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A Competency Index for Research Librarians in Kenya

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Abstract

Discussion on competencies for librarians is not new. Several librarianship scholars and practitioners have proposed diverse skill-sets over the years. While some of these suggestions correspond, others contradict. Further, whereas specific skill-sets have been proposed for various types of libraries, only general job descriptions exist for research librarians. So far, there seems to be no in-depth competency specifications for any category of librarians in Kenya. Through documentary analysis, interviews, social network analysis and focus group discussions, this study investigated the essential skills, attitudes and personality traits that research librarians in Kenya should possess. The findings indicate that interpersonal, management, information communication technology, and research skills are increasingly becoming as important for research librarians as the traditional core librarianship competencies. The paper concludes that the development of such skills through training and retraining programmes should be prioritised.

Keywords

Competency index, Skills, Research librarians, Research libraries, Kenya

Introduction

Although the basic professional tenets of librarianship remain the same, the methods, tools, scope and environment of information delivery continue to change dramatically (Special Libraries Association, 2003). Myburgh (2003) describes the emerging information environment as being hypertext, networked and digital (virtual) and characterised by disintermediation, convergence, connectedness, competition, globalisation, the information explosion and vacillating funding. Kigongo-Bukenya (1999) argues that the information landscape is now characterised by increased agitation by stakeholders for the use of new technologies in organising and communicating information transparently, professional differentiation to meet the special group interests, and "interdisciplinarism".

Gunasekara (2005) defines a research library as a reference library, which provides specialised information facilities where exhaustive investigation on a particular field is conducted. He adds that research libraries are established under specific research institutes. Kent, Lancour and Daily (1978) also agree that research libraries should collect information on the area of research pertinent to their parent institutes in greater depth than any other library. Research libraries ordinarily provide reference service, reference management, research space, information literacy training, management of research outputs, resource exchange, and access to online information resources and gateways.

Research libraries, just like the other library typologies, are continually facing new expectations from stakeholders. The Council on Library Information Resources (CLIR, 2008) explains that the research information landscape is currently characterised by ubiquitous, digitised, indexed and online access to content. CLIR (2008) also predicts that the research libraries of the future will be multi-institutional entities collaborating with multiple researchers, stakeholders and information providers; open to change and embracing discovery; and largely

digital, holding federated collections organised and delivered digitally through converged ubiquitous media. Such libraries will support the creation of research information, connect research communities, and provide the physical and virtual infrastructure to facilitate their use. Walker (2009) explains that research librarians are expected to be custodians of the physical and digital research information resources; managers of institutional repositories; administrators of information services; experts in subject information, information literacy and the management of vast research data sets; and providers of specialised information technology services.

Knight (2009) argues that the dynamic information environment requires versatile and better-educated information professionals who, besides librarianship and technical information skills, also possess good change management, communication, leadership and people management skills. Although some scholars (Salter 2003; Abram 2005) advocate for a new breed of librarian, i.e. Librarian 2.0, others (Gutsche 2010) argue that a review of the skills, knowledge, behaviour and attitudes of progressive librarians should possess would mainstream the profession in the emerging information ecology. Opinion is also divided on whether each librarian should possess all the skills. Some practitioners argue that the more the merrier while others hold the view that the essential skills differ depending on the context of the librarians. The latter group explain that research libraries can benefit more from a synergy of skills from different librarians than multi-skilled individuals (Partridge, Lee and Munro 2010).

Literature Review

Limited literature exists on the competency requirements of library and information professionals in Kenya. Only two works were identified. Shiholo (1999) conducted a study on competency requirements for information professionals of the 21st Century and concluded that information technology and management were rated high. Specifically, he identified knowledge of library automation activities, networking, databases, online searching, and information systems development as some of the competency areas modern information professionals would need. Shiholo and Ocholla (2003) investigated trends in the training needs of information professionals in Kenya. They explain that in the early 1980s, the focus of information training moved to databases, information technology, library automation, public relations and communication, and that the 1990s witnessed an increase in the demand of technology-related competencies including computer applications and programming, networking, media technology, and information systems management.

Other studies only mention required librarian competencies in the context of African countries collectively, and/or Kenya in passing. Among these, Nyakundi and Mnjama (2007) explain that there is increased demand for competencies of the Internet, World Wide Web, as well as online and offline electronic databases. The Commission for Higher Education (CHE) (2007) provides general guidelines and standards for the staffing of academic libraries in Kenya. Aina (2005) argues that an ideal LIS curriculum should have modules on library concepts, information and communication technology, archives and records management, rural information service, research, management, publishing and public relations. Westhuizen and Randall (2005) identify a number of skills as necessary for information specialists supporting research, including facilitation of learning process, value addition to products, current awareness, web newsletter support, searching techniques, metadata management, business sense, web product development, copyright knowledge, communication, evaluation of information, research tools knowledge, e-scholarship, proficiency in digitisation processes, leadership, client relationship management, change management, flexibility, mentorship, knowledge management, IT literacy, and critical thinking. Ocholla and Bothma (2007) suggest that the emerging economic environment demands information professionals with research, communication, customer care and interpersonal skills.

Some Existing Competency Indices

Competency indices define requirements needed for workers to perform and meet the needs of a specific job (Rothwell and Lindholm 1991). The indices can be used for benchmarking, evaluation and to

determine education requirements for positions. Competency indices deconstruct positions into knowledge, skills, values and attributes which determine success of the bearers (Soutter 2007). Competency indices are much broader than traditional task-oriented skills in job descriptions. They are used to clarify common goals to all employees, identify employee skill gaps, develop training programmes, recruit qualified staff, reward achievements and retain staff (McNeil 2002).

The Association of South-eastern Research Libraries (ASERL) in the United States of America developed a set of competencies desired of research librarians (ASERL 1999). However, a review of the competencies reveal that the association focused on academic libraries and not research libraries as per our definition above. Nonetheless, it states that the attributes of a successful research librarian include intellectual curiosity, flexibility, adaptability, persistence, and entrepreneurship. The association also emphasises communication skills, commitment to life-long learning and personal career development. Other mentioned competency areas include information resources management, technology and innovation, principles of librarianship, strategic planning, library cooperation and collaboration.

Middleton (2003) conducted a survey of the skills LIS graduates are expected to have. He identified 189 skills which he categorised as collection building and management, communication, facilities and equipment, information organisation, information services, information systems, management, marketing, and research. The American Library Association (ALA) in 2009 approved the basic knowledge anyone graduating from ALA accredited Master's programmes in library and information studies should have (ALA, 2009). This body of knowledge covers librarianship theory; information resources acquisition, organisation and management; knowledge and information management; emerging information and communication technology; reference and user services; quantitative and qualitative research; continuing education and lifelong learning, administration and management. Critically, ALA (2009) also emphasises that professional librarians need certification or licensure.

WebJunction (2009) presents a detailed competency index for a wide spectrum of librarianship fields. The index was aggregated from competency definitions of several librarianship associations, as well as practitioners mainly drawn from the United States of America. The index covers library management, personal and interpersonal, public services, technical services, and technology skills. Library management includes competencies to manage budgets, community relations, library physical space, laws, procedures and policies, marketing, organisational leadership, personnel management, project management, staff training and development, and strategic planning. The personal and interpersonal competencies include communication, customer service, ethics and values. Public service competencies include access services, specialised user (adult, youth, and children) services, collection development and patron training. The technical competencies cover acquisition and processing, cataloguing, collection management and preservation of information resources. The technology competencies include electronic communication, core hardware, Internet, core software, core operating systems, applications, web design and development, enterprise computing, networking and security, server administration, technology project management, technology policy development and technology training.

The University of Florida's George A. Smathers Libraries have also developed a competency index for their librarians (University of Florida 2011). These competencies include institutional, interpersonal, management, technology, public service, cataloguing, acquisitions, and preservation and binding competencies. The institutional competencies include understanding the place of the library in its parent institution. The interpersonal competencies are identified as communication, presentation, collaboration (teamwork), adaptability, and independence. Planning, budgeting, facilities and human resource management are some of the management competencies listed. Various levels of technology competencies have also been proposed. Basic understanding of computer hardware and software, ability to perform basic Internet tasks including searching and use of social networking tools, and IT security are listed as core technology competencies. Circulation, information and research assistance,

inter-library loan, stack management, policies and procedures are considered core public service competencies.

Despite the above and other efforts to develop competency indices for librarians generally or research librarians in particular, no serious attempts have been made to develop competency indices for librarians in Africa, and specifically, Kenya. Indeed, no literature providing an in-depth competency index for library and information professionals in Kenya was found. This study sought to address this apparent knowledge gap by investigating, harmonising and documenting a set of competencies for research librarians in Kenya.

Methodology

This study was conducted through interpretive qualitative case study. The data was collected in 2010 from sixteen librarians and 162 researchers in five national and international research institutions in Kenya. The research institutions are the African Medical and Research Foundation (AMREF), International Livestock Research Institute (ILRI), Kenya Medical Research Institute (KEMRI), Kenya Agricultural Research Institute (KARI), and the International Centre for Agroforestry Research (ICRAF) which is also known as the World Agroforestry Centre. The authors used information-oriented case study sampling strategy to select the five libraries. As Flyvbjerg (2006) explains random sampling focuses on representativeness alone while information-oriented sampling also focuses on expectations of information content of the cases. The cases were selected based on the amount and quality of information they had the potential to generate.

Data was collected through individual face to face interviews with the sixteen librarians and 162 researchers; ten focus group discussions (two for each case library) with groups of five to seven researchers; one focus group discussion with five middle-level librarians; and one half-day workshop with five senior librarians. Additional data was collected through participant observations both directly and through mystery shopping within the case libraries (Copies of the various instruments are available upon request from the first author). Mystery shopping was done by research assistants unfamiliar to the case library staff. These assistants posed as any other ordinary library user and experienced the services first hand. As Hogg and Gabbott (1996) suggest, mystery shopping was used in recognition of the fact that: (a) there is a discrepancy between real and reported behaviour; (ii) often facts are brought to light in the context of natural settings and may not be obtained through questioning; and (iii) the verbal capabilities of the interviewee may limit the quality and quantity of information gathered.

Relevant interview schedules, focus group discussion guides, observation checklists and mystery shopping scenarios were used. Data on social networks and collaboration between the librarians was collected through social network analysis. The analysis was based on co-authorship of publications listed in the online Web of Science comprising the Science Citation Index; Social Science Citation Index; Arts and Humanities Citation Index; Conference Proceedings Citation Index – Science; and Conference Proceedings Citation Index – Social Science and Humanities.

The data was analysed through content analysis, conversation analysis and Heideggarian hermeneutics. Content analysis was used to examine the content and context of various secondary data obtained from documents, as well as primary data obtained through interviews and focus group discussions. On the other hand, conversation analysis which involved making a moment-by-moment, turn-by-turn "transcript" of the actions in each encounter and examination of these encounters individually and then comparatively to reveal a practice's generalisable orderliness was used for the analysis of the data collected from the focus group discussion and interviews with researchers and librarians. The Heideggarian hermeneutics approach focuses on how people interpret their lives and attach meaning to their experiences. This approach recognises that the data generated by the research subjects becomes fused with the experience of the researcher during research. This means that the views of the researcher cannot be bracketed off, thereby recognising that no researcher can come to the study with suspended preconceptions. This technique was used to interpret the basic terminology and the meanings of the issues and events observed and/or captured by other means during the study.

Reliability was ensured through accurate

coding, issuing of explicit instructions to the participants during the study as well as maintaining objectivity throughout the process. On the other hand, validity was ensured through methodological triangulation, pre-testing of the data collection tools through cognitive (intensive) interviews with researchers and librarians, and use of appropriate samples which were truly representative of the research population.

Findings and Discussion

The State of Kenyan Research Libraries and Librarians

No official inventory exists but the findings of this study indicate that there are about 25 research libraries in Kenya. All these libraries are attached to research institutions working on specific research areas such as agroforestry, fisheries, agriculture, livestock, policy analysis, economics, population, and health, among others.

Background Information

Of the 162 researchers who participated in the study, 88 (54%) were male while 46% were female. Further, 52 (32%) of the researchers interviewed were between 31 and 40 years of age. Forty-eight researchers (30%) were between 20 and 30 years of age; 49 (30%) researchers were between 41 and 50 years of age; while 13 (8%) were over 50 years old. Similarly, sixty nine (43%) of the researchers interviewed currently had master's degrees. There is also a sizable portion – eighteen (11%) – that had professional diplomas. This latter category comprises mainly technologists supporting the research process, especially in the laboratories. Only 21% of the researchers interviewed possessed a PhD, which is evidently low. The study concluded that the average researcher in Kenya is equally likely to be a male or female individual aged 31-50 years who holds a master's degree. These findings imply that the researchers are relatively young and are likely to use the research libraries for many years.

The case study libraries employed a total of twenty professional librarians. Of these, sixteen, representing 80%, were interviewed. One half (eight) of the librarians interviewed were male while the other half were female. Six (37%) of the librarians were below 30 years of age while four (25%) were between 31 and 40 years of age. Thus, ten (62%) of the librarians were below 40 years of age. Seven (44%) of the librarians possesed bachelor's degrees, while six (37%) had master's degrees. Some of the librarians had also had specialised training in the areas of research of their institutions such as agriculture, botany and biological sciences. None of the research librarians interviewed had a PhD degree even though some have enrolled for such degrees. Thus, the study concluded that the average research librarian in Kenya is below 40 years of age and holds a bachelor's degree. Though there is no major gender imbalance amongst the research librarians, it is noteworthy that all the five case libraries were headed by female librarians.

Social Networking

The findings from social network analysis revealed that there was not even one publication co-authored or authored individually by librarians in the case libraries. This is a matter of great concern as it may be a true pointer to the possibility that the research librarians in Kenya do not undertake much research themselves. This finding hints to a major competency gap and seems to imply that the research librarians in Kenya are not active in research, and thus may not be adequately competent to support researchers. During the focus group discussions, both the researchers and the librarians agreed that if the research librarians conducted their own research they would acquire skills and experiences which would enable them to engage more effectively with the researchers. They noted further that active participation in research would also enable librarians to get better recognition and attract funding to the libraries and the institution at large. Both the researchers and the librarians recommended that a research librarian, at whatever level, should possess fundamental understanding of the research methods, theoretical frameworks, current research issues and the latest research findings in the specific areas of service. They also opinionated that providing librarians with research skills would enable them to acquire research status in their parent institutions, thereby providing them access to research funding and favourable working conditions.

Strategic Management Competency

The study also found out that most of the research librarians did not have effective strategic management competency. In fact, none of the five case libraries had a documented strategic plan. Instead, they were guided by the corporate strategic plans of their parent institutions. Unfortunately, the corporate strategic plans make nominal mention of libraries and do not provide adequate details on the goals the libraries ought to achieve and how. The situation is exacerbated by the fact that most of the librarians did not participate actively in the development of these corporate plans, partly because of their perceived incompetence in strategic management. Both the researchers and the librarians in their respective focus discussion groups underscored the value of effective strategic management in anticipating and managing change in and around the libraries, and in mobilising resources, demonstrating and justifying the return on investment in the library to the parent institutions, and aligning the library services to the emerging needs of the institutions. It was encouraging, however, that the librarians in all the case libraries said that in recognition of the potential value of strategic management to the survival of the libraries, they would develop strategic plans within a year or so.

Customer Care

Information on elements of customer care, which was obtained through mystery shopping, focus group discussions and interviews, revealed that many research librarians in Kenya lack good interpersonal skills as cases of rudeness, incompetence in responding to user needs, desertion of library reception areas and service desks, pre-occupation with other tasks when attending to users, poor communication, and lack of commitment to keep the promises made to customers were found to be rampant in the case libraries. This poor state of customer service can be attributed to the personality of librarians, poor training of librarians in customer care, lack of documented and internalised customer service standards and policies in the libraries, lack of motivation, understaffing, poor work environment and lack of adequate tools to meet the needs of the users. In acknowledging the fact that good customer care keeps the librarians and libraries relevant in a fast changing world, the researchers and the librarians recommended that research librarians should possess certain basic interpersonal skills which would enable them to provide superior services to the users. Both the researchers and librarians also recommended that appropriate actions should be taken immediately to remedy the sorry customer service situation in the research libraries. Even though no particular approach was recommended, development of customer service standards and empowerment of librarians to comply with them should be considered as some of the critical elements of the possible remedial measures. Similarly, it was proposed that the library and information studies curricula should be revised to prepare the students adequately for future responsibilities in offering acceptable customer care in research libraries.

Findings from the Focus Group Discussions

The findings from the focus group discussions and interviews with both the researchers and the librarians underscored the fact that research libraries should harness the power of the latest ICT tools to provide superior library services to the researchers, some of whom are already using these tools individually or through social networks to seek information. It was also suggested that the research library should be integrated with the institutional websites, Extranets and Intranets. It was also proposed that where possible, depending on the preferences of the users, the libraries should also embrace Web 2.0 interactive tools such as blogs, wikis, and folksonomies, among others, to support the services rendered to the users. The importance of ICT tools in delivering library services was underscored by the findings from interviews with the researchers and corroborated by the librarians that the users value the Internet and access to online journals and online research papers as the services most important to them. Consequently, the researchers and librarians proposed that research librarians should have the requisite technology competencies including web publishing, multimedia and ICT systems management skills to maximise the potential of these tools to the user community.

Social Networking

The findings from social network analysis showed that there are loosely-knit social networks around

and within research libraries in Kenya and their parent institutions, the full potential of which has neither been harnessed nor realised. Such networks could facilitate pooling of information resources, funds and ideas for the benefit of research in the country. The researchers and librarians explained that this scenario is attributable to the lack of adequate networking and alliance building skills among the research librarians. Another possible explanation of the situation was deemed by the respondents to be the lack of effective communication mechanisms between researchers from different organisations. The respondents also explained that this challenge can be reduced through the adoption of simple, generally free and versatile Web 2.0 and other technological tools. The fact that most libraries are not maximising the potential of these tools is mainly attributed to the lack of knowledge and skills among the research librarians regarding these tools as earlier stated.

Research Library Services

The need to promote the research library services also emerged as an important determinant of how effective the research libraries play their role. Currently, the libraries seem to be waiting for users and, to a large extent, only offering what the users ask for. Consequently, there is some gap between what the researchers know they can get from the libraries and what the libraries have the potential for or are actually offering. Whether they are managing organisational knowledge or creating a platform for interaction for researchers, the fulfilment of these research library roles largely depends on how well the users understand the services and products of the library and are facilitated to use them. The respondents asserted that outreach to the users by the libraries is of paramount importance now more than ever given the existence of several alternative sources of information which compete with the libraries for the users. As one of the users said during the interviews, "times have changed and the Internet poses a real challenge because users will only come to the library if they know they can get services which are better than or on a par with what is offered by alternatives." The respondents suggested that the research libraries should conduct vibrant and dynamic marketing campaigns to increase the users' awareness of the library services and products, as well as educate them on how to make the best use of the library. Consequently, they proposed that research librarians should possess some basic marketing and information promotion skills.

Interviews and Focus Group Discussions with Librarians

The findings from the interviews and focus group discussions with librarians also confirmed that most of the librarians are not aware of the models of library service they are using. It emerged that most of the time the services are planned based on what similar libraries are offering. It was recommended that research librarians should be grounded on the conventional and emerging library service models.

Generally, there was consensus between the researchers and the librarians that the research libraries in Kenya are underutilised. The findings indicated that most of the researchers only use the library when they are undertaking programmes of study. Consequently, the level of usage varied depending on whether one was studying for a qualification or not. This fact was corroborated by the librarians who said that most of the researchers used the library more when they are undertaking some studies or when they are writing research reports or proposals. The findings also showed that the usage and the membership of the research libraries have reduced over the past three or so years with sixty six (51%) of the researchers interviewed saying that they would stop their membership in the next three or so years. Most of the factors identified as affecting the usage of the libraries relate to inadequate staffing. Thus, we hold the view that improving the competencies of the research librarians will enrich the research library experience in Kenya. Indeed, the researchers suggested that retraining the library staff on ICTs, public relations and marketing, as well as supporting continuous training of librarians through short courses and workshops would improve the services in research libraries.

Toward the Development of the Competency Index

In this section, the authors categorise, discuss and summarise the competencies that research librarians

in Kenya need to have based on the findings of this study from the literature review and the various data collection and analyses that were performed. Five main competency areas are identified, explored and discussed: technical professional, personal and interpersonal, ICTs, management and research.

Technical Professional Competencies

Even though most scholars (McNeil 2002; Shiholo and Ocholla 2003; SLA 2003; Soutter 2007; ALA 2009) agree that librarians now do more than the traditional tasks, they emphasise that technical librarianship skills are still important. These technical competencies can be generally categorised as management of information resources, information services and proficiency in information management and dissemination tools and techniques.

The librarians still need the capacity to manage the full cycle of information, that is, from creation or acquisition to disposal; build collection of all formats through ownership, access and other means; develop in-depth knowledge of the content of the collection; provide best access to the collection physically and virtually; and maintain the collection through suitable preservation and conservation techniques.

It is also paramount that the librarians possess skills to provide cost-effective user-centric information services, review the services constantly, employ evidence-based approaches of information service design and delivery, provide information and not just information resources, and empower users to self-serve. Thus, the librarians should be able to execute a suitable circulation and lending service, inter-library loaning, reference, stack management and binding services to the researchers. The tools research librarians should master include online and offline databases, indexing, cataloguing, classification and abstracting tools, library management systems, thesauri and online public access cataloguing systems.

Personal and Interpersonal Competencies

Partridge, Lee and Munro (2010) argue that some personal traits may be more important to research librarians than technical skills. Some of these personal traits include passion, enthusiasm, good grooming, "spark", resilience, curiosity, self-drive, and open-mindedness. Other attributes include independence, moral integrity, action-orientation, patience, diplomacy, sensitivity, personal commitment and customer-orientation (Myburgh 2003).

Progressive librarians should not shy away from using non-traditional approaches to information organisation and readily use tagging, tag clouds and folksonomies where appropriate. The librarians should also readily embrace non-textual content such as videos, pictures, sight and sound (Singhal 2010).

It is also important that modern librarians have a flexible attitude. Cohen (2006) proposes a seventeen-point manifesto of the desired ethos and attitudes of the modern librarians. The manifesto calls on the librarians to recognise the changes around the libraries and users and adapt to them without sticking to or defending the status quo but to participate actively in moving the library forward by proposing and experimenting with new services and products. The manifesto also requires the librarians to recognise the role of the users in determining what and how they are served. It also urges the librarians to be willing to go where the users are. This is important because researchers are increasingly migrating online and trying to bring them back to the offline environment may be futile. The new information ecology demands that librarians no longer offer services from behind a desk. The new role of librarians is not only offering a good service but also a good customer experience whether it is physical or virtual. Wittenborg (2011) also explains that the comfortable, predictable librarianship routines are gone –the only routine now is change – and adds that only the librarians who learn how to thrive in it will survive.

Partridge, Lee and Munro (2010) and WebJunction (2009) propose that progressive librarians need more than ordinary oral and written communication skills to engage effectively with diverse audiences using a variety of tools and methods. They suggest that these librarians should also have advocacy, lobbying, negotiation, diplomacy, conflict resolution, marketing, and promotion skills. They also suggest that the librarians should have good presentation skills.

Progressive librarians should also be competent in community relations. This competency would enable the librarians to demonstrate the value and impact of the library effectively; build support for the library; maintain positive public relations; and form strategic partnerships. The skills would also be

useful for creating a warm, friendly, safe, and healthy physical, social and virtual library environment that encourages the members of the community to use the library (WebJunction 2009).

A progressive librarian should be an educator, trainer or guide. This role is particularly critical since there are many complex issues and tools in the emerging information environment that the researchers cannot handle effectively on their own (Partridge, Lee and Munro 2010). Progressive librarians also need life skills such as problem solving, critical thinking, effective communication, teamwork and ethical thinking which complement their discipline-specific skills and professional knowledge (Partridge and Hallam 2004). Modern librarians should learn to establish connections with information and not libraries per se; embrace the role of a teacher; adopt marketing approach to library service design and delivery; and have confidence to embrace the future (Saint-Onge 2009). Partridge and Hallam (2004) also emphasise that teaching, marketing and customer service skills are critical for all librarians of the 21st Century.

Partridge, Lee and Munro (2010) also propose that modern librarians should have collaboration, networking and teamwork skills. These are invaluable to research librarians because research is taking a multi-disciplinary dimension. There are many players that work to make the library experience appropriate for researchers and the librarian must be able to synergise with them to concoct this experience. Such librarians do not only collaborate with individuals but also with groups, associations, communities and institutions. Myburgh (2003) also suggests that in a globalised world, librarians now need to understand at least one more language spoken by its core publics going beyond the common lingua-franca.

Information and Communication Technology (ICT) Competencies

King (2007) proposes a set of ICT skills a librarian should possess. These include ability to write and post to a blog; create, upload, and edit photos, short videos, podcasts and screen casts; edit an avatar's appearance; and, know how to select a new device and figure out how to use it. Partridge and Hallam (2004) suggest that web content management has also emerged as an important skill area that modern librarians should master.

Stephens (2006) suggests that modern librarians should control technolust by not adopting technologies just because it is "cool" to do so; make decisions fast (with the help of the researchers) since research projects are time-bound; and embrace Web 2.0 tools. He also argues that modern librarians are trend-spotters who are constantly scouting for change in the library environment which may impact their institutions and users.

Progressive librarians should have adequate skills to enable them to manage their email, hardware, Internet, operating systems, software applications, servers, computer networks and electronic publishing (including web publishing), according to WebJunction (2009). Besides, the librarians should be able to plan and manage technology projects effectively. They should also be able to impart the same skills to the users. Modern librarians should also understand the power and opportunities of Web 2.0 and help the end-users to embrace the technologies to satisfy their information needs (Singhal 2010). In this manner, the librarians connect the users with technology in the information context. They also mix and remix the e-resources and print materials to meet the needs of the library users.

Fadehan and Ali (2010) suggest that modern librarians should have competencies in imaging technology, optical character recognition, web mark-up languages, indexing and database technology, user interface design, open source information management software, creative commons, web server management, web publishing, networking, desktop publishing, multimedia design, automation of library processes, storage technologies, and ICT systems administration. Partridge, Lee and Munro (2010) suggest that the place of ICT skills for modern librarianship may have been hyped. They admit that the skills are essential but point out that technology is just a means to an end in librarianship and not the end. They suggest that the librarians should have essential ICT skills to enable them to understand what is available, what it can do for the libraries and how to use it. They seem to suggest that advanced ICT tasks in the library can be undertaken by ICT specialists either within the library or in the corporate ICT units.

Management

WebJunction (2009) suggests that a progressive librarian should have competency to understand budgets and funds management. Thus, the librarian should understand basic financial and budgeting terminology and processes. The librarian should also seek and manage funding sources (resources mobilisation). The librarian should also provide strong leadership for all the library stakeholders and teams. Change management is also a critical component of management competencies that a librarian should have. The librarian should also have basic human resource management skills enabling him/her to recruit, empower, motivate and appraise the library workers (including consultants and volunteers) to deliver the library services effectively. Partridge and Hallam (2004) also suggest that librarians should be conversant with risk management, time management and project management.

Modern librarians should also have the competency to shoulder legal responsibility. They should understand legal issues and apply the relevant legal provisions relating to information storage, organisation and access; standards of professional conduct; legal deposit; intellectual property and copyright (Myburgh 2003; Partridge and Hallam 2004; Kennan, Willard and Wilson 2006; WebJunction 2009). The librarians should also be able to develop policies and procedures appropriate for the needs of the library. Modern librarians should also have skills to manage the information organisations and agencies as business entities. They should understand the "big picture" and align the library to the parent organisation's vision and mission. They should be able to develop strategic plans, set priorities and allocate resources to achieve them. The modern librarians should also be able to calculate and demonstrate the return on investment for the library to the stakeholders. They should also be competent to supervise the day-to-day administration of the library.

Research

Research competency is critical for research librarians. Partridge, Lee and Munro (2010) suggest that librarians ought to have research skills to enable them to embrace evidence-based practice. They specifically point out that good research skills would enable librarians to make best decisions, develop best practices and establish benchmarks. They also argue that good research skills would enable librarians to evaluate the library's resources and services and align them to the emerging needs of the users and other stakeholders. Partridge and Hallam (2004) and Singhal (2010) also explain that research skills enable the librarians to remain current regarding developments in their fields of interest and those of their stakeholders.

The research librarians ought to know the top research issues in their institutions, as well as the top researchers and publishers in those areas. They must be able to track breaking news and publications in those areas. The librarians should also be willing and able to engage the researchers in their domains (Walker 2009).

Competency Index for Research Librarians in Kenya

From the foregoing discussions and rationale, the authors propose a competency index for research librarians in Kenya, as shown in the Appendix. The index is defined at three levels: competency areas, particular competencies under each area, and specific skills under each competency. There are five competency areas: technical, personal and interpersonal, ICTs, management and research. The rationale for including the areas in the index is explained above. Technical covers various aspects of the professional and technical role that a research librarian is expected to demonstrate that are not personal or interpersonal, ICT, management or research related per se. This first area covers professional foundation, i.e. the qualification-based, experiential skills and knowledge the research librarian should have; information resources management skills and competencies; information services design and delivery skills and competencies, and information management tools and techniques.

The personal and interpersonal area comprises personal attributes and attitude, communication, public relation and networking competencies which may be seen to reside in the personal and social dimension. ICTs require competency in ICT systems, hardware and software, the Internet, Web and desktop publishing and digitisation. The area of management covers general management, funds and

project management and legal affairs. The fifth area, research, details the general skills expected in a research librarian which culminate in being able to support researchers in reference and output management.

Conclusion and Recommendations

The role of research libraries is to support research through the provision of appropriate information that empowers the researchers to conduct and report research effectively. Most of the research libraries in Kenya do not play this role effectively. Thus, improving competencies of the research librarians holds a great potential for improving the services of the research libraries in Kenya.

The competency index proposed in this paper has been developed from insights that emerged from the extensive literature review, from the various data collection and analysis tools used in the study and from the opinions of the research librarians surveyed. The index is furnished here for discussion and debate and implementation or testing through the avenues recommended above and below. Validation of the index might be in terms of being compared with benchmarks in the literature specified for other countries.

The authors are conscious of the inconclusive debate on whether librarians are born or made. Nonetheless, it is proposed that a research librarian, that is, well grounded and knowledgeable can be made through appropriate training and retraining. The goal can be achieved through a revamp of LIS curricula, as well as the provision of new skills through short courses, professional conferences and workshops. In-service training and periodic online training in the workplace can also be used to equip serving librarians with the emerging ICT skills (Muller 2007; Ocholla and Bothma 2007; Fadehan and Ali 2010).

The authors hope that the findings of the study would be helpful to people considering research librarianship as a career, current research librarians, educators developing or reviewing LIS curricula, professional associations developing membership requirements and employers appraising or recruiting research librarians, among others. Noteworthy in this regard is that the items in the skills column of the index in the Appendix provide details of the specific skills that could be infused into the curricula of library schools, and into in-service and continuing education and training programmes, as capacity and other resources are developed.

Finally, as the index is drawn from carefully triangulated empirical research methods and validated against a systematic review of the literature, what remains is for the index to be tested by practical implementation in the academy and by practitioners in the workplace. The authors are based in practice and the academy with opportunities to implement what they recommend and also to seek to persuade others though conference paper presentations and so on to test the index. To this extent, it can be seen as a work in progress.

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Appendix: Proposed Competency Index for Research Librarians in Kenya

Area	**Competency**	**Skills**
Technical	*Professional* foundation	Research librarians should have: 1. A formal post-graduate professional library and information science training or its equivalent; 2. An understanding of the theory of librarianship and information management; 3. Knowledge of the history of libraries and information materials (books, compact discs, computers and many more); 4. An understanding of the trends of the profession (history, present and future); 5. The ability to distinguish and apply the common library typologies and models; 6. Proficiency in library and information centre operations, policies and procedures; 7. An understanding and appreciation of the indigenous knowledge of the research community; 8. Knowledge of the socio-economic issues in the research community such as the fight against HIV/AIDS, conservation of the environment, and food security, among others.
	Information resources management	A research librarian should have the training and skills to: 1. Participate in and manage the research information lifecycle; 2. Evaluate, select, acquire, process, disseminate, store and dispose print and electronic research information resources; 3. Organise the information resources in a way that attracts researchers and enhances ease of access and use; 4. Maintain research information resources for later use (preservation of physical collection and hyperlinks); 5. Understand and work with multimedia formats including social media; 6. Apply appropriate collection development approaches and policies to build adequate research collection for scholarship and quick information; 7. Provide ready access to the information resources at the point of need through appropriate lending, circulation, inter-library loan online and offline; 8. Develop and deploy appropriate disaster preparedness and recovery systems.
	Information services design and delivery	A research librarian should be: 1. Committed to providing information rather than information resources only; 2. Able to design and deploy appropriate (user-centric) information services with the input of the research stakeholders; 3. Diligent in empowering the researchers to self-serve through suitable information literacy programmes; 4. Conversant with library service models and capable of selectively deploying them in a way that meets the information needs of the researchers; 5. Proficient in information searching and retrieval using a wide array of online and offline tools; 6. Able to constantly review the information services in tandem with research and librarianship trends.

	Information management tools and techniques	A research librarian should be proficient in: 1. The design, management and use of online and offline research information databases; 2. Indexing, classification, cataloguing and abstracting schemes and tools; 3. Social media information management tools and concepts including tagging, folksonomies and social bookmarking.
Personal and interpersonal	*Personal attributes and attitude*	In the line of duty, a research librarian exhibits: 1. Passion, enthusiasm, resilience, approachability, curiosity, open-mindedness, independence, diplomacy, sensitivity, flexibility, innovativeness, critical thinking and adaptability; 2. Moral uprightness according to the virtue systems of the research community; 3. Balanced lifestyle; 4. Willingness to take calculated risks.
	Communication	A research librarian in Kenya should possess: 1. Excellent oral and written communication; 2. Proficiency in English, French, and Kiswahili; 3. Ability to present ideas effectively; 4. Skills and tools to facilitate and act on users' feedback; 5. Ability to impart knowledge effectively.
	Public relations	A research librarian should: 1. Create an environment of mutual respect and trust around the library; 2. Negotiate confidently and persuasively; 3. Participate in the community activities (community relations); 4. Work effectively with suppliers and vendors; 5. Respect divergent views; 6. Genuinely value all users; 7. Understand organizational dynamics (politics); 8. Possess conflict resolution acumen; 9. Market and promote library services and products.
	Networking	A research librarian should have the skills to: 1. Create mutually beneficial partnerships and alliances; 2. Participate effectively in the professional association (Kenya Library Association, Association for Health Information and Libraries in Africa (AHILA), among others); 3. Create and sustain inter-departmental linkages and partnerships, especially with the IT department; 4. Harness essential synergy in the department, organisation and beyond; 5. Mobilise resources within the organisation, donors and community; 6. Organise events and programmes which enhance the visibility and usability of the library (art galleries, reading nights, and many more); 7. Lead and be part of a team.

Information and Communication Technology (ICT)	*ICT system*	A research librarian should have the capacity to: 1. Develop ICT access and usage policies; 2. Build the capacity of the researchers in the use of the relevant ICT tools and systems; 3. Evaluate, select, acquire, configure and maintain basic ICT systems relevant to the library; 4. Install, update and monitor basic ICT security systems including antivirus utilities; 5. Administer Intranets, web servers and basic local area network (LAN) systems; 6. Work with open source tools and systems.
	Hardware and software	A research librarian should be able to: 1. Configure and troubleshoot basic ICT hardware such as computers, printers, scanners, digital cameras, external hard discs and photocopiers, among other equipment; 2. Install and configure basic operating systems, applications and databases.
	Internet	A research librarian should have the capacity to: 1. Install, configure and monitor Internet connection through wireless, cabled and USB equipment; 2. Perform advanced information searches on the Internet using search engines and information gateways, among other tools.
	Web publishing	A research librarian is: 1. Proficient with web content management systems; 2. Conversant with HTML and other web content editors such as FrontPage and Dreamweaver, among others; 3. Able to script and edit basic HTML and XML codes; 4. Comfortable with common FTP packages to manage web site files; 5. Conversant with web animation packages such as Flash; 6. Able to post and update content on social media tools such as Twitter, flickr, blogs, MySpace, Facebook, Slideshare, Wikis and RSS; 7. Able to promote an online publication effectively using search engines, online directories and other systems.
	Desktop publishing (DTP)	A research librarian should be able to: 1. Design and publish basic posters, newsletters, briefing notes and other research publications using common DTP packages such as InDesign, Adobe PageMaker and Publisher, among others; 2. Edit and integrate photos and other graphics into publications using Adobe Photoshop and Adobe ImageReady, among others.
	Digitisation	A research librarian should be conversant with: 1. Scanners and other optical character recognition tools and systems; 2. Digital cameras; 3. Photocopiers; 4. Electronic archiving tools and techniques; 5. Audio and video capture, editing and publication.

Management	*General management*	A research librarian: 1. Understands the day-to-day administration and supervisory management of a library or information centre; 2. Sees the big picture and fits the library functions into the vision and mission of the parent organization; 3. Plans, sets priorities and evaluates performance of the library; 4. Participates actively in the organisational strategic planning; 5. Calculates and demonstrates the return on investment of the research library; 6. Manages the library ergonomics and physical facilities including furniture, shelves, decoration, cleaning, lighting and ventilation; 7. Manages change; 8. Recruits, trains, mentors, inspires and retains professional and administrative staff essential for the success of the library; 9. Understands organisational behaviour.
	Funds management	A research librarian is able to: 1. Perform basic book-keeping tasks; 2. Develop and manage the library's budgets; 3. Manage the library's grants.
	Project management	A research librarian has the capacity to: 1. Write project proposals; 2. Perform day-to-day management of library's special projects; 3. Monitor and evaluate the library's special projects; 4. Compile and disseminate project reports.
	Legal affairs	A research librarian: 1. Understands and applies the copyright and other intellectual property laws; 2. Understands, interprets and applies the Freedom of Information Policy and other provisions in the Bill of Rights of the Constitution of Kenya.
Research	*General*	A research librarian: 1. Possesses qualitative and quantitative research skills; 2. Participates in the entire research lifecycle; 3. Understands the research trends, literature and researchers in the institution's area(s) of research interest; 4. Conducts own research and publishes in peer-refereed journals; 5. Supports researchers in reference and research output management.

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Giving Them What They Want and Assessing Impact: Case Studies of Public Library Services in the Western Cape, South Africa

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Abstract

This paper focuses on the principles proposed in the "Library and Information Services Transformation Charter", exploring the extent to which two public/community libraries in the Western Cape Province of South Africa are already engaged in charter activities. Interviews were conducted with directors of the library services who identified libraries where examples of good practice were already in evidence. Two sites were thereafter selected as case studies out of a total of 98 libraries in the City of Cape Town Library and Information Service, and the nature of the charter-oriented services being provided there described. The paper concludes with an attempt to show how data may be collected to make a case for the impact of library services as part of an advocacy strategy and to secure recognition of the validity of claims by public and community libraries for partnership in national development efforts.

Keywords

Library and information services, Public libraries, Impact assessment, Information Services Charter, South Africa.

Introduction

South African public libraries suffered a period of decline after independence in 1994, because of declining government funding and a lack of appreciation by politicians of the importance of the sector (Public Libraries in Africa, 2000). It is arguable that the low visibility of the public library was a legacy of the apartheid years during which time political and ideological neutrality constituted the professional orthodoxy of librarians and the eschewal of social and ethical issues, the usual vectors of transformation and development. In 1998, four years after the democratic dispensation, the professional organisation, Library and Information Association of South Africa (LIASA), submitted a memorandum detailing the then parlous situation of libraries to the responsible Portfolio Committee of Parliament (Lor,1998), reflecting the concern expressed by librarians and in the press about the rate of deterioration of services of the public library system which could be traced back to 1828, and which is considered to be the strongest in Africa (Public libraries in Africa, 2000). It is, however, a system characterised by "areas of neglect and pockets of excellence" (Lor, Van Helden and Bothma, 2005: 272).

In 2000, an inventory of public/community libraries was commissioned, resulting in the Public and Community Libraries Inventory of South Africa (PaCLISA) funded in part by the Carnegie Corporation of New York and designed as a planning tool to show "what public and library service points were in existence and where (Lor et al., 2005: 269). In a part of the project, the researchers attempted to develop a common set of basic measures and indicators for public libraries (De Jager and Nassimbeni, 2005), but the initiative to launch national data collection ended in failure as public libraries were at that stage unable or unwilling to engage in counting and measuring what they were doing (and not doing).

In 2007, the South African government demonstrated its faith in public libraries, when the

then Minister of Arts and Culture, Pallo Jordan, invested an extra one million Rand in the public library sector in the form of conditional grants in order to achieve their transformation. The project has been completed, and a further 1.6 billion Rand has been allocated for the expansion of library services particularly in previously disadvantaged areas (Budget vote speech by the Deputy Minister of Arts and Culture, Dr MJ Phaahla, to the National Assembly, 2011). The following were some of the activities that were expressly stipulated for spending the grant:

- Build more libraries and upgrade library buildings;
- Buy, equip and deliver mobile libraries and container libraries in remote areas;
- Appoint more staff and extend opening hours;
- Expand and improve ICT connectivity;
- Develop and implement a new provincial ICT system;
- Upgrade security and improve library assets; and
- Buy more library materials and stock more books in indigenous languages (The Library and Information Services Transformation Charter. 2009: vii).

During the implementation of this project, it became apparent that the whole of the LIS sector was in a parlous situation requiring serious attention. The National Council of Library and Information Services, the statutory body that advises the Ministers of Arts and Culture, and of Education, therefore addressed the issue by appointing a Technical Team to draft a Library and Information Services Charter for South Africa. Their assignment was that the Charter had to:

- 'Define the challenges facing the sector; and
- Provide a clear framework of principles and mechanisms for effecting the changes needed by the sector to contribute to the elimination of illiteracy, the eradication of inequality in the LIS sector, the promotion of social cohesion, and building of an informed and reading nation' (The Library and Information Services Transformation Charter. 2009: vii; LIS Transformation Charter, Community Libraries Grant, Indigenous language development by provinces: Department of Arts and Culture briefings, 2011).

The Technical Team, headed by Professor Muxe Nkondo, Chair of the Board of the National Library of South Africa, accepted that the 'overarching social goal of LIS is to build the human, intellectual and social capital crucial to the kind of knowledge society to which South Africa aspires' (The Library and Information Services Transformation Charter. 2009: xviii). Its method of work was very inclusive with consultative workshops in each of the nine provinces designed to give LIS professionals and the public opportunities for contributing ideas and information. The resultant document combining participants' inputs and comments contains twelve chapters in a framework designed to guide librarians on how to enhance the public value of libraries and the efficiency and effectiveness of their services (LIS Transformation Charter, Community Libraries Grant, Indigenous language development by provinces: Department of Arts and Culture briefings, 2011).

An early draft was presented at a national summit in Pretoria in December 2008 following which participants' comments and inputs were incorporated in successive drafts. The current version is the 6th draft – this is the draft that was presented to and accepted by the Minister of Education and the Minister of Arts and Culture. It was presented to the provincial Members of the Executive Council with responsibility for libraries and information services in their provinces before submission to the Portfolio Committee of Parliament in May 2010, the step before the final phase of ratification which will be at cabinet level. Once this has been accomplished, the Charter will become law and public libraries will need to comply with its recommendations.

The Charter expressed concern about the deleterious effects of a clause in the South African Constitution (Part A of Schedule 5) impacting on the provision of public library services. This clause stipulates that public library services are the special competence of the provinces. This provision has proved problematic deviating as it does from past practice where the responsibility was shared between local and provincial governments. In the previous dispensation, the provinces supplied professional and

technical services, such as acquisitions and cataloguing, and local authorities were responsible for hiring staff, paying their salaries and providing and maintaining buildings (The Library and Information Services Transformation Charter, 2009: 17). Under the new Constitution, this anomaly has given rise to many municipalities regarding library provision as an unfunded mandate, and has led to a decline in spending on libraries (The Library and Information Services Transformation Charter, 2009: 17). It is hoped that future legislation will mitigate this situation and make provision for provinces to assign funds specifically for libraries to local authorities.

The Charter also stressed the need to develop performance indicators for each of the LIS sub-sectors and so proceed to the establishment of national benchmarks. Very little has yet been done in the public library sector on measurement and impact, and it is proposed that a document such as the evidence-based Standards and Guidelines for Australian Public Libraries (2011) could be used as an example, providing public library services with external benchmarks for their activities.

One of the chapters of the Charter dealt with public libraries, highlighting the need to design suitable mechanisms to realise the goals of community building and countering social exclusion through activities such as enhancing literacy and education, by promoting community information and providing access to ICTs and related skills. The Charter specifically recommends that public libraries demonstrate the extent to which service objectives impact on individuals, communities and the environment. It is recognised that performance indicators have still to be established and notes that '[s]tatistics being currently collected can be used for this purpose. Norms and standards will be developed, against which reporting can be done' (The Library and Information Services Transformation Charter, 2009:27). Informants repeatedly confirmed that the development of (as yet non-existent) country-wide norms and standards would be most useful for purposes of internal and external benchmarking and reporting to governing bodies. This paper does not, however, attempt to propose any such standards or benchmarks, but will suggest an initial approach to guide the selection of objectives which could begin to demonstrate the impact of library services that are based on empirical evidence gathered in two case studies, and thus linking them to the guiding principles of the Charter and demonstrating feasibility.

The extent to which even basic statistics are currently collected in South African public libraries varies from province to province and the national system of statistical data collection initiated by the National Library of South Africa in 2005 and reported in earlier work (De Jager and Nassimbeni, 2005:43) has not succeeded. It is hoped that data collection will become routine as the Charter is accepted and implemented nationally. Basic statistical measures of input and output, however, are not sufficient for impact evaluation. As was recommended in the earlier work, such measures 'give only the bare outline of what is happening at particular institutions and clearly they are not enough ... They cannot give all the details and they certainly do not give any reasons why things are as they are' (De Jager & Nassimbeni, 2005:43).

Methodology

As this was an exploratory study, it was decided to focus on public library services in the Western Cape and to explore their reactions to the Charter and their perceptions of the most serious obstacles to realising the Transformation Charter's vision of the public library as a 'community information and cultural hub' (2009: 20). In the first instance a series of interviews was planned with public library service directors or their representatives as informed experts, in order to understand to what extent they shared the vision of what the Charter terms 'the new model of responsive service' and public libraries' 'dynamic role as change agents' (The Library and Information Services Transformation Charter, 2009: 20).

Interviews were therefore arranged with a representative of the Director of Library and Information Services of the City of Cape Town, as well as with the Director and Deputy Director of the Western Cape Provincial Library Service. Having considered the policy dimension and its fit with the Charter's vision, the researchers followed up by gathering concrete evidence from two deliberately identified sites (out of a total of 98) to provide exemplars of practice. The selection of the two libraries for on-site visits was guided by respondents in the first phase of the investigation, who specifically

recommended these two sites. They are Library A, a library situated in a middle class suburb physically accessible to all residents of the suburb, but some 10km distant from an informal settlement also falling within its jurisdiction. The official South African department of statistics defines an informal settlement as: "an unplanned settlement on land which has not been surveyed or proclaimed as residential consisting mainly of informal dwellings (shacks)" (Statistics South Africa, 2004: 9). Library B is a community library in the centre of an informal settlement poorly served with public amenities. On ethical grounds, the two libraries were not identified by name as they had specifically requested this.

Interview questions were derived for the directors from the Charter, which had identified a set of practices that would reflect the developmental goals of the library. The Charter had identified some issues and the researchers wanted to explore how and to what extent all or some of them already were in place in the directors' library systems:

- Promotion of reading and writing;
- Formal and informal education and learning;
- Community and other useful information provision, e.g. consumer information, health, employment opportunities;
- Democracy and citizenship;
- Fostering creativity and cultural expression;
- Social cohesion and the fostering of appreciation of cultural diversity;
- Access to and the mediation of ICTs; and
- Information literacy to allow citizens to participate in the knowledge society (2009: 20)

During the onsite visits, head librarians and other members of their staff were interviewed; and the community building activities that reflected the examples noted in the Charter were observed and documented.

Findings and Discussion

Matching Visions: the Charter and Public Library Services

The Director and Deputy Directors were to a considerable extent in agreement and they expressed a positive view of the Transformation Charter, believing that it concretised their vision of public libraries and reaffirmed their goals and values. They thought that the Charter presented feasible objectives for the library services, at the same time acknowledging that a number of its suggestions have already been realised to some extent, or that they were engaged with processes that would do so.

The twin obstacles of underfunding and consequent staff shortages were the main problems noted by both library services. While public libraries remain an unfunded mandate, informants thought it was unlikely that the Transformation Charter vision would come to fruition. The conditional grants to public libraries had made a big difference, they acknowledged, but questions of sustainability have not been resolved. It was therefore essential to obtain funding and grant money from external sources, and to establish partnerships with businesses and charitable organisations in order to ensure additional resources. Without such extra money, libraries found it impossible to do much more beyond basically keeping the doors open and might even have little capacity to implement even the core programmes.

Under-funding results in staff shortages, which, it was thought, remained one of the biggest obstacles to preventing the realisation of the Charter vision. Staffing capacity problems were of two kinds and manifested not only as too few actual staff members, but also in the selection and retention of suitable staff who should have an understanding of political processes and be able to engage meaningfully with politicians. Informants noted how difficult it was to find and appoint appropriate and capable people with good communication skills, who were knowledgeable and interested in books and reading, and who had adequate computer skills.

Several times, it was noted that funding issues were exacerbated because libraries are not viewed as an important priority by politicians and City councillors who do not necessarily understand the many roles that public libraries can play in a community. They often are not library users themselves and do not think of libraries as useful facilities, hence are unwilling to fund them adequately. Unfortunately, libraries in the main have not yet embraced the importance of objectively demonstrating their value and librarians themselves might lack the tools to do so. In this paper, the

researchers will attempt to provide some initial guidelines for impact assessment and its use in advocating the role and function of public libraries to politicians and funders.

Overview of Some Activities that Implement the Charter

The interviews with library directors were followed by visits to Library A and Library B that they had identified as sites of good practice, where it was possible to see some of the services in action. The researchers' observations, which are detailed below, are enhanced by details from discussions with the directors, and will be mapped to the activities identified by the Charter.

These are generally regarded as core public library activities. For instance, the Australian Standards and Guidelines G14 (p.40) stated core public library activities to be providing a welcoming, trusted place where those seeking to improve their literacy skills have opportunities to do so without fear of judgment or stigma, and providing resources and programmes which encourage and stimulate reading among all members of the community.

The informants noted, and librarians met during the site visits agreed, that especially younger people tended to read less than before. Both sites focused a lot of their attention on preschoolers and offered story times, lap reading sessions with parents and toddlers, and taking books to babies in crèches. Literacy interventions are still regarded as one of the biggest needs in many communities; in Library B, literacy projects and 'thinking skills' training were offered in response to expressed community needs where opinions were voiced that young people's reckless behaviour was encouraged by their lack of exposure to reflecting on consequences of choice and behaviour.

Formal and Informal Education and Learning

At the time of the visit to Library B, a parenting programme in progress was observed. Mothers with toddlers were engaged in this informal activity which not only had a developmental intent with respect to parenting skills, but also had aimed to add growth in self confidence and empowerment by encouraging active participation in shaping their circumstances. The mothers, for example, were taught how to share books and stories with their toddlers and also to network among themselves.

Community and Other Useful Information Provision

Libraries from both services are involved in HIV/ AIDS programmes through information provision; permanent exhibitions, links with clinics, distributing up-to-date pamphlets and by providing venues for testing sessions in libraries on World AIDS Day. Libraries have also been used by the City of Cape Town as venues and vehicles for the distribution of application forms and information about employment opportunities in the City Council. Participating librarians were of the opinion that such interventions are "very popular" and have a big impact on the public. When quizzed, however, they were unable to give any quantitative evidence of impact on employment status of participants.

During the visit to Library B, a two-week careers programme was in process, engaging young people from the surrounding community during their winter vacation. The librarians noted that careers programmes were particularly appealing to both teens and unemployed youths since their schools offered no useful information in this regard, and the programme offered a path to employment in a community where socio-economic ills of poverty and unemployment are prevalent.

Support for Democracy and Citizenship

The Director and Deputy Director reported that polling stations are established in some libraries on the outskirts of the city on voting days. They also function as distribution points for information emanating from government departments. The researchers were informed about a monthly legal aid programme in a library where people may without charge consult a lawyer about their problems. Weekly programmes are also run about business opportunities. It was noted that not many public libraries work in this area, but a few have responded to identified needs in their community, recognising that the active participation of adults and teens in community programmes offered by the library to enhance life chances can serve as a vehicle for raising awareness of participants and giving them

confidence that they have a voice and can assert their rights. Acting in these ways, the library can become a focus for civic engagement.

Fostering Creativity and Cultural Expression

A number of libraries have writing and poetry workshops for teens and young adults. In Library B, the art club meets on the last Saturday of the month. Each month, a new art form is explored, offering a creative experience to a group of teenagers. Exhibitions and outings are arranged and the library hosts art exhibitions by local artists.

Fostering Social Cohesion and Appreciation of Cultural Diversity

Social cohesion is an elusive term with which public libraries the world over have been grappling in the last decade. Stilwell (2006: 3) notes that there has been scant attention to the exploration of the term "social exclusion" as it applies to libraries in South Africa, unlike in the UK which started to address the issue seriously in the late 1990s. The report on social exclusion in public libraries in the UK by Muddiman et al. (2000) has been very influential, leading many commentators to reflect on how library planning and practice might combat social exclusion, and promote social inclusion and social cohesion. Muddiman's definition of social exclusion is a useful one:

> … [it] relates not only to a lack of material resources, but also to matters like inadequate social participation, lack of cultural and educational capital, inadequate access to services and lack of power (1999).

One group of individuals who might feel socially excluded are those who do not know what libraries can offer and how to use them. However, the default position of a voluntary approach to social inclusion must be replaced by the purposeful directing of resources to programmes specifically for targeted groups who are marginalised in the ways described above (Muddiman, et al. 2000). In both Library A and Library B, targeted programming for those on the margins was found; like people living in informal settlements who tend to be excluded from even local authority services. Both libraries worked with youths in an effort to strengthen their schooling, and give them hope for the future allowing them to imagine and plan a socially and economically integrated life. Library A encouraged an appreciation of diversity by offering opportunities for meeting and socialising to members of different communities in a safe and attractive place where they could enjoy joint activities.

Access to and Mediation of Information and Communication Technologies (ICTs)

Public libraries in the Western Cape have had access to computers for some time through the 'Smart Cape' project, which initially rolled out six reconditioned computers with Internet access to six public libraries in disadvantaged areas. The project was so successful that it won the prestigious Bill and Melinda Gates Foundation Award in 2003. A minimum of six computers are now available in all public libraries in the Western Cape and are a major draw card and cause of increase in public library use and membership. Some public libraries have since secured funding for extra computers. The recent installation of ADSL has made a major difference as response times had been very slow in the past.

According to the informants, the provision of ICTs is playing a major role in enhancing service delivery to rural areas and to bridge the digital divide. Conditional grant funding received from the National Department of Arts and Culture has expanded the roll-out of ICTs to 20 additional sites during 2009/10 and is receiving substantial support from communities: 'Service delivery is being enhanced by these ICT projects and all libraries where these facilities had been installed report an increase in membership and use of libraries' (Western Cape Province, 2010:41). Such projects would typically include computer literacy programmes, sessions on CV preparation and accessing job advertisements.

Informants noted that staff capacity problems have become particularly noticeable in connection with ICTs, as staff are spending more time teaching computer skills or finding volunteers to help them. Computer classes to retirees are in demand in some libraries and young people with computer skills are used as volunteers or 'cyberscouts' in some libraries to assist novice users. It was particularly noted that the areas around the computers in the libraries were

the busiest of all.

Information Literacy to Enable Citizens to Participate in the Knowledge Society

Libraries teach information skills and conduct orientation sessions and class visits to local schools. Informants noted that politicians are particularly concerned with support for learning, especially with improving matric results and computer skills. The informal ad hoc assistance given to learners could provide the platform for a systematic programmatic approach to the provision of information literacy, a project that has already commenced in the Cape Town City Library and Information Services.

Key Features of the Activities in the Two Sites

It was observed that both libraries were engaged with their communities and were constantly on the alert for opportunities to raise their visibility, for example, by hosting high profile personalities with the power to attract and engage the communities, to mark special events. They also made efforts to extend their reach by taking services outside the four walls. According to the informants, the library was seen in each community as a welcoming place, making available, for example, its space, facilities, materials or activities for social interactions and learning opportunities. These observations suggested to us that both Library A and Library B were engaged in the building of social capital although neither library theorised the role of the library as a public meeting place in these terms, an area of emerging research in the public library sector. Social capital is defined as involving social networks, trust and norms of reciprocity (Putnam, 1993), being built in democratic states by efficient public institutions and public policies, and also through voluntary associations and informal interaction (Stolle, 2003). Audunson, et al (2007) theorise that offering the library as a meeting place where people 'are exposed to values and interests different from those that create their core identity by having contact with diverse people' can build social capital '...[and that] they may be important in creating bridges between people with different values and belonging to different cultures' (2007).

The affordances of the development of social capital by Library A and Library B were evident in the meetings and social interactions made possible by both libraries. The library was recognised as:

- A place for accidental meetings and conversations;
- A place where you can find information about other meeting places in the community;
- A public sphere where cultural and other ideas are presented in a formally constructed event;
- An arena where you can acquire information and knowledge allowing you to be an active citizen; and
- An arena for virtual meetings on the Internet.

Library B, recognising their powerlessness to change the Constitutional arrangements that were having a deleterious effect on funding for special projects to achieve the goals of social inclusion, took a decision to direct their future by raising their own funds. This change of mindset – the determination not to succumb to victimhood, but rather to focus on what can be done and changed – has gathered momentum and success in fundraising so that they have been able to expand their projects and spread their reach. Their success has been built on their ability to identify partners and to make and nurture relationships with other agencies to jointly deliver some of their objectives, like improving school performance.

Assessing and Demonstrating Impact

Library impact assessment has become an increasing concern in the international arena in recent years, as the growing body of literature testifies (Markless and Streatfield, 2006:6). These authors note a number of factors supporting the trend towards the increasing demand for accountability in libraries, which include a "growing focus on performance management and accountability in public institutions," the "value for money ethos" and the move "towards evidence-based library and information work" (2006:6-8). Attempts at assessing library impact in these terms have employed different strategies such as social audits (Usherwood, 2002:117), return on investment (British Library, 2004), or contingent

evaluation (Hider, 2011). But as the discussion above indicated, South African public libraries have not yet demonstrated the ability, nor had data at their disposal to venture into these aspects of impact assessment. This paper does therefore not attempt to present an investigation into either the activities and outputs or the economic value of South African public libraries, but to provide guidelines for a qualitative approach to demonstrating public library value.

As early as 1973 Orr. had distinguished the two aspects of "library goodness" in the questions "how good is the service?" and "how much good does it do?" (1973: 317). Brophy noted in an eloquent discussion of qualitative approaches to providing evidence for library performance, that the first of Orr's questions relate to measures and outputs of library activities, while the second focuses on "the effects the library has on its environment, and, crucially, on its users" (2008:7). In concluding this paper therefore, the intention is to suggest guidelines that may assist public librarians in demonstrating how much good the library does for its users in Orr's terms – and in this case some of the users may be from the poor and deprived members of the South African society.

Also public libraries in South Africa urgently need to demonstrate to politicians and funders that library services can make a meaningful difference in the communities they serve. In the libraries that were visited for this paper, the researchers were very impressed by activities that were observed and that were indeed expressing the objectives of the Charter. It was, however, also noted that the librarians are not focused on collecting evidence of the difference that they make to their users and in their communities.

An important rationale for impact assessment may be found in demonstrating the difference that information and libraries can make to individuals and on society (Usherwood, 2002:118). Services that make a meaningful difference in peoples' lives not only result in popular support for the service providers, but also demonstrable evidence of their impact, and in turn, provides politicians and policy makers with rationale for financial support (Johnson et al., 2004:33). It is therefore suggested that in addition to the routine collection of basic statistics, public libraries could also select one or two of their individual activities and systematically gather evidence of their impact, selecting in particular those activities and programmes whose objectives are consonant with the areas identified by government for priority action, such as the provision of quality education, literacy, and social cohesion, as illustrated by the examples of Charter activities already in place.

Value and Impact

In order to understand the difference between library value and impact, it is important to distinguish between value and impact of library services. Much research has been done in the problematic area of assessing value in a library or information service, first has to define value, an elusive concept informed by the disciplines of philosophy and of economics. Saracevic and Kantor (1997) provided a theoretical framework for an examination of value in LIS. Their definition of value is useful here, as it links value and impact:

> We take it that value within some context describes a relation between an object or objects (be they tangible like products or intangible like ideas and information) and their worth, which may include merit, benefit, impact, quality, utility/usefulness, desirability, and/or cost. The cost may not be necessarily monetary in nature, it could be represented by time or effort ... the value of a library and information service is an assessment by users (or user surrogates) of the qualities of an interaction with the service and the worth or benefits of the results of the interaction, as related to the reasons for using the service (1997: 539).

Accepting that something is valuable therefore requires 'recognition that value is dependent on value sets or systems' (Town 2010) , so that value is defined by what a recipient believes to be valuable. Town succinctly states that 'value will mean different things to different people' (2010). In order for something to be valuable, it also has to be something *important*; or significant, something that someone cares about. If something is regarded as trivial, it does not have much value.

In order to demonstrate value, therefore, it is obvious that evidence of value will only be accepted

when the same value system is shared. For public libraries to demonstrate the value of their activities to their governing bodies, for example, it will be necessary for them to focus not on what other librarians value, but on what the local government or the politicians value; on what they regard as important.

Once one has accepted that evidence of value is only available from someone who shares the same value system, evidence of the impact of an intervention or a service may be sought. Impact is making a recognisable difference in an area that has worth or that is regarded as valuable. Markless and Streatfield (2007) suggest that one can recognise impact in terms of change in the following dimensions:

- Behaviour (doing things differently);
- Competence (doing things better);
- Levels of knowledge; and
- Attitudes (e.g. confidence, valuing the LIS staff).

It would clearly be a difficult task for busy librarians to evaluate their impact on all these levels at any one time, but they could select one or two areas where they would like to demonstrate their own impact:

> Effective impact evaluation involves careful focus on what is important and then gathering the minimum amount of evidence needed to tell you what you need to know ... evidence is not a separate category of information; it is information chosen by someone and gathered for a particular purpose (Markless and Streatfield, 2006:88).

It is therefore proposed that in addition to developing the activities noted by the Charter, public libraries should also pay attention to gathering qualitative evidence of the impact of these activities in order to be able to demonstrate to politicians and convince funders that public libraries indeed are valuable social assets that should be supported and funded accordingly.

Demonstrating Impact

A basic requirement for impact assessment is to focus on the mission or objectives of an organisation in order to demonstrate that objectives are being carried out or the mission being accomplished. In public libraries, these should typically be in line with the integrated development plans of their local authorities, and also the strategic goals of the province. The latest strategic plan of the Department of Cultural Affairs and Sport of the Western Cape Provincial Government includes the following objectives:

- 'Improving school education outcomes;
- Increasing social cohesion;
- Promoting rural development;
- Effective, efficient and responsible government; and
- Creating a nation of readers' (Western Cape Province, Department of Cultural Affairs and Sport, 2010: 53).

All of these outcomes embody a value for the individual, the community or the nation and it was obvious that the libraries that were visited were actively engaged in activities that supported these objectives, although they were rather more practically focused on their library and its activities. In order to capture evidence of the value of library services under such circumstances, therefore, one might turn to Brophy who proposed a new approach to impact evaluation by "painting rich pictures – in particular the use of narratives and story" (2008: 13). This might for example be achieved by deliberately collecting detailed reports of actual incidents and experiences of library services that make a difference in the lives of library users.

Library B, for example, was involved not only in a well-attended careers programme for young people in the community, but worked in partnership with a programme that provided senior high school pupils with additional tuition in their school subjects. While these are excellent programmes in themselves, and clearly appreciated by both the young participants and the volunteers that were assisting them, such initiatives could in addition be used to illustrate the library's contribution to the Departmental objective of 'improving school education outcomes as noted above.

In order, then, to set about gathering evidence

to this effect, additional and somewhat different information will have to be collected from programme participants. Basic information like names, schools and grade levels will probably be collected in any case; these must be retained for matching with school results at the end of the year to see whether participants have all passed or perhaps even if average pass rates are higher than class averages. Surveys and interviews with library users or participants in a library programme could specifically document reports on library impacts on their attitude to school work or to studying. The point is not to produce an avalanche of unmanageable information, but to gain actual and objective accounts and narratives of real differences that the library has made in specific lives. Such information, specifically collated and packaged to focus on the library's role in improving school results, will provide policy makers and funders with incontrovertible evidence of the library's contribution to delivering the governmental strategic plan.

Library B also offered well-attended programmes for mothers living in informal settlements, who gathered there with their toddlers to talk about child-rearing and other issues of importance to them – a clear example of 'increasing social cohesion'. Similarly, Library A was involved in regular story times and play programmes that kept younger children busy and occupied during afternoons and vacations. Such activities could be linked to the objective of 'creating a nation of readers'. Once more, in addition to routine counts of meetings and participants in both these cases, focusing on outcomes that matter to local authorities will enable libraries to gather evidence demonstrating the difference that they make in communities. Collecting evidence in these instances will involve talking to the mothers (in their own language) in the toddler groups, to document their reflections on how their relationships with their children, or their feelings of belonging in the community, have changed as a result of the library meetings. The children who attend the regular story-telling sessions could be monitored to find out from teachers or parents whether their reading, or their enthusiasm for reading, is different from that of other children in their classes. Here too, the aim is to find actual instances and narratives of change that have been effected through library interventions and to record and collect the rich detail of individual occurrences to gather a body of documentation in this regard. Of course, in order to demonstrate impact in a scientific manner, such data and information would need to be collected before and after the introduction of the new services and then compared in order to convince that the new services have had significant beneficial impact.

Conclusion

In this paper, the researchers have attempted to show that public libraries in the Western Cape are already engaged in many of the activities prescribed by the Charter, but not yet in attempts to evaluate their impact empirically and objectively. It is therefore suggested that in addition to the routine collection of basic statistics, libraries could select one or two of their regular activities or special projects and systematically gather tangible evidence of their impact. In this way, narratives that are backed up with objective and verifiable evidence can provide politicians and funders with incontrovertible proof of the value of public library services.

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Knowledge and Use of Web 2.0 by Librarians in Anambra State, Nigeria

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Abstract

Web 2.0 is a new concept that represents change in the ways that the Web can be used to search for, contribute to and share information. Web 2.0 is facilitated by such Web tools and services as Chats, Blogs, Wikis, RSS feeds and social network sites. Web 2.0 also provides opportunities and challenges for libraries and librarians in their mission to provide information services to their clienteles, and many librarians in developed countries and some in developing ones are already harnessing its potentials for library and information service delivery. This paper surveys the knowledge and use of Web 2.0 by librarians in Anambra State, in South-East Nigeria. A questionnaire was used to collect data from 57 librarians, representing 78.1 per cent of the librarians who were sampled. Findings show low knowledge and use of Web 2.0 tools by the librarians, which could be attributed partly to the absence or inadequate Internet connectivity in most of the libraries and library schools from where the librarians were sampled. The findings highlight the need for these institutions to address the current inadequate Internet connectivity situation, as well as the for librarians themselves to explore and use Web-based innovations for information service delivery and management in their constituencies. They should also lobby and spearhead efforts to develop and improve the Internet connectivity facilities in their work places.

Keywords

Web 2.0, Librarians, Web knowledge, Web use, Information literacy, Information technology literacy.

Introduction

The world is in an age of rapid change propelled by developments in Information and Communication Technologies (ICT). While the traditional medium of information dissemination and access was predominantly print-based, the modern medium is electronic-based. The Internet and the Web epitomise this new medium. Rapid change means that the time lag between technological inventions and innovations is reduced and the rate of technological obsolescence is high. All professions now need to be dynamic in adopting these technological innovations in order to keep abreast and achieve and sustain excellence. Librarians clearly feel the challenging impact of these technological evolutions, as they see more and more of their services and clienteles that were traditionally print- and library-oriented becoming electronic- and market-oriented. The Internet has continued to change over the years leading to new skills and competency requirements. Olomojobi (2006) states that with the explosive growth of the Internet, library services must also develop in tandem or risk becoming obsolete, and that the required changes in the services depend upon the capabilities and motivations of librarians to change and adapt to new methods.

The Internet was initially a static structure like a printed material that allowed read only access to information. The creation of web pages was a highly professional activity undertaken mainly by website development experts, known as webmasters. Moreover, users of the information on the web pages were expected to be passive consumers, and were provided with no or minimal opportunities to contribute

feedback or original information. However, with continuous innovations, the Internet has evolved into a platform that enables users to also be both users and creators of information. This empowerment of users has turned the Internet into a collaborative and interactive network supporting active interaction and information sharing among users. Tim O'Reilly (2005) coined the term Web 2.0 to describe the development.

Librarianship researchers and practitioners have since recognised the potential opportunities and challenges of Web 2.0 and its likely impact on libraries and librarians. Singh (2001) points out that the Internet is playing an important role in transforming libraries and the ways in which library resources and services are viewed. Maness (2006) posits that altogether the use of these Web 2.0 technologies and applications will constitute a meaningful and substantive change in the evolutionary history of libraries. Among various potential impacts of Web 2.0 technologies, the library's collection will change, becoming more interactive and fully accessible; and the library's services will change, focusing more on the facilitation of information transfer and information literacy rather than providing controlled access to it.

The Scottish Library and Information Council (SLIC) and the Chartered Institute of Library and Information Professionals in Scotland (CILIPS) (nd.) believe that social media websites have great potential to enhance the delivery of library services and to contribute to the professional development of library staff. They also note that Web 2.0 technologies present new opportunities for large-scale professional collaboration and cooperation. Maness (2006) states that social networking could enable librarians and patrons not only to interact, but also to share and exchange resources dynamically in an electronic medium.

INFLIBNET (2004) posit that library profession needs to remain flexible and open to the opportunities that the Internet can have for the profession and for library users. Internet access should therefore be seen as a means to augment information access for users, and that library professionals who embrace this new environment of collaboration will be better able to provide customised service to their clients.

Accordingly, the acquisition of skills needed to harness effectively the various components of Web 2.0 for modern library services is therefore a critical and imperative challenge that libraries in both developed and developing countries must address in order to sustain their relevance in the digital age.

Literature Review

Nations (2011) notes that "Web 2.0 is the move toward a more social, collaborative, interactive and responsive web. It is a change in the philosophy of web companies and web developers, but more than that, Web 2.0 is a change in the philosophy of society as a whole. In the early days of the web, we used it as a tool. Today, we aren't just using the Internet as a tool; we are becoming a part of it." Farkers (2007) identifies some characteristics that distinguish social software tools from other technologies as easy content creation and content sharing, online collaboration, conversations distributed and in real time, capitalising on the wisdom of crowds, personalisation and transparency. Some current Web 2.0 tools and services include:

- *Blogs* (a shortened version of Weblogs) are online journals or diaries that can be used for sharing information and ideas, including video and pictures. Most blogs incorporate links to other commentary, which can be a longer exposition written by the blogger, someone else's blog entry or another type of source document.
- *Wikis:* These are web pages that allow users to add, remove or edit their content. The most popular wiki is the online encyclopedia, Wikipedia.
- *RSS Feeds:* (RSS means either Really Simple Syndication or Rich Site Summary). RSS is a web feed that constantly scans the Web and provides links to content in which one has indicated an interest or requested a periodic update (Liesegang, 2007).
- *Social Networking Websites:* Examples of these are Facebook, MySpace and Twitter. These are online group-forming websites that connect people through shared information interests. They allow users to locate links with people through mutual friends or acquaintances, build profiles, and update address books (Kamel-Boulos, and Wheeler, 2007).

Web 2.0 social technologies provide opportunities and challenges for the more effective and efficient delivery library services. It is pertinent to note that awareness and knowledge are a prelude to the use of new technologies. In an age where social media is highly shaping information access and dissemination, not being adequately aware and knowledgeable of these new media and the potential they offer in enriching library services will affect librarians' ability to adopt and harness them. Many librarians especially in developed countries are already well informed on Web 2.0 and its potentials. Consequently, some are already harnessing the tools in their work: blogs to share information and market library resources and RSS to provide selective dissemination of information services. Many libraries have also established Facebook and Twitter accounts to enable their librarians to exchange information and ideas with their users. Ezeani and Eke (2010) have noted that blogs can be used to market available library resources. Chua and Goh (2010) wrote that in libraries, blogs are commonly used to generate interest in specific topics; RSS is used to communicate news and events, and provide updates of resources or collections; social tagging is used to facilitate search and discovery; instant messaging is used to handle users' enquiries during predefined timeslots; and social networking services are used to forge personalised connections with users.

Related Empirical Research

Research reports from different parts of the globe show that librarians are not only aware of Web 2.0, but also are already harnessing its power and benefits for a more resourceful service to users. Rogers, (2010) surveyed libraries in the United States of American to determine how they are employing Web 2.0 and social networking tools to promote library programs and services. Result showed that "many libraries are using them voraciously, some still not at all." Social networks (78.6%) and blogs (51.9%) remained the two highest Web 2.0 applications used by the libraries to promote and market library services.

Xu, Ouyang and Chu (2009) explored the websites of the 81 academic libraries in New York State, USA to find out the extent of adoption and use of Web 2.0 tools. Thirty-four (42%) of the institutions introduced Web 2.0 tool to their libraries, while 47 (58%) did not. Among the seven Web 2.0 tools adopted by the academic libraries instant messaging led in terms of adoption frequency, followed by blogs and RSS. Similarly, Tripathi and Kumar (2010) surveyed websites of 277 university libraries located in Australia, Canada, the United Kingdom and the United States. The purpose was to provide a reconnaissance report on major academic libraries located in these countries that had embraced Web 2.0 tools for enhancing library services. Findings showed that 76% of the libraries had adopted at least one of the Web 2.0 tools, whereas 24% of them had not used any. RSS, Instant Messaging (IM) and blogs were popular in the academic libraries.

Using a web-based questionnaire, Al-Daihani (2009) investigated the familiarity of library and information science (LIS) academics with Web 2.0 concepts, tools and services and applications as these relate to LIS education. Forty-four LIS academics in three LIS schools, two located in Kuwait and one in Wisconsin, US completed the survey. Result showed that the respondents had a low level of familiarity with and use of Web 2.0. Lack of training was found to be the most inhibiting barrier to the use of Web 2.0 applications. It was also found that institutional affiliation and Internet experience were significant factors in regard to a number of online activities and Web 2.0 barriers.

Aharony (2009) conducted a research among three main groups of Israeli librarians: school librarians, public librarians, and academic librarians. The study explored whether librarians are familiar with new technological changes and innovations, and whether they make use of different Web 2.0 applications. The study found out that Israeli librarians are quite exposed to these changes, and that the librarians understood that in order to survive, remain relevant, attract new patrons, and be professional, they should master the newest technological applications and apply them in their changing work environment.

Garoufallou and Charitopoulou, (2011) investigated Greek library science and information systems (LSIS) students' knowledge, understanding and use of Web 2.0 tools. Result shows that although most of the students had heard of the term Web 2.0

and its tools, further knowledge of the subject is limited. This lack of knowledge was apparent in the poor ways that students exploited Web 2.0 features. The researchers suggested that the knowledge and implementation of Web 2.0 should begin in the library and information science schools to prepare future library staff for the new challenges ahead.

Luo (2009) examined the adoption of the Web 2.0 technology in information literacy (IL) instruction. Respondents were selected from the Information Literacy Instruction Discussion List (listserv) of the Association of College and Research Libraries based in USA. According to the findings, the surveyed librarians had actively used Web 2.0 technology in teaching IL courses. Their adoption of Web 2.0 tools is manifested in a three-level hierarchy. At the first level, the librarians only used Web 2.0 tools for their own purposes without engaging students. At the second level, librarians used Web 2.0 tools to facilitate the delivery of content to students. They did this by either using the tools to publish content for students to access and interact with, or by involving students in using the tools to complete coursework collaboratively or enhance interaction. At the third level, the librarians drew upon certain features of various Web 2.0 technologies to illustrate IL concepts.

Recent research reports from Nigeria show divergent findings on the awareness and use of Web 2.0 components by librarians. Ezeani (2009) studied the social network literacy skills of academic librarians in the University of Nigeria Nsukka library system. The findings showed that the librarians were generally aware and participated in several social networks. However, Atulomah (2010) reported insufficient awareness and understanding of what constitutes Library 2.0 by librarians in South Western Nigeria.

Research Problem and Objectives

Progress in all human endeavours and professional practices is tied to innovation and change. Librarians should be relevant providers of information and experts in the use of technology, including the use of Web 2.0 products. If librarians do not have these characteristics, their users will find other more responsive and relevant sources of information, even if the quality of information might be inferior (Miller, 2006). Given these trends, and the contradictory and inconclusive findings reported by Ezeani (2009) and Atulomah (2010) noted above, there is a clear need for further research to collate evidence on and recommend appropriate strategies for awareness, skills and use of Web 2.0 tools and services among libraries and librarians in different other areas and institutions in Nigeria. This is the rationale for this study which assessed how adequately the librarians in Anambra State of Nigeria had been adopting and using technological innovations to enhance the performance of their professional duties. Are the librarians aware of developments of Web 2.0 and their benefits to information services? Have they been harnessing Web 2.0 tools in their work?

This study sought to find out the levels of knowledge and use of web 2.0 for personal and professional development and work by librarians in Nigeria, using the librarians in Anambra State as a case study. Specifically, the study set out to:

(a) Ascertain the level of awareness of Web 2.0 and its tools by the librarians;

(b) Find out the level of use of Web 2.0 tools by the librarians;

(c) Find out the ease of access by the librarians to Internet connectivity facilities in the libraries and library schools in the state.

Methods

Anambra State, one of the 36 states of the Federal Republic of Nigeria, is located in the Southeastern part of the country. The state has eight academic libraries, three library schools and a statewide public library system with branches in the eleven local government areas of the state. The population of practising librarians in the state at the time of the study was 73 (*Source:* Nigerian Library Association, Anambra State Chapter Register), which formed the population of this study. A 13-item questionnaire was developed and used to collect data. Seventy-three copies of the questionnaire were distributed to all the librarians, out which 64 copies were retrieved, and data from 57 copies (representing 78.1%) were considered usable for the analyses. The distribution of respondents according to institution is shown in table 1.

Table 1: Institutional Distribution of the Respondents

S/N	Institutions	Frequency	%
1	Nnamdi Azikiwe University	18	31.5
2	Federal Polytechnic Oko	6	10.5
3	Anambra State University	4	7.0
4	Nwafor-Orizu College of Education	8	14.0
5	Anambra State Library Board	13	22.8
6	Paul University Awka Library	1	1.8
7	Madonna University Okija Library	1	1.8
8	Judicial Central Library	1	1.8
9	Metrological Institute of Tech. Library Onitsha	1	1.8
10	Secondary School Libraries	3	5.2
11	JOPC Onitsha Library	1	1.8
	Total	**57**	**100**

Findings and Discussion

Characteristics of the Respondents

Nineteen (33.3%) of the respondents were males, while 38 (66.7%) were females. In terms of highest academic qualifications, 25 (43.9%) of the respondents had bachelor's degrees or higher national diplomas, 22 (38.6%) had master's degrees; 6 (10.5%) had postgraduate diplomas; while 4 (7.0%) had doctorate degrees. The occupational distribution of the respondents shows that the majority, i.e. 42 (73.7%) worked in a library; 11 (19.3%) were full time lecturers in the three library schools, and 4 (7%) of them combined lecturing and library work.

Awareness and Knowledge of Web 2.0

As many as half 29 or (50.9 %) of the librarians indicated that they were not aware of the concept of Web 2.0. A simple test of knowledge question was used to gauge the level of understanding of Web 2.0 among the 28 (49.1%) librarians who indicated that they were aware of the concept (Table 2). The table shows that only 57% of those who indicated awareness were able to describe Web 2.0 in terms of the options provided, and that only 57 % of all the surveyed librarians indicated awareness and also had a correct understanding of the concept. These results are similar to those of Atulomah (2010) who, in a study of awareness of the related concept of Library 2.0 by librarians in South Western Nigeria, reported that as many as 67.7 per cent of the librarians were hearing of Library 2.0 for the first time during the survey.

Table 2: Respondents' Accurate Description of Web 2.0

Description	No	Per cent of Aware
Interactive and collaborative web	16	57.1
Millennium Web development	11	39.3
Web development for professionals	1	3.6
Static Web	0	0.0
Total	**28**	**100.00**

Exploring further the nature of knowledge of Web 2.0 that the librarians had, table 3 shows that different Web 2.0 tools were each identified correctly as such by very small percentages of the respondents: 14 (24.6%) of the respondents correctly identified Wiki as a Web 2.0 tool; 9 (15.8%) identified MySpace; 12 (21.1%) identified blog; 18 (31.6%) identified Facebook and 6 (10.5%) identified RSS Feed. These results are similar to the findings of Atulomah (2010). In that study, only seven respondents, out of the 31 were able to identify RSS feed and Podcast as Web 2.0 tools.

Table 3: Identification of Web 2.0 tools by Respondents

Web 2.0 Tool	No.	%
Facebook	18	31.6
Wiki	14	24.6
Blog	12	21.1
MySpace	9	15.8
RSS Feed	6	21.4

N = 57

Use of Web 2.0 Tools

To find out the level of use of social media tools by the respondents who indicated awareness of Web 2.0 tools, they were asked to indicate the tools that they used personally. The results show very low use of Web 2.0 tools and the only two features indicated were used by less than half of the respondents who indicated awareness of Web 2.0 tools - Facebook (46.4 %) and Blog (28.6%). None of the respondents had used MySpace or Twitter. This is in contrast to the result of Ezeani (2009) where librarians in the study were generally aware of social network and belonged to several of them. In that study, 60% had Facebook accounts, and 90% belonged to My Space, 82% to Hi5 and 66% to Library thing.

Table 4: Respondents' Use of Social Media

	Yes	%
Facebook	13	46.4
Blog	8	28.6
My space	0	0
Twitter	0	0

N = 28

A Wiki allows users to freely create and edit the content of Web pages. Mak and Coniam (2008) notes that Wikis have been found useful in promoting collaborative writing and sharing of information and exchange of ideas. On making personal contributions to Wiki pages on the Internet, table 5 shows that 43 (75.3 %) of the respondents had never contributed to Wikis, 12 (21.1%) contributed occasionally; while only one each (1.8%) contributed often and very often to Wiki, respectively.

Table 5: Contribution to Wiki Pages on the Internet by Respondents

Responses	Frequency	%
Very often	1	1.8
Often	1	1.8
Occasionally	12	21.1
Never	43	75.3

On social networking, only 16 (28.1%) of the respondents indicated they had participated in the discussion groups on the Internet, while only 14 (24.6%) had participated in the NLA forum, the online discussion group of the Nigerian Library Association (NLA). Members share ideas and disseminate information and news. The implication is that majority 43 (75.4%) may not be participating in this online community that may impact positively on their professional development.

Ease of Access to Internet Connectivity

Web 2.0 tools are Internet-based. So, the study tried to find out the availability of Internet connectivity facilities in the various libraries and library schools in the state, as easy access to the Internet in the work place is expected to support development of both Internet and Web 2.0 use skills among the librarians. As many as 40 (70.2%) of the respondents in this study had no access to Internet connections in their libraries or departments. This finding is similar to that of Igben and Akobo (2007) in their study of state of information and communication technology in Rivers State of Nigeria, which showed that only nine (56%) libraries out of 16 studied had Internet access in their libraries. However, Fagbami and Ogunjobi (2009), in a study of the availability and use of information and communication technologies in four agricultural research institutes in Ibadan, South Western Nigeria, found out that 140 (84.8%) out of 165 surveyed members of these institutes indicated having access to the Internet in their institute libraries.

Further analysis of the data of this study revealed that, in the absence of ready access to the Internet to most of the surveyed librarians (56.1%) accessed the Internet mainly through the cybercafés, 21.1% had personal subscriptions to Internet connectivity, while only 10.5% used Internet facilities of their institutions. Adetimirin (2009), in a study of practising academic information professionals in Oyo and Ogun States of Nigeria, also observed very high use of cybercafés by the respondents.

Table 6: Respondents Major Internet Access Point

Access points	No.	%
Cybercafé	32	56.1
Personal Internet connectivity	12	21.1
Institutional facility	6	10.5
No response	7	12.3
Total	**57**	**100.0**

Discussion

Singh (2001) had noted that the library profession is one that has been most intensely affected by the challenges created of the Internet and the Web, with resultant shifts in paradigms of library service from collection management to information management, from ownership to access, and changes in nature, boundaries and structure of information. As noted by Sreekumar (nd), the Internet skills of information professionals need to improve drastically in order to be able to grapple with the opportunities and challenges created by the new technologies. The findings of the study show clearly that the level of awareness, knowledge and use of Web 2.0 by librarians in Anambra State is very low. Improvement on this state of affair is certainly imperative, in order that library services and library professionals and users in the state can benefit from the opportunities provided by Internet and Web 2.0 tools.

One of the benefits of Web 2.0 is social networking. Miranda, Gualtieri and Paolo (2010) have noted that social networking tools enable communities of users who share the same interests, to build their own online social networks for communicating or sharing resources. Users, librarians, and information services professionals can interact more efficiently, thereby creating additional information and content and generating knowledge. This study found out that librarians in Anambra State exhibited very low use of the social networking tools. They were also not participating adequately in even their local professional online social networks like the NLA forum. Only 28.1% of them belonged to an online social network, and only 24.6% of them had contributed to the online forum of the Nigerian Library Association. The implication of this very low participation in the forum by the librarians in the state is that as many as 75 per cent of them miss valuable information, news and latest development relating to the practice of their profession in the country. This is surely a disservice to existing and potential users of library services in the state.

It is nevertheless also important to stress that practising librarians need adequate tools to enable them access and use Internet and Web 2.0 tools in their work. This study observed that most practising librarians in the state lacked access to the Internet at their work places. The consequence is that most of them use personal resources to access the Internet from commercial cybercafés. This cost them money, which means that they are most likely to use such mode of Internet access for personal purposes than to deliver library services. Time spent in cybercafés often also mean time spent away from their desks harms effective delivery of library technical or user services.

Conclusion and Recommendations

Web 2.0 is a new web concept that represents change. Librarians should have enough exposure in order to play their expected roles. The paper has demonstrated low knowledge and use of Web 2.0 tools by librarians in Anambra State. To build this knowledge, increase use and participation in social media, it is important to have facilities on ground that supports acquisition of information skills. It is therefore very imperative that librarians are provided access to the Internet in their work places. This study therefore makes the following recommendations:

- Library administrators in the state should make concerted efforts to acquire, as a matter of urgency, information technology structures that support information and technology skills acquisition. Internet is a basic information necessity, it should be provided for both users and workers in the library either free or at subsidised rate. This will improve productivity, as well as increase job satisfaction.
- Librarians should develop the zeal to discover and explore innovations. This is an important way for them to keep up with the wheels of development.
- NLA Anambra State chapter should endeavour to acquaint librarians on every development in

the national level. If this is done, many librarians in the state will be aware and participate actually in national events. On the individual level, every librarian should endeavour to 'pass on the information' for the benefit of others.

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System-related Factors that Predict Students' Satisfaction with the Blackboard Learning System at the University of Botswana

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Abstract

This study examined students' satisfaction with the Blackboard Learning System and the factors that predict their levels of satisfaction. The sample for the study comprised 503 undergraduate students of the University of Botswana selected from seven faculties and 42 departments of the university. Data were collected through a survey questionnaire. The results showed that all the system-related factors focused upon in the study, i.e. net benefits, self-regulated learning, content quality, teaching/learning quality, system quality, and service quality, correlated with users' satisfaction with the Blackboard system and the factors jointly predicted 54% of variations in the students' satisfaction. Based on these findings, it is recommended that the university needs to improve the support services provided for users of the system. The Blackboard support staff should always consider making themselves available for assistance bearing in mind that the system is all about technology which can develop technical faults at any time.

Keywords

E-learning, Course management systems, Blackboard Learning System, User satisfaction, University of Botswana.

Introduction

Information Communication Technology (ICT) is now a central construct that enables and/or supports the process of e-learning and has made remarkable progress in the last two or three decades (Rao, 2006). Course management systems are components of e-learning and their adoption for web-based instruction continues to increase. Wang et al. (2007) defines e-learning as referring to learning via the Internet. A course management system (CMS) is a software program or integrated platform that contains a series of web-based tools to support a number of activities and course management procedures (Severson, 2004). Examples of proprietary course management systems are WebCT/Blackboard, eCollege, Desire2Learn, LearningSpace, and ANGEL, as well as a growing number of open source systems such as The Sakai Project, Open Source Portfolio Initiative, Moodle, and uPortal (Bradford, Porciello, Balkon, and Backus, 2007). Course management systems are a class of information systems that manage teaching and learning. They were developed to support and enhance the organisational processes of content creation, storage and retrieval, transfer, delivery and application. At the University of Botswana, the course management system being used for classroom and online educational assistance is the Blackboard Learning System, hereinafter referred to as Blackboard. Blackboard is an integrated, user–machine system for providing information or content to support teaching and learning.

Blackboard provides powerful and easy-to-use systems for educational instruction. According to Bradford et al. (2007), the system allows the instructor to easily meet the needs of the students and lecture notes, audio recordings, animations, learning activities, case studies and video clips can be added very easily to the system. These resources may be developed by the instructor or very commonly through web links to supplemental online material. Blackboard provides the opportunity for students to use the familiar environment of the internet for educational purposes. The argument is often made that the use of Blackboard and other course management or learning as pedagogical tools is good

from the standpoints of both student learning and faculty instruction. Such tools provide a medium to present curricular materials in a way that promotes the development of students' organisational, communication, and time-management skills.

According to Bradford, Porciello, Balkon and Backus (2007), the Blackboard Learning Management System was founded in 1997 with a vision to provide a user-friendly means by which college professors could put course information, including syllabi, reference sites, and study guides, on the Web.Blackboard merged with CourseInfo LLC, a course management software provider and startup company at Cornell University, in 1998, and the merged company thereafter released their first software product for online learning. Blackboard Inc. acquired its Richmond, USA-based competitor MadDuck Technologies, in 2000, purchased CampusWide Access Solutions Inc. from AT&T and CEI SpecialTeams from iCollege Inc. in 2001, and Promethius, another online learning competitor, in 2002. Blackboard Inc. later merged with the rival e-learning software company, WebCT, which gave Blackboard Inc. control of up to 80 per cent of the academic course management system market in North America" (Bradford et al., 2007). As of June 2006, the Blackboard Empire included over 12 million users in over 60 countries. Blackboard offered products in 12 languages to over 2, 200 learning institutions.

However, despite the increasing use of Blackboard for teaching and learning the world over and at the University of Botswana specifically, little attention has been given to examining the factors that predict or explain users' (students, teachers, course designers, or course administrators) satisfaction with the system. The focus in this study was user satisfaction from the perspective and opinions of the students.

An adequate knowledge of the factors that influence the adoption and use of Blackboard by students and the interrelationships among the factors is clearly needed in order for university administrators, course designers and teachers to be able to improve students' experience, productivity and satisfaction with the system. It is against this background that this study was designed to examine the factors that predict students' satisfaction with Blackboard at the University of Botswana.

Blackboard Learning System at the University of Botswana

The University of Botswana (UB) was established in 1982. This was after the breakup of the multinational and multi-campus University of Botswana, Lesotho and Swaziland, which had been established in 1964 to serve the three southern African countries of Botswana, Lesotho and Swaziland. The University main campus is situated in Gaborone, the capital city. During 2006/2007, the University had a total enrolment of 16,238, students of which 12,934 were full time. Approximately 51% of the students were females. Of the total enrolment, 15,248 were pursuing undergraduate programmes (University of Botswana, 2007). The University has six faculties, namely: Business, Education, Engineering and Technology, Humanities, Science and Social Sciences comprising thirty-nine (39) departments. It also has a School of Graduate Studies and several specialised centres and research units and a staff strength of 2,640, of which 994 were academic. The academic programmes are offered at certificate and postgraduate levels (University of Botswana, 2007). The University of Botswana defines e-learning as the appropriate organisation of information and communication technologies for advancing student-oriented, active, open, collaborative and life-long learning process (UBeL, 2002).

The implementation of e-learning at the University of Botswana was motivated to fulfil the university's responsibility, among other things: prepare students for effective participation in the wider information society; use ICT to increase the success rates of students; provide the opportunity for the University to enhance flexible learning anytime, anywhere and at student's own pace; and enable access to relevant national and international resources and enable instructors to handle large classes (UBel, 2002:16). The university also has a policy-guided e-learning program that emphasised a blended approach to e-learning in which various modes, methods and media are integrated and organised for appropriate learning (Batane and Mafote, 2007; UB WebCT Report, 2007).

The University of Botswana embarked on a programme of e-learning in 2001 when it mandated the EduTech Unit of its Centre for Academic

Development to transform the education process at the University technologically (Uys, 2003). EduTech carries out the training of faculty in the effective and appropriate use of educational technologies at the university. The Unit also provides resources such as state-of-the-art computer laboratories known as smart rooms. The smart rooms were constructed to facilitate technology-based, open, active, and collaborative learning, and are fully equipped with wireless Local Area Networks (LANs), videoconferencing facility, digital projectors, scanners, and the Blackboard system. A smart room is typically laid out with clusters of computers situated in such a way as to enable eye contact among instructors and learners. This is similar to what obtains in some other higher education institutions that are implementing e-learning, as in Korean Universities (Leem & Lim, 2007) and the University of the Witwatersrand, South Africa (Lowe and Kaplan, 2007).

During 2006, 145 lecturers of the 827 faculty used e-learning in the delivery of their courses and during 2007/08 academic session, 258 lecturers of the 994 academic staff used it in the delivery of their courses. The number of students enrolling in e-learning course is also growing. During the first semester of 2006-2007, more than 1,300 students were added to online courses (University of Botswana, 2006). According to the UB Blackboard/ WebCT Report, 2007:9, "it is difficult to tell the exact number of students online because most students are enrolled in more than one course. A rough estimation of about 8000 + students are enrolled on Blackboard".

Literature Review

The literature on information systems (IS) development and use is replete with studies that show that varied factors could be used to predict or explain why users of information system accept or avoid, adopt, use, or become satisfied or dissatisfied with information systems. Among the most commonly highlighted factors are: perceived ease of use (e.g. Chang and Vera-Pang's, 2011; Zhou, 2010), self-efficacy (e.g. Abad, Morris and Nahlik, 2009, system quality (Wang et al., 2007), content quality (Wang et al., 2007), and perceived usefulness, individual impact, service quality, intention to use (Tella, 2009). Studies have paid and still pay considerable attention to e-learning quality. The quality issue has received attention from educational institutions such as the Western Interstate Commission for Higher Education (WICHE), and the Institute for Higher Education Policy (Frydenberg, 2002). The institutions which adopted this approach focused on the quality of e-learning system as a whole, instead of limiting their focus to single factors such as service quality or system quality only. However, MacDonald et al. (2001, 2005) proposed a model called the Demand-Driven Learning Model (DDLM) that relied on the following five factors which were considered to be essential to creating e-learning quality in higher education: structure, content, delivery, service, and outcome.

Also relevant to this study is a model developed by Tella (2009) for evaluating the Blackboard system at the University of Botswana. The evaluation model highlighted the importance of the following nine interrelated factors: system quality, content quality, service quality, teaching and learning quality, student self-regulated learning, user intention to use, organisation preparedness, user satisfaction, and net benefits. Each of these factors is explained next.

System Quality: According to Delone and Mclean (2003), system quality refers to an overall quality of hardware and software of a learning system and the elements of the system that affect the end user in the way they interact and use a system. Therefore, Blackboard system quality in this study refers to the elements of the system that affect students at the University of Botswana in the way they interact and use the system. Some researchers had identified system quality as one of the key potential predictors of users' satisfaction with a system. For instance, Eom (2010) applied path analysis modeling to examine the relationships between students' satisfaction with and their perceived learning outcomes in the context of university online courses. The results indicated that system quality, information quality and self-managed learning behaviour significantly predicted students' satisfaction levels, while system use and computer self-efficacy did not.

Content Quality: In the context of an information system, information quality refers to output that an information system provides. Content quality

represents information quality in this study because the output of the Blackboard learning system is the information content it provides to students. Course content quality is defined as the extent to which the course content management system provides valuable content in the judgement of the student users relative to their learning needs. The quality of course content is measured by its important attributes, i.e. timeliness, relevance, usefulness, accuracy, importance, availability, and completeness. Shin (2009) explored the factors influencing the adoption of IPTV within the technology acceptance model (TAM), and confirmed the impact of information quality and system quality on consumers' technology experience. The study specifically shows that the perceived quality of content and system was found to have a significant effect on users' perceived usefulness and perceived enjoyment. Koivumki, Ristola and Kesti (2008) focused on how different dimensions of information quality affect consumers' satisfaction towards and eventual acceptance of mobile information services. How these dimensions affect consumer satisfaction in both utilitarian and hedonic use contexts was analysed. The results show that all the information quality dimensions examined had a statistically significant positive relationship with user satisfaction, while user satisfaction in turn had a positive relationship with the intention to use the service again. The results also indicated that content is more important for users with hedonic goals.

Service Quality: Service quality is considered as the overall level of support delivered to students in their use of the Blackboard learning system by the Blackboard service provider at a particular Blackboard installation. It includes the types and levels of support rendered to the students by a combination of the institutions' information system department, Blackboard support team, and/or an outsourced Internet service provider. Stone, Good and Baker-Eveleth (2007) reported that assessments of system/service quality in tasks performed using the system impacted perceived performance of the marketing organisation which they studied and also mediated individual-level impacts such as perceived usefulness, attitudes toward using the system, and system use.

System Usage: Straub et al. (1995) found that actual system usage has a notable practical experiential value for managers interested in evaluating the impact of information technology. Igbaria et al. (1997) found that individuals are likely to use a system if they believe it is easy to use and will increase their performance or productivity. Objective measures of actual use are difficult to obtain for Internet-based technologies and therefore many of the TAM studies either left out usage as a dependent variable, focusing solely on behavioural intention, or else used perceived usage as a proxy. Page-Thomas (2006) in a regression analysis on web usage frequency reported that users usually find it easy to learn to use the web and that users' self-reported uses of the web for purchasing activities are the best predictors of how frequently they will use the web. The results highlighted the importance of training users to effectively use hypermedia-based systems like the web, and the design of systems that are easy to navigate and that provide advanced functionality for transactional activity.

Net Benefits: Wu and Wang (2006) defined this as an idealised comprehensive measure of the sum of all past and expected future benefits from using Blackboard as perceived by users, and that takes into account past and expected future costs of use, including the expenditures and time taken in learning to use and using the system. In order to measure net benefits, one needs to adopt one or more stakeholders (e.g. students) points of view about what is valuable and what is not about the system as suggested by (Seddon, 1997). Net benefits was measured in this study by the perception of the students on how valuable the Blackboard learning system was to them. This was measured using a modified version of the net benefit sub-scale used by Wang et al (2003). On the benefits side of the net benefits equation is the increased performance of individual and group learning by a student. For a University of Botswana student, important net benefits resulting from the use of a Blackboard system included improvements in the learning outcome and performance, decision-making, the quality of the students produced by the university though the system. Through the virtual service connections, students can learn and enhance their knowledge. By actively participating in virtual service connection, a student can become more visible to their peers. Net benefits is also concerned with improved performance at the University of

Botswana, improved outcome/outputs, quality of graduates, cost reduction, as well as increased work volume. Previous research on net benefit, e.g. Cegarra-Navarro and Carriónkey (2011) reported the key benefits of telemedicine in the e-learning context as including the fact that it enables the doctors to identify and replace poor practices and also avoid the re-invention of the wheel, and cost reduction by minimising unnecessary work caused by the use of poor methods.

Learning and Teaching Quality: This is the improved quality of teaching and learning processes, as perceived by the students. The variable is important because the expected core role of the Blackboard learning system is to support and improve learning and teaching. In this study, improvements in teaching and learning quality areas measured by students' assessments of the improvements in the way courses are delivered through the Blackboard platform, and the quality of interaction with tutors on the platform.

Self-Regulated Learning: Schunk and Zimmerman (1994) defined self-regulated learning as "the process whereby students activate and sustain cognitions and affects that are systematically oriented toward an attainment of their goals." Cognitive self-regulation can be taught to students (Hwang and Liu, 1994). This means that students are guided in order to play an active role in learning, become self-organised, self-directed, independent, and actively participate in the learning process to construct their knowledge (Vovides, et al, 2006). According to the constructivist learning theory, students utilise open applications to construct more complicated meanings. However, not all learners are able to manage their learning process and master the content at hand, especially in e-learning environments. This is where Blackboard can provide the support to guide learners in the use of the appropriate tools to help them acquire, for example, the strategic knowledge to collect and organise data and then demonstrate what they have learned (Niederhuser and Stoddart, 2001). The Blackboard learning system should inspire, motivate and guide the students to develop self- regulated learning cognitive skills. The opportunity learners have to self-regulate their learning under Blackboard can go a long way in determining the users' satisfaction with the system. Students' self-regulated learning is considered as one of the Blackboard users' satisfaction factors in this study because it is critical for measuring acceptance, satisfaction and even success of a system in educational context. In this study, self-regulated learning is defined as the way learners actively participate and take decisions regarding their learning under the Blackboard learning system, and measured using a modified version of the learners' self-regulated scale developed by Schunk and Zimerman (1994).

Organisation Preparedness: This denotes the level of readiness of the University of Botswana in implementing an effective e-learning WebCT CCMS. The indicators used to measure this variable are e-learning infrastructure, funding, skills and capacity building.

User Satisfaction: This is the dependent variable on this study, and is defined as a user's level of satisfaction with the system in terms of individual outcomes on a pleasant-unpleasant continuum (Zhou, 2010). User satisfaction in this study refers to the degree to which an individual user is satisfied with his or her overall use of the Blackboard learning system. Collective findings from prior IS research have suggested that user satisfaction is a strong and critical manifestation of a systems' success (Delone and Mclean, 1992, 2003), and several measurement inventories have been developed and validated to measure it. In this study, user satisfaction was measured using a constructed and validated user satisfaction scale that required the students to use four-point rating scales to indicate how satisfied they were using Blackboard at the University of Botswana in terms of the following variables: relevance, dependability, accuracy, usefulness, adequacy and effectiveness.

Tella (2009) had used the above nine variables in a research model which he used in a doctoral thesis to assess the effectiveness and efficiencies of implementation and use of the Blackboard at the University of Botswana. This study, which is based on data collected for the thesis, focuses on the extent to which user satisfaction, which was one of the variables that was used to evaluate the Blackboard implementation and use at the university, can be

predicted with data collected during the study on seven of the eight other variables in the model, except organisation preparedness.

Research Questions

To achieve the objective of the study, the following research questions were specified.

1) What inter-correlations exist among the system-related factors (system quality, content quality, service quality, teaching and learning quality, student self-regulated learning, and net benefits) in respect of the Blackboard Learning System at the University of Botswana?
2) Which of the Blackboard learning system related factors best predict users' satisfaction with the system?
3) What is the joint predictive strength of all the factors in explaining the users' satisfaction with the system?

Methodology

The study was carried out at the University of Botswana during the 2008/2009 academic session. A survey research design was used on a target population that consisted of all undergraduate students who had been using the Blackboard at the university. According to the UB Fact and Figures, 2008/09, there were 16, 238 students distributed across seven faculties and 42 departments. Out of this number, the publication estimated that at least 8,000 were using Blackboard across all faculties at the time of the study. The sample sizes were based on 7.5% of the students in each faculty. This resulted in a target sample of 600 students.

In each faculty, a core course was chosen at each of the four levels of study in the four-year undergraduate programmes (core courses are compulsory foundation courses in an academic programme which all students must study and pass in an examination before graduation), for a total of four core courses for each faculty. The total number of students taking each of the core courses was identified for each faculty, and about 10% of them were targeted with a view to obtaining at least 7.5% returned and usable copies of the questionnaire.

A questionnaire was used to gather data from the respondents in this study. The items in the questionnaire were adapted from various previous IS success measures. The design of the questionnaire was guided by the literature review, previous survey questionnaires used in similar studies, and the research questions. The choice of a questionnaire for the collection of data was based on the fact that most studies on information system success have adopted the use of questionnaire for the collection of data (Hussein, et al, 2007)

Sub-scales for collecting data for measuring each of the following constructs were included in the questionnaire: (1) user satisfaction (the dependent variable), (2) System quality, (3) Content quality, (4) Service quality, (5) learning and teaching quality, (6) system use, (7) self- regulated learning, and (8) net benefits. Items in the sub-scales had 4-point Likert response scales with the points coded and labelled as 1 "Strongly disagree", 2 "Disagree", 3 "Agree", "Strongly Agree". The 4-point scales are known as forced choice Likert scales as "respondents were not allowed a "not sure/indifferent" response in order to overcome the neutral and don't know responses (Hussien et al., 2007) and avoid potential distortion of results.

The questionnaire was hand distributed to the participants. The questionnaire was pilot tested on a selected sample of the population in order to ascertain the validity and reliability of its items and sub-scales. The questionnaire was self-administered by the students during a lesson in each of the selected core courses after the instructions on how to respond to the items in the questionnaire were explained to them by the researcher. Out of the 600 copies of the questionnaire administered to the students, 503 were returned, giving 84% response rate.

Results

Table 1 reveals that correlation exists between the overall users' satisfaction score and the other system related factors/measures of Blackboard system. The results show that student self-regulated learning had the highest correlation with users' satisfaction. This is followed by students' self-regulated learning ($r = 0.51$) and net benefits ($r = 0.50$). A correlation of other factors reveals content quality and teaching and learning quality as having ($r = 0.49$), system quality

(r = 0.46) while service quality had the lowest correlation with users' satisfaction (r = 0.37). This suggests that all these factors correlate with users' satisfaction with Blackboard system.

Nevertheless, the results reveal that some correlations are higher than others. Among the highest inter-correlations that are higher than 0.5 are content quality with system quality (r = 0.588); content quality and teaching/learning quality (r = 0.525); and system quality with teaching/learning quality (r = 0.506). These high correlations are what should be expected, as users are likely to link perceptually teaching/learning quality with content quality as content is what is taught and expected to be learned. Also, they are likely to link content quality with the technology or system (Blackboard) through which it is made available to them. The other similarly high inter-correlations (above 0.5) are between user satisfaction and self-regulated learning (r = 0.511), between user satisfaction and net benefits (r = 0.500), and between user self-regulated learning and net benefits (r = 0.511). A few other inter-correlations are very close to 0.5. Among these are: user satisfaction with content quality (r = 0.497) and with teaching/learning quality (r = 0.497), and teaching/learning quality with self-regulated learning (0.485).

However, some factors had much lower inter-correlations with one another: system quality with service quality (r = 0.336), with self-regulated learning (r = 0.331), and with net benefits (r = 0.296); service quality with teaching/learning quality (r = 0.393), with self-regulated learning (r = 0.342), and with net benefits (r = 0.242). These results indicate that the students' perceptions and ratings of both system quality and service quality were low, which probably also explains why these two factors are also weakly correlated with the system success factors such as user satisfaction and net benefits, as the table shows.

Table 1: Descriptive Statistics and Intercorrelation Matrix among Factors (N=503)

			Factors (Variables)						
Factors (Variables)	Mean	Standard Deviation	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) User Satisfaction	102.4314	23.987	1.000						
(2) System Quality	14.874	2.874	.464	1.000					
(3) Content Quality	11.169	2.315	.497	**.588**	1.000				
(4) Service Quality	7.411	2.694	.367	.336	.418	1.000			
(5)Teaching/Learning Quality	7.986	2.067	.497	**.506**	**.525**	.393	1.000		
(6) Self-regulated learning	10.451	2.472	**.511**	.331	.421	.342	.485	1.000	
(7) Net Benefits	13.456	3.389	**.500**	.296	.343	.242	.393	**.511**	1.000

Table 2 presents the results of the regression of user satisfaction on the six system-related variables. The regression results show an adjusted R-square value of 0.541 (table 2(a)), and an F-ratio of 93.872 (table 2(b)), the latter of which is significant at 0.05 level (0.000 < 0.05). These results indicate that the six independent variables (*net benefits, self-regulated learning, content quality, teaching/ learning quality, system quality, service quality*) jointly (as indicated by the R-square value) explained or predicted 54.1% of the variations in the students' satisfaction with Blackboard system. The prediction is also significant, as indicated by the F-ratio.

Table 2(c) provides information on the individual contributions of each of the six factors in predicting user satisfaction with the system. The results show, firstly, that each of the factors (except service quality) makes significant contributions to the prediction (as indicated by the significance of the t values, which are less than 0.05, as shown in the rightmost column of the table.)

Secondly, the standardised coefficients (Beta values) which indicate relative strength of each factor in the prediction of user satisfaction show that net benefits contributed most to the prediction of user satisfaction (Beta value = .282), followed in declining order of strength by system quality (Beta = .244), teaching and learning quality (Beta = .196), self-regulated learning (Beta = .117), content quality (Beta = .116). Although service quality had a Beta value of .035, its contribution is not significant, as indicated in the final column (Sig. = 0.05 not less than 0.05). These results imply that five of the six factors exert significant contribution to the explaining or predicting user satisfaction with the Blackboard system.

Table 2: Regression of User Satisfaction on Blackboard System-Related Factors (N = 503)

(a) Model summary

Multiple R	.739
R Square	.547
Adjusted R Square	.541
Std. Error of the Estimate	4.932
Log-likelihood Function Value	-1107.304

(b) ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	13526.129	6	2254.355	93.872	.000
Residual	11215.289	467	24.016		
Total	24741.418	503			

(c) Coefficients

	Unstandardised Coefficients		Standardised Coefficients			
	B	Std. Error	Beta	Std. Error	T	Sig.
(Constant)	-.676	.755			-.895	.371
Net Benefits	.323	.043	.282	.038	7.455	.000
Self-Regulated Learning	.185	.063	.117	.040	2.943	.003
Content Quality	.195	.071	.116	.042	2.751	.006
Teaching/Learning Quality	.365	.076	.196	.041	4.782	.000
System Quality	.327	.054	.244	.040	6.098	.000
Service Quality	.099	.050	.069	.035	1.965	.050

Discussion

This study has examined students' satisfaction with the Blackboard Learning System: an investigation of the predictive factors at the University of Botswana. The results have revealed that all the system related factors (*net benefits, self-regulated learning, content quality, teaching/learning quality, system quality, service quality)* correlate with users' satisfaction with Blackboard system. However, some system factors have higher correlation close to .5 and higher than .5; including content quality, teaching and learning quality, students' self-regulated learning, and net benefit; while factors such as system quality and service quality had the lowest correlation with users' satisfaction. These lower correlations might be because users usually experience difficulties such as system failure or other related issues. Also, lower correlation of the service quality to users' satisfaction might be due to the system weak support services provided to the users which might be considered as not strong enough to satisfy the users.

Similarly, all the six system-related factors together made 54% prediction of users' satisfaction with Blackboard learning system. This suggests that the variables have direct prediction on the users' satisfaction with Blackboard system and that all the six factors exert significant contribution to user satisfaction with the Blackboard. Nevertheless, the results also show that the students rated both system quality and service quality lower than the other system-related factors such as content quality, teaching/learning quality, self-regulated learning.

The inter-correlations reported among the system-related factors and users' satisfaction corresponds with the previous studies identified in the literature. Similarly, the joint prediction of the factors to users' satisfaction with the Blackboard learning system corresponds with the findings of some earlier research. For instance, Eom (2010) reported that system quality, information quality, and self-managed learning behaviour significantly affect students' satisfaction. On content quality, Shin (2009) reported that perceived quality of content and system was found to have a significant effect on users' perceived usefulness and perceived enjoyment and users' satisfaction. Koivumki, Ristola and Kesti (2008) reported how different dimensions of information quality affect consumers' satisfaction. Stone et al. (2007) and Ozkan and Koseler (2009) have reported service quality as a key determinant of users' satisfaction with e-learning, while Cegarra-Navarro and Carriónkey (2011) reported the importance of net benefits in determining users' satisfaction with a system.

Conclusion

Blackboard learning system is becoming the most popular and commonly used e-learning system and is believed to be the most commonly recent e-learning platform in many universities the world over. Even, non-educational organisations are also making use of this system to train their employees. However, measuring and determining factors predicting users' satisfaction with Blackboard learning system is considered to be one of the main issues in e-learning systems evaluation. The analyses in this study show the causal relationships between the identified factors and the users' satisfaction with the Blackboard learning system. The findings also validate those of many earlier studies.

Nevertheless, it is important to recognise some limitations in the scope and methods of the study. Firstly, the study was conducted among only one (students) of the three main stakeholder groups (students, staff and ICT support staff) in the Blackboard Learning System at the university. Secondly, only one data collection instrument, i.e. the questionnaire, was used to collect the data on the students' opinions and ratings on both the dependent and the independent factors in the study. Thirdly, although research on the impacts of e-learning implementations in African universities is rare, the data for this study were collected from only one African university, the University of Botswana's implementation of the Blackboard Learning System. The scope of the study was also limited by time, financial and data collection constraints that limited the sample size that was used. However, it is hoped that other researchers would design and use other types of instruments for other stakeholders in different African institutions that use other e-learning platforms than the Blackboard Learning System.

Recommendations

Teaching and learning support is the core business of e-learning systems such as Blackboard. The results of the study show that service quality has the lowest correlation with users' satisfaction with Blackboard. This suggests either that service quality is weak or imperceptible to the students. Hence, it is recommended that the university needs to improve the support services provided for the users of Blackboard. The Blackboard support staff should consider improving and making service support visible by making themselves available for user assistance roles, bearing in mind that the system is all about technology that students may not understand fully, or which can develop technical faults at any time. The University of Botswana should consider increasing the number of adequately trained Blackboard support staff on campus.

Teaching and learning quality correlated strongly with user satisfaction. However, there is still need for improvement in the quality of teaching and learning through Blackboard at the university, as the majority of the courses in the university were still delivered outside the system at the time of the study.

There is also the need to improve the content quality of courses delivered through Blackboard. There is need for the people in charge of the system at the university (i.e. Blackboard Administrator and the e-learning support team) to make sure that quality content in terms of substance, relevance, media and formats is uploaded on the system. In other words, there is a need for course content quality control to ensure that all the content on the system is up to specified standard. Modification could also include encouraging lecturers to add more activities to what is currently available on the system.

Finally, in order to further enhance the overall satisfaction of the users, there is a need for regular upgrading of the system, perhaps in every 3-5 years, to ensure that the system keeps pace with new developments in e-learning pedagogical methods and tools.

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Awareness and Incidence of Plagiarism among Undergraduates in a Nigerian Private University

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Abstract

This study examined students' awareness of plagiarism in Babcock University, one of the earliest established private universities in Nigeria. The study also assessed the incidences of plagiarism among students and the perceived factors responsible for the plagiarism. Out of the 200 copies of a structured questionnaire randomly distributed to students, 169 copies (84.5%) were returned and used for the analysis. The results indicated that most of the students lacked adequate understanding of the behaviours that constitute plagiarism and are thus more likely to commit unintentional plagiarism. Copying from the web without attribution is very common as more than 60% of the students admitted doing that. The ease of accessing information from the IInternet, the desire to earn good grades, a poor knowledge of appropriate citing principles and the pressure to meet assignment deadlines were mentioned by the students as the most prominent reasons for plagiarism. A significant positive relationship was found between levels awareness and incidence of plagiarism, indicating that awareness of behaviour that constitutes plagiarism may not deter students from engaging in it. The study recommended that academic institutions should discourage unintentional plagiarism by teaching students the techniques of appropriate summarisation, paraphrasing, citing and referencing, by embarking on value re-orientation to encourage honesty, diligence, fairness and academic integrity among student, and by adopting strict policies and sanctions against intentional plagiarism.

Keywords

Plagiarism, Undergraduate students, Babcock University, Nigeria

Introduction

Among the legacies that quality education bequeaths on its recipients is the capacity to think critically and analytically as well as generate novel ideas. The purpose of university education is to produce creative and original thinkers who can contribute meaningfully to the development of the society. This noble mission is however becoming a Herculean task as the increasing number of literature on academic plagiarism attest to the prevalence of the practice among university students. Like piracy and other forms of copyright infringement, plagiarism violates other people's intellectual property rights. It undermines the principles of honesty, trust, fairness, respect and responsibility, which are fundamental to academics. It devalues the integrity of academic qualifications and discourages students who do not engage in such practices (JISC, 2005). There is therefore a need to understand students' perception of plagiarism and the factors contributing to the prevalence of the practice in order to effectively combat it.

Plagiarism is a derivative of the Latin word 'plagiarius', which means 'kidnapper' or 'abductor'. It is 'the theft of someone's creativity, ideas or language (Williams, 2002). Plagiarism manifests itself in different subtle forms hence some studies have attempted a distinction between deliberate or intentional plagiarism and unintentional plagiarism. Intentional plagiarism is a deliberate act of literary theft. It is designed to deceive, hence, is more difficult

to detect (Park, 2003). Intentional plagiarism includes presenting whole documents written by others as one's own work, buying and presenting papers from paper mills, hiring someone else to write assignments or term papers and including references that were never consulted in work. Unintentional plagiarism, on the other hand, is often borne out of ignorance of citation and referencing rules. It includes copying word for word, either from a print or from an electronic source without acknowledging the source.

Several reasons have been adduced for the rising incidences of academic plagiarism. The most popular is the ease with which information can be retrieved, manipulated and distributed on the Internet. The widespread use of the Internet among students has fostered the 'cut and paste' approach to research. The anonymity of the web and the practice of 'downloading' music, software, games, etc. at no cost from the Internet have gradually eroded the culture of attribution that is fundamental to academic research (Young, 2001). Students generally have the misconception that the Internet is a free source for collecting information without acknowledging the author (Willems, 2003). Furthermore, students are presented with lots of hard to resist temptations to plagiarise on the Internet. The number of paper mills, websites that offer written term papers for a fee, has increased significantly with the advent of Internet technology. Other reasons for academic plagiarism include lack of knowledge of rules for citation and referencing (JISC, 2005), inability to cope with workload and poor time management skills (James, McInnis and Devlin, 2002), pressure to succeed (Introna, *et al.*, 2003), lack of motivation to excel, laziness, cultural differences in learning and presentation styles (Handa and Power, 2005).

Plagiarism has profound consequences not only for the one whose work is plagiarised but also for the plagiarist, the academic community and the society at large. According to the Center for Intellectual Property (n.d.), plagiarism "short-circuits the learning process." When students plagiarise, they deny themselves the mental stimulation and intellectual development that could result from critical and analytical thinking. Plagiarism also puts institutional reputation at risk as graduates of such universities where academic plagiarism has been widely reported will be poorly rated by employers than their counterparts from other schools. Plagiarism has the tendency to encourage indolence as students learn to take the easy way out of challenging tasks. It kills creativity, innovation and diligence. According to Bensman (1988), students who successfully plagiarise their way through the university are not likely to be honest and hardworking members of the society. Rather, such people would hinder intellectual advance when they have access to status and funds.

Research Questions

The study addressed the following research questions:

(1) Do Babcock University students really understand the intellectual behaviours that constitute plagiarism?

(2) How prevalent is plagiarism among the students?

(3) Why do the students plagiarise?

(4) How does awareness of plagiarism correlate with actual plagiarism behaviour by the students?

Methodology

The survey design method was used for this study. A structured questionnaire was used to capture students' demographic information and assess the levels of awareness and incidences of plagiarism and reasons for plagiarism among Babcock University students. The questionnaire was administered on 200 students, who were randomly selected from different undergraduate disciplines and different levels of study, and from which 169 usable copies (84.5%) of the questionnaire were retrieved and analysed using descriptive statistics and the Spearman ranked correlation method. The frequency distribution of the students by department is shown on table 1.

Table 1: Frequency Distribution of Respondents by Discipline

S/N	Discipline	Frequency	Percentage
1	Information Resources	16	9.5
2	Languages and		
	Literary Studies	11	6.5
3	Mass Communication	14	8.3
4	Theology	14	8.3
5	Business Administration	13	7.7
6	Political Science	12	7.1
7	Public Administration	10	5.9
8	Biochemistry	13	7.7
9	Public Health	12	7.1
10	Nursing	13	7.7
11	Computer Information Systems	15	8.9
12	Agriculture and Industrial Technology	9	5.3
13	International Law and Diplomacy	17	10
	Total	**169**	**100**

Source: Field Survey 2009

Results

The sample included 98 (58%) female and 71 (42%) male students, who were at the following levels of study of their undergraduate programmes: 100 level (17.7%), 200 level (28.4%), 300 level (24.8%), 400 level (21.8%) and 500 level (7.1%). The very low proportion of students from the 500 level is attributed to the fact that only two departments run five-year programs in the University.

From table 3, the majority of the respondents agreed that the following acts constitute plagiarism: copying word for word from an original source book or journal article (60% of them), submitting an article downloaded from the Internet as assignment (57%), and copying and pasting parts of electronic documents without acknowledgement (54%). However, less than half of the students agreed that the following other acts constitute plagiarism: copying from a colleague's assignment (44%), not using quotation marks for text copied verbatim from another's work (36%), not including references in assignment (34%) and including references that were not consulted (32%). These results show a generally low understanding of plagiarism among the respondents, which are likely to result to incidences of unintentional plagiarism.

Table 2: Perceptions and Understanding of Acts that Constitute Plagiarism

	Statements about Plagiarism	Agree	Disagree	Undecided	No response
1	Copying word for word from a book or journal article without acknowledgement	102 (60.3%)	50 (29.6%)	13 (7.7%)	4 (2.4%)
2	Submitting an article downloaded from the Internet as assignment	93 (57%)	48 (29%)	25 (14%)	3 (1.8%)
3	Copying and pasting parts of electronic documents without acknowledgement	90 (54%)	56 (34%)	20 (12%)	7 (4.1%)
4	Copying from a colleague's assignment	73 (44%)	61 (37%)	32 (19%)	3 (1.8%)
5	Not using quotation marks for text copied verbatim from another's work	60 (35.5%)	59 (34.9%)	39 (23%)	11 (6.5%)
6	Not including references in my assignment	58 (34.3%)	83 (49.1%)	21 (12.4%)	7 (4.1%)
7	Including references that I did not use in my work	53 (32%)	81 (49%)	32 (19%)	3 (1.8%)

Source: Field Survey 2009

The results in table 3 show that only 8.2% of the respondents admitted to buying term paper from paper mills often. As many as (46%) of them admitted copying from a colleague's assignment with his knowledge or permission, while 4.7% admitted copying from a colleague's assignment without his/ her knowledge. Furthermore, 69.2% often copied and pasted portions of text from the Internet; 65.7% often copied verbatim from a textbook or journal without using quotation marks; 58.5% often included references they did not use in their work and 46.7% often submitted assignments without references. The results for the copying and pasting directly from the Internet and for patronising paper mills suggest that the 'cut and paste' practice is very common, but that buying term papers from the Internet is still novel to a large extent. The fact that transactions on paper mills require the use of credit card which is not common in Nigeria is a possible reason for the low patronage of paper mills among the respondents.

Table 3: Frequency of Incidences of Plagiarism

No	Plagiarism Practices	Often	Not Often	Undecided	No response
1	Buying term paper or assignments from a 'paper mill'	14 (8.2%)	136 (80.47%)	13 (7.7%)	6 (3.6%)
2	Copying from a colleague's assignment with his knowledge/ permission	78 (46.1%)	69 (40.8%)	18 (10.7%)	4 (2.4%)
3	Copying from a colleague's assignment without his knowledge/ permission	8 (4.7%)	151 (89.3%)	8 (4.7%)	2 (1.2%)
4	Copying verbatim from a textbook or journal without using quotation marks	79 (46.7%)	67 (39.6%)	18 (10.7%)	5 (3%)
5	Copying portions of text from electronic documents without acknowledgement.	117 (69.2%)	39 (23.1%)	10 (5.9%)	3 (1.8%)
6	Submitting assignments without references/ bibliography	111 (65.7%)	72 (42.6%)	14 (8.3%)	4 (2.4%)
7	Including references that I did not use in my work	99 (58.5%)	45 (26.6%)	23 (13.6%)	2 (1.2%)

Source: Field Survey 2009

Table 4 shows that most of the respondents 134 (79.3%) plagiarise because information is readily available to download from the Internet; 109 (64.5%) plagiarise because of the need to pass with good grades and 104 (61.5%) plagiarise because they do not know how to cite internet sources. 101 (59.7%) plagiarise in order to meet assignment deadlines; 90 (53.3%) plagiarise because those who engage in the practice often score higher marks; while 64 (37.9%) do so because everybody is doing it. Seventeen per cent of the respondents plagiarise because they do not know how to search the library for materials and because lecturers have never complained about it. This result shows that the commonest reasons for plagiarism among the respondents is the abundance and ease of accessing information materials from the Internet followed by the need to pass with good grades and inability to cite internet sources correctly.

The final analysis that was carried out is the Spearman ranked correlation analysis. This was done in order to determine the relationship between levels of awareness and understanding of plagiarism and actual practice of plagiarism among the students. The result indicated a significant and positive relationship between the two variables (N= 169. *r=0.33, p= 0.001)* suggesting that as awareness of plagiarism increases, incidence of plagiarism also increases.

Table 4: Reasons for Plagiarism Practices

	Plagiarism Practices	**Often**	**Not Often**	**Undecided**	**No response**
1	I plagiarise because I do not know how to search the library for materials	28 (16.5%)	121 (71.6%)	15 (8.8%)	5 (3%)
2	There are lots of materials to download free of charge from the internet	134 (79.3%)	19 (11.2%)	10 (5.9%)	6 (3.6%)
3	I need to pass with good grades	109 (64.5%)	41 (24.3%)	10 (5.9%)	9 (5.3%)
4	I plagiarise only when I cannot find enough materials for an assignment	51 (30.2%)	96 (25.4%)	16 (9.5%)	6 (3.6%)
5	I plagiarise in order to meet deadlines for assignments	101 (59.7%)	27 (32.5%)	35 (20.7%)	6 (3.6%)
6	I do not know how to cite internet sources	104 (61.5%)	34 (20.1%)	25 (14.8%)	6 (3.6%)
7	My lecturers have never complained about it	30 (17.8%)	91 (53.8%)	38 (22.5%)	10 (5.9%)
8	Everybody is doing it	64 (37.9%)	41 (24.3%)	56 (33.1%)	8 (4.7%)
9	Those who plagiarise often get higher marks	90 (53.3%)	35 (20.7%)	38 (22.4%)	6 (3.6%)
10	I plagiarise when the assignment is too difficult	53 (31.8%)	80 (47.3%)	29 (17.1%)	7 (4.1%)

Source: Field Survey 2009

Discussion

The findings of this study show that most of the students admit to copying all or some parts of a print or electronic document without attribution as plagiarism, but failed to identify correctly as plagiarism the more subtle forms of plagiarism such as not using quotation marks when copying word for word and including sources that are not consulted in references. This shows that the students are more prone to committing unintentional plagiarism. This finding corroborates the study of Tsang and Aaron (2005) who observed that most of the computer science students they studied did not have a clear understanding of plagiarism as they were only able to correctly identify very few of the 12 plagiarism scenarios presented to them. Marshall and Garry (2005) in their study of the perceptions of plagiarism among students from English speaking and non-English speaking background reported that the students could not recognise the subtle forms of plagiarism. Pupovac, Bilic-Zulle and Petrovecki (2008) also noted that most students plagiarise because they lack an understanding of what constitutes plagiarism or its consequences. JISC (2005) and Cohen (2003) both concluded that most of the students who plagiarise do so out of ignorance of citation principles.

With respect to the incidences of plagiarism, most of the respondents had copied directly from print and electronic materials without acknowledging the sources. This finding corroborates the submission of Marshall and Garry (2005) that copying from the Web is more common among students than copying from books. In addition, the practice of copying assignments between students seems to be also common as almost half of the students admitted doing this. This shows that the students do not see anything wrong with sharing assignment. Such practice might not be out of place among young people who are used to sharing pictures, video and audio files with one another.

Other findings of this study show that apart from availability of information on the Internet, the desire to earn good grades, poor knowledge of citation principles and the pressure to meet deadlines were the major reasons for academic plagiarism among Babcock University students. Dordoy (2002) reported a similar finding that the need to get better grades and poor time management were the most popular reasons why students plagiarise. These findings imply that students are more interested in getting better grades which they regard as a means to earning an academic degree and employment. Such instrumental attitude defeats the purpose of academic endeavour.

The findings further show that the ease of access to information materials from the Internet was the most common reason for plagiarism among students. Several studies have reported similar findings (Armstrong and Delbridge, 2008; JISC, 2005; Oliphant 2002). The desire to earn good grades was the second most popular reason for plagiarism among Babcock students, followed by a poor knowledge of citation principles and the pressure to meet deadlines. Pupovac, Bilic-Zulle and Petrovecki (2008) assert that students would plagiarise in order to meet assignment deadlines even though they are aware that such a practice is dishonest. Tsang and Aaron (2005) also found no significant relationship between awareness of what counts as plagiarism and intentional plagiarism. The positive relationship that was found in the present study between levels of awareness and incidences of plagiarism tends to corroborate these findings and leads to inescapable conclusion that other reasons than poor awareness and understanding of plagiarism, including those mentioned above, could be responsible for plagiarism by students. Thus, improving students' awareness of plagiarism through training would not be enough to discourage it, unless there are effective institutional strategies and policies to discover and sanction such acts.

Conclusion and Recommendations

Although plagiarism is not a new phenomenon, the alarming rate of incidence among university students has made it an issue of concern. Access to databases of information enabled by information and communication technology, especially the Internet has been blamed for the prevalence of the practice. However, since the Internet will continue to play an important role in teaching, learning and research, each institution must be ready to take decisive steps towards curtailing plagiarism because of its far reaching effects on academic scholarship and the society. Based on the findings of this study, it is

recommended that academic institutions should:

- Adopt well publicised institutional policies that clearly define plagiarism behaviours and their consequences.
- Ensure that students are well-tutored in reading comprehension and techniques of paraphrasing, summarising, use of synonyms and different citing and referencing conventions.
- Improve the delivery and content of relevant general education courses such as the use of library and use of English.
- Conduct seminars on time management to help students learn how to allocate time to their coursework and extra-curricular activities.
- Embark on value re-orientation to encourage honesty, diligence, fairness and academic integrity among undergraduate students.

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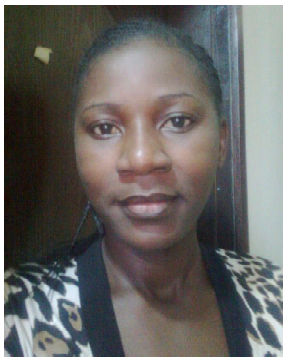

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Indigenous Knowledge Acquisition and Transfer among Members of the Nupe Royal Music Band in Nigeria

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Abstract

The traditional Nupe royal music has survived till the present day in spite of the splitting of the Kingdom into seven emirates. This royal music has passed through generations through a knowledge transfer and acquisition aspects of which are shrouded in mystery. This study investigated this traditional knowledge transfer system. The case study approach was used, with all 50 members of the traditional royal band of Bida emirate forming the population and sample of the study. Data was collected by structured and translated questionnaire. Findings show that the acquisition of knowledge is largely through traditional instruction methods, learning through observation and imitation of older relatives, while apprenticeship is not popular. The challenges faced by this traditional system of knowledge acquisition and transfer include myths associated with the knowledge, lack of interest and rural to urban drift by the youth, poor remuneration of members and the negative influences of modernisation on indigenous cultures. The use of ICT in repackaging the knowledge is recommended as strategy to preserve the knowledge as well as promote its acquisition among the youth.

Keywords

Indigenous knowledge, Nupe, Royal music band, Knowledge acquisition, Knowledge transfer.

Introduction

Nigeria is a multi-ethnic country with diverse indigenous cultures, including more than 250 languages and dialects. The country is politically divided into thirty-six states and the Federal Capital Territory (FCT). Nineteen of the states are located in the northern part of the country, and peopled by several major ethnic groups such as Hausa, Kanuri, Tiv, Igala, and Nupe. The Nupe ethnic group is one of the largest in central (also known as middle-belt) Nigeria, and inhabit the basins of the Niger and Kaduna rivers. The area extends from Leaba, eastward of the Niger to Kataeregi to form the northern boundary of Nupe land; and from Tsaragi in Kwara State through Patigi to Lokoja in Kogi State to form the southern boundary. The main occupations of the Nupes are farming and fishing.

According to Ismaila (2002), it is generally accepted that the ancestor of the Nupe was Uban bn Nafi who was said to have migrated from across North-East Africa to Nubia, and then to the present Nupe land in Nigeria. The earliest history of Nupe centres on the figure of Tsoede or Edegi, the cultural hero and mythical founder of the Nupe kingdom. Tsoede or Edegi was the son of the *Attah* (King) of Igala, born of a Nupe woman. According to Ibrahim (1992), Tsoede (a shortened form of "Etsu ye-de". brought various royal insignia such as bronze, canoe, a long trumpet called kakati, drums and special chains for binding prisoners (known today as "dzari Tsoede") to Nupe country. Apart from the royal insignia and some emblems of magic, Tsoede brought certain crafts such as silver smiting, glass making, and canoe building, and these crafts have survived in different wards of Bida till this day. Tsoede died in 1591 at the repute age of 128 years as recorded in some oral narratives after many years of successful wars against many tribes and kingdoms. He built a capital at Gbara on the river Kaduna to replace Nupeko.

Presently, there are seven emirates of Nupe in Kwara, and Niger states of Nigeria: Agaie, Bida, Lafiagi, Lapai, Patigi, Tsaragi and Tsonga.

As stated by Idrees (1998), the Nupe tradition and custom lay much emphasis on the paraphernalia of the institution of the *Etsu* (King of) Nupe. The richness of this regalia often had some positive or negative impact on the people in the acceptability of an individual as the Etsu. These included famous royal drums used known as "kpadondo". These were exclusively used during special ceremonies and in war fronts in the pre-Fulani era of Nupe kingdom and they are still used today during ceremonies. Other components of the royal Nupe music include trumpet (kakati), talking drums, praise singing and other drums.

Knowledge is defined by the *Oxford English Dictionary* as: (i) expertise, and skills acquired by a person through experience or education; the theoretical or practical understanding of a subject; (ii) what is known in a particular field or in total; facts and information; or (iii) awareness or familiarity gained by experience of a fact or situation. Indigenous knowledge has been variously referred to as cultural knowledge, local knowledge, traditional knowledge, farmer's or pastoralist's knowledge, folk knowledge, traditional wisdom, traditional science, people's knowledge and also a sub-set of traditional knowledge. According to UNESCO, MOST Phase I website and Nuffic-Ciran (2001-2002), Indigenous Knowledge (IK) is "the local knowledge that is unique to a given culture or society. It is the basis for local-level decision-making in agriculture, health care, food preparation, education, natural resource management and a host of other activities in rural communities."

Statement of the Problem

Indigenous knowledge and skills abound among the Nupe land, alongside preference and quest by the Nupe youth for both western and Islamic education. As stated by Fafunwa (1995), education, whether ancient or modern, aims at perpetuating the culture of the society. Traditional education attaches considerable importance to this aspect of training (that is, promotion of cultural heritage) but, this is done without elaborate equipment or complicated teaching methods. The child just grows into and within the cultural heritage of his people and imbibes it. Culture in traditional society is not taught, it is caught. The child observes, imitates and mimics the actions of his elders and siblings. The child in a traditional society cannot escape his cultural and physical environment. Unfortunately however, modernisation of societies often witnesses the older people preferring and clinging to the traditional cultural values and practices while the young are more predisposed to accept modern and foreign cultures. The result is that as the older generations die off, the survival of traditional cultural practices and values are threatened by extinction.

The traditional Nupe royal music, as introduced by Tsoede in the 15th century, has survived till the present day, in spite of the splitting of the kingdom into seven emirates and the influences of modernisation. The old royal musical insignia survives, especially in Bida and Patigi emirates. This royal music has passed through generations through a knowledge transfer system that appears now threatened to extinction by the influences of Western education and music and urban drift of the rural youth who would be expected to acquire the knowledge and skill in the traditional music. In order to provide an insight into the opportunities and threats that the music faces in contemporary Nupe society and the digital age, this study investigated the traditional system of acquisition and transfer of this knowledge.

Objectives

The objectives of the study are to:

(i) identify the types of people who are involved in the traditional Nupe royal band.

(ii) find out the method of knowledge acquisition and transfer members of traditional Nupe royal band.

(iii) find out the challenges faced by the knowledge transfer and acquisition systems.

Methodology

This was a case study. The population of the study is made up of the members of Etsu-Nupe Royal band,

all of whom were involved in the study. In all, 50 members comprising drummers, praise singers, trumpeters, and talking drummers were used. A structured questionnaire was used as the data collection instrument, and the collected data were analysed using frequency count and simple percentages.

Data Analysis

The sample of 50 members of the Bida royal band was dominated by persons who were older than 40 years. In addition, six (12%) respondents were between 31 – 40 years; 10 (20%) were between 21 – 30 years of age; and seven (14%) respondents were between the age 10 – 20 years. Thirty-six (72%) of them were married. In terms of education, 30 (60%) of the respondents had had Quranic education, four (8%) had had primary education, nine (18%) had had secondary education, while seven (14%) had had post secondary education. Quranic education is clearly the predominant type of education acquired by the respondents, although some of them combined this form of education with Western education at the primary, secondary and lower post-secondary levels. In terms of the other occupations that the respondents combined with their practice of royal band music, 20 (40%) of them were farmers, while between 10 and 14 % of the others engaged in local crafts were herbalists or healers, or public servants. Thirteen of them (26%) were into other types of occupations.

Types of Royal Music Instruments Played

Table 1 shows the types of main types of traditional royal instrument that each of the 50 respondents played. The table shows that only three main types of instruments are used in addition to praise singing, and that a clear majority of the band members were drummers.

Table 1: Kinds of Traditional Music Instrument mainly played by Respondents

Instrument	Frequency	%
Talking drum	8	16.0
Other drums	21	42.0
Trumpet	10	20.0
Voice (Praise singling)	11	22.0
Total	**50**	**100.0**

Experience in Traditional Royal Music Practice

Table 2, which provides information on the extent of experience of the respondents, shows that nearly two-thirds of them (64%) had had more than 20 years of experience in the practice, most of whom are also likely to be the older people. Also, the higher proportion of those who had had less than eleven years experience (12%) compared to those who had had 11-20 years experience suggests that there had been some additions to the membership of the royal band population during the previous decade. These are likely to be younger persons, as indicated by the data in table 3. The data shows that more than three-quarters of the current population of the royal band members joined the practice at the tender age of between 5 and 10 years, mostly likely as assistants to their older relations in the band.

Table 2: Experience in Traditional Royal Music Practice

Experience	Frequency	%
Up to 10 years	12	24.0
11 – 20 years	6	12.0
More than 20 years	32	64.0
Total	**50**	**100.0**

Table 3: Age at which Members joined the Practice

Instrument	Frequency	%
5 – 10 years	38	76.0
11 – 15 years	8	16.0
16 – 20 years	3	6.0
Above 20 years	1	2.0
Total	**50**	**100.0**

Knowledge Transfer and Acquisition Practices

Analysis of the data showed that almost all (96%) of the respondents played mainly the type of instrument that they inherited from their families, suggesting that inheritance of skills is a major mode of skills transfer between related older and younger members of the band. However, the findings also show that as many as 84% of the members could also play other types of instruments, suggesting that there is some knowledge and skills acquisition and transfer across family and inheritance ties within the band.

These conclusions and inferences appear corroborated by the data in table 4, which shows the different methods of knowledge transfer that the members of the band reported to be using. Although the members (all of them except one) claimed that band membership was not restricted by background, it is clear that membership is influenced almost exclusively by hereditary and inheritance factors, sustained by such behaviours as observation and imitation of elders by their younger relatives. Apprenticeship with persons who are not related to existing band members was virtually absent, and was considered to be an ineffective mode of knowledge transfer of band music knowledge.

Table 4: Methods of Knowledge Transfer used among the Band Members (N=50)

Method	Frequency	%
Allowing people from any background to join the band	49	98
Long history of family performance	49	98
Heredity/Inheritance	49	98
Imitation of elders	49	98
Observation	50	100
Apprenticeship	1	2
Documentation by audio/visual	49	98

Knowledge Transfer Challenges

From table 5, 50(100%) all the respondents encountered problems as: lack of interest by youths, rural-urban drift, and poor remuneration of members. They were also of the opinion that the tradition might die down if the youths refused to join the band. Most of the respondents also expressed that modernisation is a major problem behind the acquisition of this knowledge, 49 or (98%). The same proportion of the respondents also agreed that there was mystery behind the acquisition of the knowledge.

Table 5: Problems encountered in acquiring and transferring knowledge (N=50)

Problem	Frequency	%
Tradition might die		
down if the youth refuse to join the band	50	100
Lack of interest by youths	50	100
Rural-urban drift of the youth	50	100
Poor enumeration of members	50	100
Mystery behind acquisition of the knowledge	49	98
Modernization affect the band negatively	49	98

Discussion

Findings revealed that instruments played by members of the royal dictated by family background, and that the practice is sustained within families by knowledge transfer from older to younger family members, who usually begin to learn the craft at very early (3-10 years) by observing and imitating elders within the family. These findings, along with the finding that apprenticeship of persons from non-royal band families is not common, suggest that knowledge transfer and acquisition is restricted to within the existing royal band families. Moreover, although royal band members usually learn to play other instruments than those inherited from their families, they do so not as traditionally recognised and respected experts in the playing of these other instruments and are most likely to be subordinated to the royal band members who originate from families recognised as experts in the instruments. Accordingly, not only does the totality of royal band playing skills held within the circle of royal band families, the individual skills are further held within specific families. It also follows that the survival of the royal band skills depends on the abilities of the royal band families to sustain their inherited skills through knowledge transfer from older to available and willing-to-learn younger members of the families.

The study also found out that among the other major challenges that threaten the sustainability of the royal band skills are the myths usually associated with the skills by both practitioners (often as barriers-to-entry strategy) and non-practitioners of the skills, the growing lack of interest in such traditional music by the Western-educated youths who are more likely to migrate to the urban areas in search of further education and white or blue collar jobs, and the poor remuneration of bands members which contributes further to the lack of interest among the youth. All the respondents agreed that the tradition might die off if the youth (in their families) refused to join the royal band practice.

Conclusion

This study provides some valuable insight into the knowledge transfer and acquisition practices and challenges among those who practise the indigenous knowledge that provides the Nupe royal band music. This indigenous knowledge is clearly acquired and transferred mostly within families who are likely to protect their skills and knowledge as inherited sources of income, even if minimal. There is also some assurance that the practice of the Nupe royal band music would survive as long as the Nupe royalty patronises and promotes it. Nevertheless, the knowledge system still faces some challenges that are related to inter-generational dynamics within the families of royal band members, as well as the larger social dynamics of societal modernisation through Western education that often devalues traditional cultures and values. Nevertheless, because the youth are often in love with information and communication technologies (ICTs), it may be possible to use ICTs to repackage the knowledge and music to promote and sustain the interest of the youth in the music and indigenous knowledge.

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Short Communication

Use of Library Statistics to Support Library and Advisory Services at the National Library of Nigeria

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Abstract

Statistical information is a vital tool for the management and development of organisations. Keeping statistics of activities is basic to the survival and progress of a library and enables the library to measure its performance periodically as the basis for the assessment of performance and the needs for improvement. The National Library of Nigeria (NLN) places high premium on the library statistics that it compiles yearly as the basis of its research and development in support of its statutory responsibilities and functions as the Nigeria's apex library, bibliographic control agency, and advisory roles on library matters in the country. This paper sheds light on the extent to which the compilation and use of statistics has contributed to the efforts of the NLN to promote library development for sustainable progress in Nigeria. It also highlights constraints being encountered by the apex library along with recommended solution strategies.

Keywords

Library statistics, Library management, National libraries, Nigeria

Introduction

Statistical information plays an important role in any field of human endeavour. This is one reason why the United Nations and its several agencies such as the UNESCO and the United Nations Development Programme collate and publish global statistics on various socio-economic activities in order to assist nations to assess their progress relative to other nations or earlier periods and inform the design and implementation of policies to improve their socio-economic conditions. Similarly, it is imperative for every establishment, institution and sector to keep and use statistical records of its operations. In the words of Attah (2003), statistics is a very useful and indispensable tool for research and development for sustainable progress.

Statistical records are basic to the growth and development of each and every library. Library statistics are needed in order to be able to ascertain the level of the different resources and services that a library provides and how the resources and services are being used by different classes of patrons. Statistics is also needed for assessing the level of performances of different library operations, for example, how much time it takes for ordered materials to arrive, how many books are catalogued per period by each cataloguer, how much waiting time patrons have to endure at the circulation desk, etc. These and other statistics are needed in order to be able to assess the extent to which libraries are meeting institutional goals and national or global library standards.

Library development implies the evolvement of the library as an institution or agency from a less developed state in terms of institutional resources, size, services and sophistication to a more advanced and highly organised state with continuously improving effectiveness and efficiency in serving the information needs of communities.

Statistics, as a subject of study or discipline, is concerned, according to Attah (2002), with the scientific methods of collecting, organising, summarising, presenting and analysing data, as well as drawing valid conclusion and making reasonable decisions on the basis of such analysis. Statistics, as output, represents data that has been summarised as specific quantitative facts in tables or charts. Library statistics show the strength and weaknesses

of a library in terms of resources, equipment, staffing, finance, use of collections, degree of patronage, services, etc, which, in turn facilitate effective management of libraries and enhancement of their services. Besides, library statistics are equally useful for segmenting users for current awareness services and selective dissemination information. Library data and statistics generated from the records and surveys of the information needs and service preferences of users enable the library to provide them with latest available and relevant information in the appropriate formats, such as lists of newly acquired books or journal issues, content pages of latest journals, abstracts of publications, or complete full text publications (Obilade, 2003).

This paper explores the processes, outputs and impact of the compilation, publication and use of library statistics for decision making and national library system development in the National Library of Nigeria (NLN). It shows how the NLN has been able to plan for and fulfill its statutory responsibilities with the aid of the library statistics that it collects and published annually.

National Library of Nigeria (NLN)

The National Library of Nigeria (NLN) was established by National Library Act (No.6) of 1964 which provided for a governing Board, i.e. National Library Board. The Act was later superseded by Decree No 29 of 1970 which established NLN as a full fledged parastatal, the apex library, and the nation's bibliographic control agency under the Ministry of Education. Since then, the institution has undergone some internal reorganisation and restructuring to enhance its activities. The NLN now has branches in the states of the Nigerian federation, in addition to its corporate headquarters at Abuja, Federal Capital Territory. This is in accordance with the statute establishing it which mandated establishment of a branch in every state of the federation. The National Library of Nigeria consists of seven departments including Planning, Research and Statistics Department (RDD), which is mandated to collect, collate and compile library statistics yearly which are then published and made available for administrative decision making and library system research and development.

Compilation and Publication of Library Statistics at the NLN

The National Library of Nigeria relies heavily on statistics for effective management of its own operations. The statistics compiled and published yearly forms the basis of policy and decision making, planning and implementation and advisory role on library matters. The statistics compilation function is carried out by its National Centre for Library Statistics, a sub-unit of Planning, Research and Statistics Department (RDD) and which itself two sub-units: Internal Unit (National Library of Nigeria Statistics Unit) and External Unit (Other Nigerian Libraries Statistics Unit). The internal unit is responsible for compiling the statistics of NLN itself including its branches, while the external unit collects and collates the statistics of other Nigerian libraries. Questionnaires are administered to the various units and libraries each year to collect data for the collation of the statistics. The statistics cover: library profile; library funding/budget; physical facilities; population served; size of collection; library personnel; library services; library facilities/access; personnel; number of registered users; publications; inter-library loans.

The yearly statistics has contributed immensely to the growth and development of the institution and other libraries in Nigeria in the following ways:

- Publications on the Library Profession in Nigeria;
- Efficient management of the NLN system;
- Enhanced Consultancy/Advisory Role on Library Development;
- Promotion of Intellectual and Research Activities;
- Financial Assistance, Advocacy and Recommendations,
- Guide to Nigerian Government; and
- Planning National Workshop and Seminar Themes and Topics.
- Publications on the Library Profession in Nigeria

The NLN publishes from its statistical data collection activities two major publications: *Annual Statistics of National Library of Nigeria,* and

National Digest of Library Statistics. The National Digest of Library Statistics is a biennial title that contains library statistics of all libraries in Nigeria except school libraries. It covers academic, special, public and national libraries. In addition, the annual questionnaire surveys of libraries in Nigeria enable it to publish the following directory information about libraries and registered practising librarians: *Mailing List of Libraries in Nigeria (Directory) and Nominal List of Practising Librarians in Nigeria.* These titles, although not statistics per se, nevertheless facilitate easy contact of libraries and librarians in Nigeria for the purpose of exchange of information and resource sharing.

Efficient Management of the NLN system

Compilation of statistics on the activities of the NLN itself has paved way for effective organisation and management of the large institution over the years. The yearly statistics gives insight into the activities of the NLN in terms of resources, personnel, equipment, services, patronage, finance, etc. It forms the basis for planning and implementation of its programmes and services.

Each department keeps statistics of its activities and uses them to enhance its performance, and to identify its needs for sustainable progress of the department. For instance, the Public Services Department compiles and uses its statistics daily in respect of the following:

- Size of users through attendance, door and hourly counts to ascertain the level of patronage and satisfaction derived from the services rendered;
- Size of used collections in different subjects showing the subject area with the largest and least used collections;
- Use of catalogue;
- Statistics of reference questions answered and unanswered;
- Legal deposit materials received and submitted to Collection Development and Processing Department(CDPD) for processing. This enables the latter to keep tab on the intellectual output of the country published yearly in NBN; it also shows the level of compliance of publishers to legal deposit law;
- ISSN/ISBN requests received from publishers and channel to National Bibliographic Control Department(NBCD) which is the issuing authority. This helps in knowing the number of requests satisfied as well as the response rate of publishers in obtaining the ISSN/ISBN for Nigerian publications. Above all, it sheds light on the state of publishing in Nigeria;
- Revenue generation and expenditure – This statistics of revenue generated and expenditure incurred daily and yearly enables the department to keep proper records of its revenue and expenditure for auditing to guard against misappropriation. Besides, the statistics helps in knowing whether the department is generating sufficient revenue to offset the administrative costs of its services and maintenance of its facilities; and
- Current awareness services /selective dissemination of information.

Such data shed light on the level of patronage and satisfaction with the services, adequacy and relevance of the collection, community support, needs, other essential services required, the state of the Nigerian publishing industry, the extent of compliance of Nigerian publishers with publishing standards in respect of ISSN/ISBN, CIP and the legal deposit law. Above all, the statistics enable the department to evaluate its services and measure its progress daily, monthly, quarterly and annually.

The statistics collected has been used for enhanced consultancy/advisory role on library development, promotion of intellectual and research activities, financial assistance, advocacy and recommendations, guide to nigerian government, planning national workshop and seminar themes and topics.

Enhanced Consultancy/Advisory Role on Library Development

The library statistics has been used and contributed greatly to the provision of consultancy and advisory roles by the NLN to external organisations, particularly government agencies. Armed with the data and statistics on the different types and status

of all types of libraries across the country, the NLN is able to do the following: advising on the setting up of libraries in libraries-short locations and the training of their staff in skills-short aspects of library operation and management; evolvement of minimum standards for Nigerian school libraries; contributing to the growth of public libraries by way of advice to state governments and local authorities; assisting the Education Tax Fund (ETF) in the targeting of its financial aid to Nigerian libraries; financial assistance to a number of library schools and special libraries such as those for visually challenged users and National Information and Documentation Centre for Science and Technology (NADICEST); supporting the Nigerian Library Association; fostering national discussions on the state of Nigerian libraries through workshops and seminars (e.g. discourse on the distressing state of public libraries in a motion titled 'Revitalizing Libraries in Nigeria' presented at the Joint Consultative Committee on Education (JCCE) meeting in February 2001, (Omolayole, 2003).

Promotion of Intellectual and Research Activities

Nigerian library statistics has been a vital tool in intellectual and research activities, particularly in the field of librarianship, and has aided scholars, students, researchers in their intellectual activities. Since library statistics mirrors the state of Nigerian libraries, it serves as a platform for research activities in library and information science in Nigeria leading to presentation and discussion of papers at workshops and seminars where issues of professional importance are discussed. The statistic guides Planning, Research and Statistics Department in generating research proposals and seminar/workshop themes and topics since the statistics offer insight into the status of Libraries in Nigeria leading to issuance of communiqués to libraries and institutions. The statistics are also made available for those who want to engage in empirical studies in librarianship.

Financial Assistance, Advocacy and Recommendations

Owing to library statistics collected and compiled by the National Library of Nigeria, libraries in Nigeria have continued to enjoy financial assistance, book donations and supply of computer systems from multi-national corporations and international organisations such as UNESCO, Book Aid International and Education Tax Fund (ETF). This is so because the apex library in the cause of discharging its function particularly its advisory role on library matters often makes use of library statistics to make a case for financial and material assistance for libraries in Nigeria. According to Omolayole (2003), many Nigerian libraries have enjoyed assistance from Education Tax Fund (ETF) through the efforts of National Library of Nigeria.

Guide to Nigerian Government

Library statistics gives government at all levels insight on library development in Nigeria, thus enabling them to plan adequately for library as an integral part of the Nigerian educational system, for an educational system without coherent library service is a hollow enterprise

Planning National Workshop and Seminar Themes and Topics

Workshops/seminars on library development in Nigeria are held annually with communiqué issued at the end of workshops/seminars. Library statistics serves as a guide in planning for workshops/seminars and discussion of issues leading to issuance of communiqué to all kinds of libraries and institutions, as it gives insight into the state of libraries in the country. It facilitates empirical comparative studies of different groupings of libraries in Nigeria.

Conclusion and Recommendations

Some Challenges faced by the NLN include low response when questionnaires are sent out, inadequate funding and authenticity of the information collected. To further enhance the collection and collation of library statistics in Nigeria for sustainable progress by the National Library of Nigeria, the following measures are recommended to stakeholders in library development i.e. all tiers of government, Librarian Registration Council of Nigeria (LRCN), Nigerian Library Association (NLA), and libraries.

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