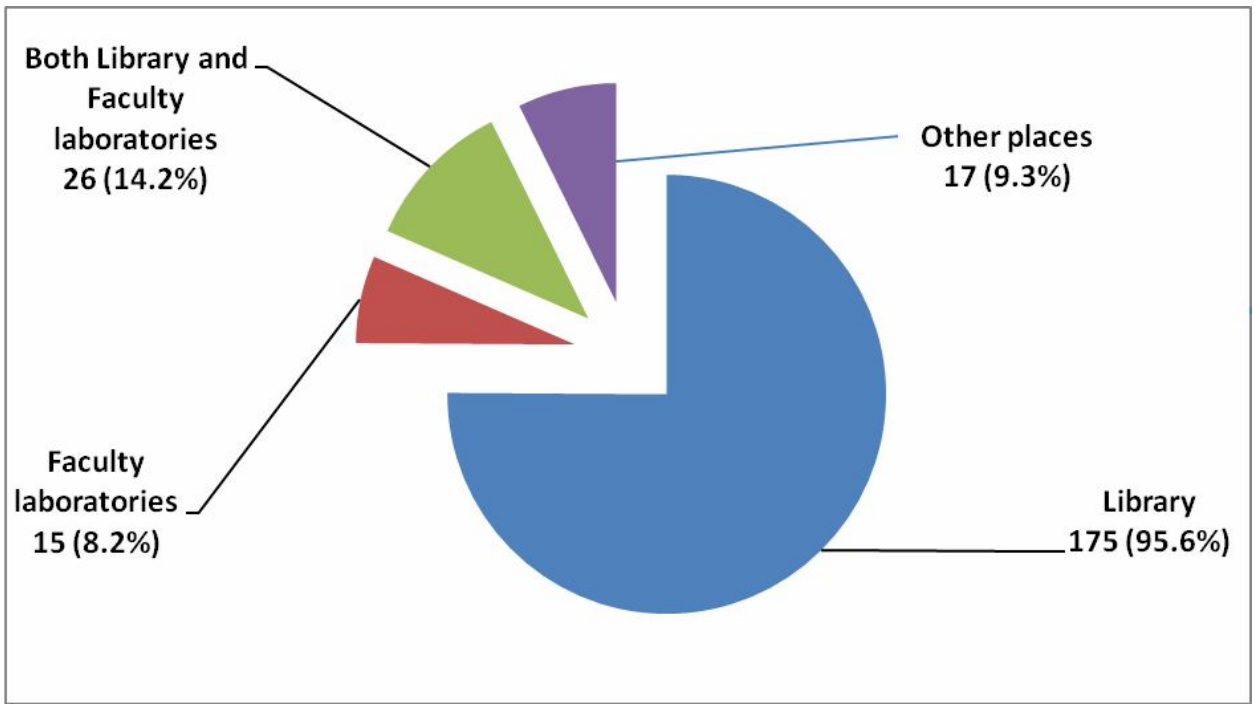

Figure 3: **Points of accessing databases N=183**

A majority of 175 (95.6%) students accessed the databases from the library, while 15 (8.2%) accessed the databases from the faculty laboratories. There were 26 (14.2%) respondents who indicated both the library and the faculty laboratories as locations from which they accessed the databases. There were 17 (9.3%) students who indicated that they had laptop computers and accessed the databases from the hostels and others from locations within the vicinity of the UB campus. Findings of the current study were in agreement with those of Radijeng (2007), who found that the library was the most common place from where databases were accessed. During the time of Radijeng's (2007) study, there was no wireless connection in the students' hostels, while during the current study, there was wireless connection in the student's hostels. However, these findings are in contrast to that of Bravy and Feather's (2001) study, which found that students were not regularly visiting the library to access the electronic databases, especially since they had access to their own laptop computers and they did not require the libraries' computing facilities for access.

In order to improve access to the databases, 111 (45%) students suggested that the speed of the Internet should be increased, while 107 (43.6%) wanted an increase in the number of computers in the library. Five (2%) students proposed that the initial password assigned to students should be used throughout their studies without having to be changed regularly and 21(8.6%) were of the view that passwords should be cancelled. In order to enable other students to access the available computers, seven (2.9%) students wanted the log-on time to be regulated. Five students suggested that the number of printers in the library should be increased. Two students (0.8%) put forward the suggestion of 24 hour access to the library and its resources, whilst three (1.2%) suggested that since, for late night study, the library is open for 24 hours, computers should be installed there to enable students access when the library was closed. To deal with the problem of insufficient computers, two (0.8%) students stated that sponsors should be approached with the proposal of giving loans to students to purchase personal computers.

Students' Perceived Importance of the Electronic Databases

This research question assessed the students' perceived importance of the databases searched. The response patterns for this question are captured in Table 1. The 183 respondents who searched the databases rated them as follows: very important, important, neutral and unimportant.

Table 1: Ratings of library databases N=183

Online Databases	Very important		Important		Neutral		Unimportant		No Response		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
OPAC	156	85.2%	10	5.5%	15	8.2%	2	1.1%	0	0%	183	100%
Juta Publications	101	55.2%	33	18%	2	1.1%	4	2.2%	43	23.5%	183	100%
SAe-Publications	31	16.9%	5	2.7%	3	1.6%	2	1.1%	142	77.6%	183	100%
LexisNexis	29	15.8%	20	10.9%	0	0%	4	2.2%	130	71%	183	100%
EBSCOHost	27	14.8%	34	18.6%	12	6.6%	10	5.5%	100	54.6%	183	100%
JSTOR	19	10.4%	10	5.4%	0	0%	4	2.2%	150	82%	183	100%
Westlaw	5	2.7%	4	2.2%	2	1.1%	3	1.6%	169	92.3%	183	100%

The OPAC was rated as both very important and important by 156 (85.2%) students and 10 (5.4%), respectively. Juta Publications was rated as very important by 101 (55.2%) and important by 33 (18%) students. Some students 10 (5.5%) rated EBSCOHost as unimportant. Juta Publications, JSTOR and LexisNexis were ranked as unimportant by four (1.1%) students each. Westlaw was considered unimportant by three (1.6%) students.

Frequency of use of the databases

Students who indicated that they searched electronic databases were requested to state their frequency of use. Table 2 shows the frequency of use of the databases.

Table 2: Frequency of use of the databases N=183

Databases	Daily		Weekly		Monthly		Yearly		Never used		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Juta Publications	**43**	**23.5 %**	**56**	**30.6%**	**32**	**17.5%**	**9**	**4.9%**	**43**	**23.5%**	**183**	**100%**
OPAC	**41**	**22.4 %**	**90**	**49.2%**	**30**	**16.4%**	**22**	**12%**	**0**	**0%**	**183**	**100%**
SAe-Publications	**11**	**6%**	**17**	**9.3%**	**11**	**6%**	**2**	**1.1%**	**142**	**77.6%**	**183**	**100%**
LexisNexis	**6**	**3.3%**	**28**	**15.3%**	**19**	**10.4%**	**0**	**0%**	**130**	**71%**	**183**	**100%**
Westlaw	**3**	**1.6%**	**4**	**2.2%**	**5**	**2.7%**	**2**	**1.1%**	**169**	**92.3%**	**183**	**100%**
JSTOR	**2**	**1.1%**	**17**	**9.3%**	**12**	**6.6%**	**2**	**1.1%**	**150**	**82%**	**183**	**100%**
EBSCOHost	**0**	**0%**	**38**	**20.8%**	**35**	**19.1%**	**10**	**5.5%**	**100**	**54.6%**	**183**	**100%**

Juta Publications was used by 43 (23.5%) daily, 56 (30.6%) weekly, 32 (17.5%) yearly, and was never used by 43 (23.5%). The OPAC was ranked second after Juta Publications. The OPAC was used by 41 (22.4%) respondents on a daily basis, on a weekly basis it was used by 90 (49.2%), monthly by 30 (16.4%) students, and yearly by 22 (12%). The usage for SAe-Publications was 11 (6%) daily, 17 (9.3%) weekly, 11 (6%) monthly, two (1.1%) yearly, and was never used by 142 (77.6%).

LexisNexis was used as follows: 6 (3.3%) daily, 28 (15.3%) weekly, 19 (10.4 %) monthly, it was never used on a yearly basis and 130 respondents had never used it. Westlaw was used most on a monthly basis by five (2.7%), followed by a weekly usage of four (2.2%), daily usage of three (1.6%), the least usage was on a yearly basis at two (1.1%). There were 169 (92.3%) students who never used Westlaw. JSTOR was used mostly on a weekly basis by 17 (9.3%) students, the monthly usage was second at 12 (6.6%), the daily and yearly usage were two (1.1%). One hundred and fifty (82%) students never used JSTOR. EBSCOHost was used mostly on a weekly basis by 38 (20.8%), monthly by 35 (19.1%), yearly by 10 (5.5%) while 100 (54.6%) students never used EBSCOHost.

How Law Students Learnt about the Availability of Databases

A list of sources from which respondents may have learnt about the availability of databases was provided. Respondents were to select all the options through which they learnt about the databases. The results are given in table 3.

Table 3: Source of awareness of availability of databases

N=244

Source of awareness	Yes		No		Total	
	Count	%	Count	%	Count	%
Friends	160	65.6%	84	34.4%	244	100%
Library orientation	122	50%	122	50%	244	100%
Lecturers	107	44%	137	56.1%	244	100%
Library guides	38	15.6%	206	84.4%	244	100%
Library website	36	14.8%	208	85.2%	244	100%
Information literacy module	4	1.6%	240	98.4%	244	100%
Law librarian	3	1.2%	241	98.8%	244	100%
Library notice board	1	0.4%	243	99.6%	244	100%
Self-discovery	1	0.4%	243	99.6%	244	100%

The three most important sources of awareness were friends, which accounted for 160 (65.6%), library orientation with 122 (50%) and lecturers with 107 (43.9%). Library guides were a source of awareness for only 38 (15.6%) respondents. Thirty-six (14.8%) respondents learnt about the availability of the databases from the library website. The additional sources of awareness which the students mentioned under the "Other" option were: the information literacy module mentioned by four (1.6 %) students. Three (1.2%) students found out about the databases from the law librarian. Library notice boards and self- discovery were mentioned by one (0.4%) student each.

Findings of the current study were similar to those of Soyizwapi's (2005) study, in that friends, library orientation and lecturers proved to be the top three most important information sources concerning the library databases.

Barriers Students Encountered when Accessing the Electronic Databases

A list of known or common problems related to accessing the databases was provided. Respondents were asked to make a selection of the problems they faced when searching the electronic databases. Table 4 shows the students' responses.

Table 4: Problems experienced when using the databases

N=183

Problems	Yes		No		Total	
	Count	%	Count	%	Count	%
Slow connection	114	62.3%	69	37.7%	183	100%
Insufficient computers to access the databases	110	60.1%	73	39.9%	183	100%
Password requirements	96	52.5%	87	47.5%	183	100%
Not allowed to download, print, or e-mail results to self	85	46.4%	98	53.6%	183	100%
Staff not available to help	78	42.6%	105	57.4%	183	100%
Log on	64	35%	119	65%	183	100%
Printing	64	35%	119	65%	183	100%
Difficulty in searching	61	33.3%	122	66.6%	183	100%
Not certain which database to choose	54	29.5%	129	70.5%	183	100%

Most of the students 114 (62.3%) who used the databases considered slow connection to be a major problem, but 69 (37.7%) did not encounter this problem. Lack of sufficient computers affected 110 (60.1%) of the students accessing the databases. The requirement of passwords in the use of the databases was considered a problem by 96 (52.5%) of the respondents. Seventy-eight (42.6%) students mentioned the fact that staff were not available to help affected their use of the databases. Sixty-four (35%) students had problems with printing and logging on respectively. Not being able to decide which database to choose from was considered a problem by 54 (29.5%) students.

The following problems were mentioned by one (0.5%) respondent each under the "Other" option:

- Few or no electric sockets where laptop computers could be plugged in;
- Internet disruptions;
- Lack of off-campus access;
- Lack of operating software in some computers;
- Other students logging on for longer periods; and
- Provision of abstracts only.

The slowness of the Internet was a major problem encountered by most of the students who searched the databases. The limited number of computers inhibited a majority of students from accessing the databases. Similar problems mentioned were confirmed by the law librarians during the interview schedule. The findings of the study revealed that the top two problems related to access to the databases. Similarly Luambano and Nawe (2004) and Ekwelem, Okafor and Ukwoma (2009) expressed problems relating to Internet access to the databases. Jagarnath (2004) found that password requirements were one of the hindrances to the use of electronic databases.

The problems that were highlighted in the current study were similar to those identified in related studies by Radijeng (2007), Mawindo (2005), Soyizwapi (2005) and Sibanda (2004), with students experiencing the same problems. Problems which were highlighted in these studies included: lack of computer skills to effectively search for and retrieve information, slowness of the Internet and limited access to computer terminals. In terms of limited access to computers, Arms (2000), Rosenberg (2006) and Forsman (1998) pointed out that even though electronic resources are available in most libraries, facilities for accessing these resources is lacking.

Conclusion and Recommendations

Based on the results of the study the following conclusions were drawn:

A majority (75%) of the undergraduate law students surveyed used most of the electronic databases that the Library subscribed to. The OPAC, Juta Publications and EBSCOHost were the top three databases used by undergraduate law students. Most students who used the databases appreciated that they offered full-text. The other benefits which the students valued were ease of use and the ability to e-mail, save and print the retrieved results. With regard to the frequency of use of the databases, Juta Publications, OPAC and SAe-Publications were the top databases used daily, weekly and monthly. Westlaw and JSTOR were the least used databases by most undergraduate law students at the UB Library.

The OPAC was perceived as either very important or important by 85.2% of the students and 5.5%, respectively. The number of students who considered Juta Publications as either very important or important was 55.2% and 51.8 %, respectively. SAe-Publications were ranked third in importance, with 16.9% of the students rating it as very important and 2.7% as important.

Undergraduate law students learnt about the availability of the electronic databases from various sources. Friends and library orientation proved to be the best sources of information relating to their awareness of the databases. A majority of students were satisfied with the information they obtained from the databases.

The UB Library was the most common place from which the databases were accessed. The library was used by a majority of students (95.6%) to access the databases. Faculty laboratories and students' hostels did not offer as much access to the databases as the Library. Problems most encountered when

accessing the databases were, slow Internet connection, lack of sufficient number of computers and the password requirements.

The study found out that students were not utilising all the electronic databases to the fullest. Although there was evidence of use of the general databases like EBSCOHost, the disturbing finding was that there was minimal use of subject-related databases. The conclusion reached is that the library has to adopt an intensive marketing strategy of the databases and provide further or more intensified training to students.

In line with the above conclusions, the study proposed the following recommendations:

- In order to improve the use of the databases, the UB Library should increase the number of computers that are available to the students specifically for searching the databases. At the time of the study, there were 220 computers and only two printers in the Library.
- The number of printers available in the library should be increased. Some of the seminar rooms in the library should be designated for training on the use of the databases. Private companies should be allowed to offer printing services on campus. The library should work in collaboration with the IT department to offer off-campus access which did not exist at the time of the study. Off-campus access was available to staff on a trial basis only. On-campus access should be improved by increasing the speed of the internet. Faculty laboratories should offer students 24-hour access to computers.
- The library should enhance awareness of the available databases by approaching and informing all new and returning students at the beginning of every semester. Librarians could utlilise the students' visits to the library to effectively market electronic databases, by displaying information relating to the availability and use of the electronic databases on notice boards and other strategic places. Librarians should exploit the liaison programme that has been established with the academic staff to bring awareness of the databases to the students at least once every semester. A whole lecture hour could be dedicated to informing students about the databases. The library's advertising screen should be loaded with information about the databases and it should be updated as new databases are added.
- Targeting only first-year students may not be effective; training should be an ongoing basis and offered to all students at all levels of study. Training on use of the databases should not be limited to groups, but one-on-one training should be offered to cater for slow learners and those students who are intimidated by large groups of people.
- Librarians who conduct library orientation should use standardised and updated notes. The orientation should be intensified to include some details on use of the databases. Online tutorials on the use of the databases, which the students can follow at their own pace, should be offered. PowerPoint slides on the use of the databases could be continuously run in seminar rooms for interested students to watch and learn from.
- There should be a register on all floors provided for students needing training to record their contact details. The librarians should draw up training schedules based on how many students have requested training. Information relating to when training would be offered should be displayed on notice boards around campus, and individual e-mail messages should be sent to the students concerned.
- Where possible, the requirements for passwords to the databases should be limited.
- More training for staff specially designated to assist students on the use of the databases should be offered.

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Dr Ruth Hoskins is the Academic Leader Teaching and Learning in the School of Social Sciences at the University of KwaZulu-Natal. She is a senior lecturer in the Information Studies Programme. She holds a PhD in Information Studies from the University of KwaZulu-Natal and coordinates the Advanced Certificate in Education (ACE) in School Library Development and Management. She supervises at both the Masters and PhD level and teaches at both the undergraduate and postgraduate levels.

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The Impact of Accreditation Exercise on University Libraries in Kenya

Beatrice Achieng' Odera-Kwach
Department of Documentation and Information Services
Commission for Higher Education, Nairobi, Kenya
bkwach@che.or.ke

and

Patrick Ngulube
Department of Interdisciplinary Research of the College of Graduate Studies,
University of South Africa
Pretoria, South Africa
ngulup@unisa.ac.za

Abstract

This paper is the result of an exploratory study of the impact of accreditation - a process of external quality assurance on university libraries in Kenya. The paper also sought the perceptions of university librarians regarding external quality assurance. The mixed research method was used for data collection. The population of the study constituted all the universities in Kenya recognised by the Commission for Higher Education. The sample frame was drawn from the list of private universities authorised to award degrees in Kenya. Based on the findings from the questionnaire survey, four purposively selected heads of university libraries were interviewed. A total of 22 (92%) out of 24 potential university librarians completed and returned the questionnaire. The results show that university librarians were aware of the purpose of accreditation as it pertains to licensing, while conformity to standards was the greatest strength of accreditation. The university librarians suggested ways of improving the accreditation process. The findings show that there were positive and negative perceptions about the accreditation process. The findings reveal that despite the differences in the universities, majority of the librarians were positive that the accreditation process had brought about significant changes in their institutions. The paper concludes with a number of recommendations for improvement of the accreditation process.

Keywords

External quality assurance, accreditation, impact assessment, academic libraries, Kenya

Introduction

Globalisation and commercialisation have affected higher education systems and brought about the need for the establishment of national accreditation and quality assurance systems, along with the promotion of networking among them (UNESCO, 2010:5). These challenges have also created an increased need for improvement of the quality assurance processes and procedures in higher education institutions and external quality assurance agencies. There is an increased interest in quality and standards the world over reflecting the rapid growth of higher education and its cost to the public and the private purse (UNESCO, 2010:3; ENQA, 2005:9; UNESCO, 2006:6; Materu, 2007: xiii).

The new phenomenon of globalisation has brought growing concern worldwide regarding the quality of higher education inputs, processes and outcomes. Many countries have created new mechanisms for external quality assurance. This has resulted in quality criteria that reflect the overall objectives of higher education, notably the aim of cultivating in students critical and independent thought and the capacity to learn throughout life. Increasing emphasis has been placed on outcomes of higher education and evaluators are looking for new data and indicators that demonstrate that students have mastered specific objectives because of their education (Altbach, Reisberg and Rumbley, 2009: ix).

Quality requires the establishment of both quality assurance systems and patterns of evaluation as well as promoting a quality culture within institutions (UNESCO, 2010:3).

One of the major trends that emerged to address the challenges of globalisation and commercialisation of higher education was the setting up of regional quality assurance agencies around the world. These organisations are integrating national, regional and international initiatives to coordinate quality assurance activities in the world and include the World Bank, UNESCO, the European Association for Quality Assurance in Higher Education and the African Association of Universities (Altbach, Reisberg & Rumbley, 2009:ix; Sanyal & Martin, 2007:4).

The European Bologna Process and the MERCOSUR (Common Market of South America) initiatives on accreditation have established new trends at both the national and international levels in higher education quality assurance systems (Altbach, Reisberg & Rumbley, 2009:ix; Martin & Stella, 2007:25; UNESCO, 2006:9). Regional initiatives have been created in Africa and Asia following the Bologna process. They include the Communaute Econmique et Monetaire de L'Afrique Centrale (CEMAC) M, The Asia Pacific Quality Network (AAQN) and African Quality Assurance Network (AfriQan) (Materu, 2007:12; Martin & Stella, 2007:25; UNESCO, 2006:9).

Academic librarians should also cope with the current changes in higher education, that is, they need to identify what changes are occurring externally, what changes need to occur internally and to manage the change process to reconcile the internal with the external (Cullen, 2003:1).

Literature Review

Quality assurance is a generic term used as shorthand for all forms of external quality monitoring, evaluation or reviews and defined as a process of establishing stakeholder confidence whose provision (inputs, processes and outcomes) fulfill expectations or measures up to the minimum requirements (Martin & Stella, 2007:34). Quality assurance is also defined 'to relate to a continuous process of evaluating (assessing, monitoring, guaranteeing, maintaining, and improving) the quality of a higher education system, institutions or programmes. As a regulatory mechanism, quality assurance focuses on both accountability and improvement, providing information and judgment, not ranking through an agreed process and well-established criteria. Many systems make a distinction between internal quality assurance (i.e. intra-institutional practices in view of monitoring and improving the quality of higher education) and external quality assurance (i.e. inter- or supra institutional schemes of assuring the quality of higher education institutions and programmes). The Quale shape and the size of higher education system determine the scope of quality assurance. Quality assurance varies from accreditation, in the sense that the former is only a prerequisite for the latter. Quality assurance is often considered as a part of the quality management of higher education, while sometimes the two terms are used synonymously" (Vlasceanu, Grunberg & Parlea, 2004:48).

Various authors define the term accreditation as the outcome of a process by which a government, parastatal or private body (accreditation agency) evaluates the quality of higher education. This includes the institution as a whole, or a specific higher education programme, in order to formerly recognize it as having met certain predetermined criteria or standards and award a quality label (Martin & Stella, 2007:36; Sanyal & Martin, 2007:6; Harvey, 2004:5; CHEA, 2002:1). Accreditation ensures quality control (minimum standards) in higher education, quality enhancement and facilitation of student mobility (Sanyal & Martin, 2007:6).

There are three main methods of external quality assurance in higher education institutions. These are quality audit, quality assessment and accreditation. A quality audit examines an institution or one of its units. According to Sanyal and Martin (2007), quality audits are the first step in the quality assurance procedure. Norway, Australia, New Zealand and South Africa practise the quality audit approach of external quality assurance. Quality assessment involves evaluating the quality of higher education processes, practices, programmes and services using appropriate techniques, mechanisms and activities. France uses quality assessment to judge quality in higher education institutions.

According to CHEA (2002), accreditation is the process of external quality review used in higher education to scrutinise colleges, universities and

higher education programmes for quality assurance and quality improvement. Success results in an accredited institution or a programme. Accreditation is the most widely used method of external quality assurance. Accreditation is the common system in India, USA, Nigeria, Colombia, Germany, Japan, Philippines, Hungary, Chile, Portugal, North and South America and Kenya. This study was limited to accreditation as a method of external quality assurance.

In South Africa, accreditation refers only to institutions and their authority to offer specific programmes. In the United States of America, accreditation involves a collegial process of self-study and external peer review for quality assurance, accountability and quality improvement of an institution or program designed to determine whether it has met or exceeded the published standards of its accrediting association and it's achieving its mission and stated purpose. In Western Europe, it involves an evaluation and assessment of an institution or its programmes in relation to its aims and objectives, its recognised standards and its own goals. In Kenya, it means compliance with standards and award of status.

Over the last ten years, the demand for higher education has increased in Kenya just like in other developing countries due to the social demand for higher education. This led to the expansion of public higher education institutions from three in 1997 to seven in 2007, with 15 constituent colleges and 13 private universities. To control private higher education institutions, the Commission for Higher Education (CHE) was established in 1985 through an Act of parliament (Kenya Republic of, 1985:144).

However, Materu (2007) argues that the main reasons for setting up quality assurance agencies in Africa have been regulation of the development sector rather than to enhance accountability and improve quality. The author further states that "a stronger link between the results of quality assurance processes and funding allocations, as well as learning outcomes (quality of graduates) in order to promote accountability is needed."

The external quality assurance method used in Kenya is accreditation. In Kenya, accreditation is compulsory for private universities, but not for public universities. In fulfilling its mandate through institutional and programme accreditation, which is compulsory for all private universities, CHE conducts external quality evaluation (accreditation and re-inspection/audit). CHE uses standards and peer evaluators for quality assurance. External evaluation of academic libraries falls within this mandate.

Purposes of Accreditation

According to Martin and Stella (2007), the purposes of accreditation in higher education institutions are quality control, accountability/public assurance and improvement in teaching/learning. Bogue and Hall (2003) pointed out that accreditation performs two functions: quality assurance and institutional improvement. According to Dalrymple (2001), people perceive the quality assurance or accountability functions as wielding more influence, while at the same time functioning as a directive or a lowest common denominator. The continuous quality improvement function is seen as a positive, but without authority. Therefore, it tends to be viewed as discretionary and not required.

When accreditation functions as a quality assurance mechanism, it serves many constituencies, attesting that an institution or program has met established standards. When accreditation focuses on institutional improvement, it uses peer review to stimulate and assist educational programs to move toward achieving self-determined goals (Eaton, 2009; Bogue & Hall, 2003:23; Mathews, 2007:20; NEASC, 2006:20). According to Harvey (2004:8), accreditation is a form of control of the higher education sector. However, Hartley and Virkus (2003:32) noted that in many European universities, accreditation is seen as an opportunity to strengthen their image by demonstrating quality and to improve their market position internationally.

In the USA, accreditation has also been a force in reassuring the public of the quality of education offered within the country. A stated aim of higher education accreditation is to provide both quality and public assurance through the processes of comprehensive self-study and peer evaluation, which are guided by standards conceived by professionals in the field (NEASC, 2006:124).

Accreditation of an institution or program tells the public in general, and the institutional constituencies in particular, that it has the appropriate mission and purposes, the resources necessary to achieve those purposes, and a history and record

implying that it will continue to achieve its purposes (Bogue & Hall, 2003:23; INQAAHE, 2007:7; UNESCO, 2006:19). The accreditation process appears to generate cohesion, long-term direction and stability. The process also has profound impact on decision-making and strategic planning and is often described as a "blue-print" or a "frame-work" for future planning (NEASC, 2006:24).

Accreditation Methods and Mechanisms and its Role in University Libraries

Accreditation involves a set of procedures designed to gather evidence to enable a decision to be made as to whether the institution or programme should be granted accreditation status. The component methods include self-assessment, document analysis, scrutiny of performance indicators, peer visits, inspection, specially constituted panels, delegated responsibility to internal panels, often via proxy, entrustment to external examiners or advisors, stakeholder surveys such as student satisfaction surveys, alumni and employer surveys, direct intervention such as direct observation of classroom teaching or grading of student work (Harvey, 2004:9).

Quality assurance agencies (QAA) have developed instruments that may consist of open-ended questions to focus on qualitative analysis, or request the collection of a set of statistics. Peer review is a phase where qualitative judgment is the prevailing mode. Many quality agencies use both quantitative and qualitative data during the quality assurance process. However, human judgment is always applied to these methods of data collection (Martin & Stella, 2007:60).

An accreditation agency normally uses a three-step process; the first step involves provision by the institution of the relevant information related to pre-determined well publicised criteria. Self-assessment is the most central element in most external quality assurance systems. A set of standards and criteria determined by the QAA forms the basis of self-assessment. The second step is a site visit by an external review team to validate the self-assessment or the institutional report that results in the report. The third step is the report based on the outcome of the site visit (Martin & Stella, 2007:63). Brophy (2008) states that the use of independent assessment through external examination and peer review provides balance, as well as credibility to third parties, such as senior management. In the literature, different terms such as self-study, self-evaluation, internal quality assurance, internal review are used. This study will use the term self-assessment.

Accreditation influences university libraries generally because of the provision and use of library materials and services to support the teaching, learning and research environments of the higher education institutions. According to Dalrymple (2001), accreditation offers an opportunity for librarians to contribute to institutional self-assessment and continuous improvement. Hiller, Kyrillidou and Self (2008), Mathews (2007) and Dalyrmple (2001) have noted that the primary external motivators for engaging in assessment is accountability and accreditation, while the internal ones were for measuring achievement and improving library resources and services. Assessment has also grown in importance as libraries have become more customer-oriented.

Dano and Stensaker (2007) argued that critical issues are related to how accreditation is actually implemented as a method, what kinds of procedures are developed, and how these relate to institutional attempts to develop their own quality processes in academic libraries. According to Lindauer (1998), this includes how the meetings are set up, the types of questions asked, how they are asked, and the time reserved for discussion and feedbacks and how data and supporting documentation is organised. Dalrymple (2001) noted that:

> The task of implementing an assessment of the academic library does not include articulating a mission and determining goals, but also having a commitment to what is often called a culture of evidence. Having a working knowledge of such basic evaluation techniques as user surveys, focus groups, interviews, sampling, citation patterns and bibliometrics is necessary for a library to operate in such a culture.

Mathews (2007) stated that among the topics that must be addressed typically by a library's self-assessment are:

- Access, availability, and use of library collections;
- Collections and learning resources;
- Information literacy; information technology;
- Collaboration with faculty and other academic staff; and
- Library staff and outcome assessment.

The advent of new measurement initiatives, especially by The Association of Research Libraries (ARL), helped refocus libraries on customer outcomes and to collect data that could assist libraries in improving services and adding value to the work of their communities (Hiller, Kyrillidou & Self, 2008:226).

The implication for academic libraries is that the organisations awarding accreditation are less concerned about measuring traditional library inputs and are moving to asking for measurements that focus on the impact of the library on the lives of students, faculties, researchers and others. This shift towards determining outcomes is evidenced by the use of such phrases as "evaluation of student performance" and "evidence of student learning", found in some of the regional accreditation standards in the United States (Matthews, 2007:20).

Therefore, this paper does not attempt to assess the impact of the quality of the university library systems but to analyse how university librarians perceive the effects of accreditation on their institutions and their attitude towards external quality assurance as practised by the Commission for Higher Education.

Methodology

The study was based on the philosophy of pragmatism, and the mixed method research approach was used for data collection and analysis. During reviews of the literature on mixed method designs, parallels have been noted between the typologies discussed by Johnson and Onwuegbuzie (2004), Cameron (2009), and Creswell and Clark (2007). Johnson and Onwuegbuzie (2004) developed two mixed method research typologies, that is mixed model designs and mixed method designs. The mixed model designs are constructed by mixing qualitative and quantitative approaches within and across the stages of research. Mixed method design is based on crossing of paradigm emphasis and time ordering of the quantitative and qualitative phases.

The population of the first phase of the study constituted all the 24 recognised private universities in Kenya. The sampling units included the heads of all the eleven private chartered universities, nine private universities with letters of interim authority and four registered private universities. A questionnaire designed for this study was sent to all the universities. That included every member of the population (Kothari, 2004:14; O'Leary, 2004:103; and Sapsford, 2007:7). The selected sample for the first phase of the study reflected the characteristics of the entire population and it was therefore possible to draw concrete inferences. The sample frame was drawn from the list of universities authorised to award degrees in Kenya, accessible at http://www.che.or.ke/status.html. Based on the findings from the questionnaire survey, selected heads of university libraries were interviewed.

During the second phase of the data collection, a subset of four respondents who participated in the initial phase was purposively selected for interview. They included university librarians from two private chartered universities and two private universities with letters of interim authority (LIA). Sample size for the interview survey was much smaller than that of the questionnaire survey. This study adopted a sequential mixed model design because more than one methodology was used and data was collected in two phases. The sequential mixed model design applied in this study was based on the typology of the mixed model design discussed by Johnson and Onwuegbuzie (2004).

In this study, multiple research methods were combined to help interpret the perceptions of university librarians towards accreditation. Triangulation was used to secure in-depth-understanding of the impact of accreditation a process of external quality assurance on university libraries in Kenya. The data collected using the questionnaire, which consisted of both closed and open-ended questions, were analysed to provide information regarding the reliability and validity of the questionnaires and as a starting point for follow up questions for the interviews.

The data analysis type for this study adopted

the multi-analysis approach. The set of data collected during the first phase was analysed prior to analysing the other data set, that is, the analysis was done sequentially (Creswell & Tashakkori, 2007:306; Johnson, Onwegbuzie & Turner, 2007:115; Onwuegbuzie et al., 2007:11). The mixed model design adopted for this study allowed for the research questions for the second phase to emerge from inferences of the first phase. The first phase of the study was exploratory while the second phase was confirmatory (Cameron, 2009:146). During the first phase of study the data collected was first reduced using descriptive and inferential statistics. Open-ended and closed-ended questions were included to gather facts on the accreditation process in Kenyan university libraries. Likert scale a format in which university librarians were asked to strongly agree, agree, disagree, or strongly disagree or strongly approve, approve, was used in designing the questionnaire questions to measure university librarians attitudes towards the process of accreditation. The data from the questionnaire was analysed and the key results that needed explanation identified for a follow-up interview.

The results from phases one and two of the study were triangulated to form the basis for the conclusions and recommendations of this study. This involved qualitative data being correlated with quantitative data. It was followed by data consolidation, where both quantitative and qualitative data were combined. The next step involved data comparison, that is, findings from quantitative and qualitative sources. Data integration followed wherein both qualitative and quantitative findings were integrated into a coherent whole as recommended by Onwuebuzie et al (2007:12). The data from the two phases was analysed using descriptive and correlation coefficient statistical data analysis.

Results

A total of 22 (92%) out of 24 potential university librarians completed and returned the questionnaire. The overall response rate of 92% was high and ensured that the survey results were representative to the survey population. The total response rate included all the 11 (100%) private chartered universities, seven (78%) of the nine universities with letters of interim authority (LIA) and all the four (100%) registered private universities.

Table 1: Purpose of accreditation as cited by private universities

Private Universities	Role of Accreditation			
	Quality Assurance	Public Accountability	Award of Status	Funding
Private Chartered	10	3	8	2
Private with LIA	7	1	6	1
Private Registered	2	1	4	3
Total	19	5	18	6

Purpose of Accreditation

The most frequently cited purpose of accreditation in university libraries was "quality assurance", reported by 19 (86%) out of the 22 respondents, as shown in table 1. The respondents were from 10 out of the 11 private chartered universities, all the 7 private universities with LIA and 2 of the 4 private registered universities, as shown in table 1.

Award of status was the second most cited purpose of accreditation, reported by 18 (82%) of the 22 respondents.

Strengths of Accreditation

In response to an open-ended question, "Can you describe the strengths of accreditation?" 21 (95%) of the 22 respondents cited conformity with standards as the greatest strength of accreditation, as shown in table 2. They were from 10 private chartered universities, seven private universities with LIA and all the registered private universities, as shown in table 2. One of the respondents noted that accreditation "sets standards that a library should attain in providing resources and services that support learning and instruction that it provides". Another one noted "Accreditation sets benchmarks in terms of collection and infrastructure building."

Table 2: Strength of Accreditation in University Libraries in Kenya

Private Universities	Strength of accreditation in university libraries in Kenya					
	Conformity with standards	Quality assurance	Increased funding	Improvement of library services	Public accountability	Enhanced reputation of library staff
Private Chartered	10	7	2	2	3	2
Private with LIA	7	4	2	-	1	-
Private Registered	4	2	2	2	1	1
Total	21	13	6	4	5	3

Quality assurance was the second most cited strength of accreditation, mentioned by 13 (59%) of the 22 respondents, as shown in table 2. One of the respondents reported that "Accreditation ensures that the institution has adequate resources and staff in the library, which leads to quality education." Increased funding was cited by six (26%) of the 22 respondents as strength of accreditation, some reported that "accreditation helped institutions appreciate libraries and also invest in them.". Only 5 (24%) of the 22 respondents indicated that public accountability was also strength of accreditation. One respondent reported that accreditation increased "credibility, recognition and donor confidence".

Enhanced reputation of library staff was reported by only five (24%) of the 22 respondents as being one of the strengths of accreditation. The respondents were from two private chartered universities and one registered university, as shown in table 2.

Improvement of the Accreditation Process

An open-ended question "What needs to be improved about the accreditation process?" was answered by 19(86%) out of the 22 university librarians. Nine (47%) out of the 19 university librarians noted that more time should be spent in the library during visits by CHE in order to improve accreditation process, as shown in table 3.

One university librarian reported, "More time should be spent in the library to enable more refinement and thorough inspection because aspects such as their strategic plans and action plans conformity with these documents, annual reports need to be looked at."

One of the respondents reported that accreditation "certifies the library's competency in its role of ensuring adequacy, relevance and quality of information resources and facilities to facilitate quality learning and teaching in various academic programs".

Table 3: Improvement of the Accreditation Process

Private Universities	Improvement of accreditation process				
	More time should be spent in the library during the visits	Regular follow-ups	Consider changing information environment	Avoid conflict of interest by peer evaluators	Appreciate efforts of institutions
Private Chartered	6	4	-	-	-
Private with LIA	2	-	1	1	-
Private Registered	1	-	2	1	1
Total	9	4	3	4	1

Table 3 also shows that four of the 22 respondents reported that regular follow-ups should be conducted by CHE to ensure that recommendations made during previous visits were implemented. Three respondents reported that CHE should consider the changing environment of information communication technologies when evaluating libraries.

Two respondents reported that peer evaluators should be selected properly to avoid conflict of interest. One respondent from a private university with LIA said that the "little efforts that libraries make should be appreciated by the CHE".

Perception of University Librarians on Accreditation

The findings show that majority of the respondents agreed with the perception of university librarians on accreditation except that institutions were adequately trained on how to prepare for accreditation. The perception that accreditation process is short term was moderately accepted, as only 50% accepted the perception as revealed in table 4.

Table 4: Perception of university librarians on accreditation

No	Statements	Agreed
1	The University library staff participated in preparing for the visit/inspection	95%
2	The accreditation process has led to the physical development of the university library.	90%
3	Recommendations of the visiting/inspection team are usually valid.	90%
4	The benefits of accreditation process are long-term.	87%
5	Participation of experienced university librarians during the site-visit stimulates and assists the university library towards achieving self-determined goals	86%
6	Preparation for the accreditation visit/inspection was time consuming.	86%
7	The Commission provided guidance and support following the accreditation visit/inspection	81%
8	The accreditation has enhanced the quality of library and information services at my institution	78%
9	Participation in the accreditation process has led to improvements in the work environment for the staff.	72%
10	Participation in accreditation process has led to professional staff development training.	68%
11	The institutions are adequately trained on how to prepare for the accreditation visit.	22.5%
12	The benefits of accreditation process are short-term	50%

Discussions

The findings showed that the majority of university librarians (86%) were aware that the key purpose of accreditation was quality assurance as indicated in table 4. Award of status was also considered a major purpose of accreditation by 82% of the university librarians. The other purposes they cited were public accountability (24%) and funding (14%). The findings are in agreement with the one of the purposes of accreditation that is quality control, as suggested by several authors in the reviewed literature including Eaton (2009:2), Martin and Stella (2007:41), Materu (2007:iv), NEASC (2006:124), and Bogue and Hal (2003:23). However the university librarians were not aware of the primary purposes of accreditation that is public accountability and improvement as stated by Martin and Stella (2007:41), Materu (2007: iv).

The findings also showed that the majority of the university librarians (95%) considered conformity with standards the greatest strength of accreditation. Most of the university librarians (59%) cited quality assurance as the second strength of accreditation. The findings are contrary to a study conducted in the USA by NEASC in (2006), which revealed that the greatest value of accreditation was peer-review

and self-study processes (NEASC, 2006:124). This is not surprising because, unlike in Kenya where accreditation is compulsory for private universities, in the USA it is voluntary and based on self-regulation.

The findings further revealed that the university librarians were aware of accreditation as it pertained to award of status in Kenya that is for licensing. Based on the findings, it is important that CHE considers other methods of external quality assurance, such as quality audit and quality assessment.

Overall, the university librarians had high opinions of the impact of accreditation on the quality of libraries. This was reflected in the high ratings in their attitudes towards accreditation, as shown in table 4. Out of the 12 statements on accreditation, the librarians agreed with 10. This agreement with the 10 statements showed that the accreditation process had a positive long term impact on university libraries in Kenya such as:

- Promoting the physical development of university libraries;
- Assisting the university libraries to achieve self-determined goals;
- Enhancing the quality of library and information services in the universities;
- Improving the work environment for library staff; and
- Helping in the professional development of staff.

The benefits of accreditation process were found to be of short term benefit by involving peer reviewers during site visits, thus providing advice to universities and as NEASC (2006) stated, "the accreditation process appears to generate cohesion, long-term direction and stability. The process also has profound impact on decision-making and strategic planning and is often described as a "blue-print" or a "frame-work" for future planning".

The findings also showed that there were positive and negative perceptions about the accreditation process. The majority of the librarians agreed that recommendations made during the accreditation site/visit were valid, the benefits of accreditation were long-term, and that CHE provided guidance and support following the accreditation visit/inspection. These findings also revealed that, despite the differences in the universities, majority of the librarians were positive that accreditation process had brought about significant changes in their institutions.

Contrary to the positive perceptions on the post-accreditation visit/inspection, the findings also showed that the weakest aspect of in the accreditation process was how CHE prepared the institutions for the accreditation visit/inspection. The majority of the university librarians (86%) agreed that preparation for the accreditation site visit/inspection was time-consuming. Most of them (64%) also agreed that the institutions were not adequately trained prior to the accreditation site visit/inspection. The findings also suggested that the university librarians did not understand their role prior to the site visit/inspection.

Conclusion

The university librarians were not aware of other purposes of external quality assurance such as accountability and quality improvement. They were only aware of accreditation as it pertained to the award of status in Kenya, that is, for licensing.

Accreditation had made tremendous impact on university libraries, ensuring that the institutions had met the minimum standards such as physical development of libraries, improvement of the work environment for library staff, professional development of library staff and provision of adequate information resources. Accreditation had also made significant impact by involving peer evaluators during the site visit/inspection of university libraries. The university librarians did not practise self-evaluation (internal quality assurance). There was no evidence in the information provided by the university librarians in the self-evaluation reports. The CHE did not adequately prepare the institutions prior to the site/visit inspection nor did it conduct regular follow-ups of institutions after the site visit/inspection.

The challenge to the university librarian in Kenya was ensuring that the quality criteria reflected the overall objectives of higher education, notably the aim of cultivating in students critical and independent thought and the capacity to learn throughout life.

Accreditation offered an opportunity for

librarians to contribute to institutional self-assessment; current trends in accreditation also challenge librarians to examine the criteria by which they measure success. Accreditation had affected university librarians because the provision and use of library materials and services influence the quality of the students' educational experience (Dalrymple, 2001:23).

The main purpose of this study was to investigate the impact of accreditation on university libraries. Although the population of this study was limited to private university libraries, the findings from the study were significant. The study was also significant because, for the first time research was undertaken on the impact of accreditation, a process, of external quality assurance, on university libraries in Kenya. However, it was evident from the findings that accreditation was mainly focused on compliance with minimum standards, as opposed to accountability or guidance and improvement of university libraries. The university librarians were only aware of accreditation as it pertained to award of status.

It was evident that accreditation, a process of external quality assurance, had made significant impact in university libraries, in Kenya. The impact on university libraries was due to the eligibility requirements for the award of status. However, it was clear from the findings that the university librarians did not conduct self-assessment prior to the accreditation visit. The reason for lack of self-assessment was that the standards of CHE focused on inputs, with little attention to process, output and outcomes.

Recommendations

CHE should create new mechanisms for external quality assurance. It should also promote accountability and quality improvement during the accreditation process of institutions instead of only regulating the higher education sector based on conformity with minimum standards (Materu, 2007:iv). This might result in quality criteria that reflect the overall objectives of higher education, notably the aim of cultivating in students critical and independent thought and the capacity to learn throughout life.

CHE should consider improving the way it prepares institutions prior to the accreditation site visit/ inspection. The Commission should prepare a site visit/inspection manual, indicating how the institutions should prepare before the accreditation visit. CHE should also advocate the use of self-evaluation in university libraries in Kenya. The libraries should consider developing internal quality assurance systems. As stated by Materu (2007), regular self-assessment at the institutional and unit levels is the backbone of a viable quality assurance system.

The study, through its findings, identified areas that required further research in the evaluation of university libraries. This study explored the impact of external quality assurance on university libraries and not the institutions internal systems. Further research on the how university libraries undertake internal quality assurance is required. This would show how university libraries are fulfilling the purposes and standards that apply to higher education as defined in the institutions internal policies.

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Patrick Ngulube (PhD) is Professor in the Department of Interdisciplinary at University of South Africa. He is also Chair of the South African Society of Archivists (SASA). He has extensive experience in records, archives and disaster management. Prof Ngulube is a rated NRF researcher.