IFLA JOURNAL

Official Journal of the International Federation of Library Associations and Institutions
Volume 33 (2007) No. 2, pp. 81–198. ISSN 0340–0352 SAGE Publications

CONTENTS

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IFLA Journal
Official Journal of the International Federation of Library Associations and Institutions
ISSN 0340-0352 [print] 1745-2651 [online]
Published 4 times a year in March, June, October and December

Editor: Stephen Parker, Apt. 1C, Edifício Rosa dos Ventos, Rua Rosa Parracho 27,
Cascais 2750-778, Portugal. E-mail: zest@sapo.pt

Publisher
SAGE Publications, Los Angeles, London, New Delhi and Singapore.

Annual subscription (4 issues, 2007) Free to IFLA members. Non-members: full rate (includes electronic version) £180/$315. Prices include postage. Full rate subscriptions include the right for members of the subscribing institution to access the electronic content of the journal at no extra charge from SAGE. The content can be accessed online through a number of electronic journal intermediaries, who may charge for access. Free email alerts of contents listings are also available. For full details visit the SAGE website: www.sagepublications.com

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The *IFLA Journal* is abstracted/indexed in Library and Information Science Abstracts, Multicultural Education Abstracts, PAIS International and Sociological Abstracts.

Typeset by Star Compugraphics Private Limited, Delhi
Printed in Great Britain on acid-free paper by The Cromwell Press Ltd, Trowbridge, Wiltshire

EDITORIAL
Libraries and Information in Southern Africa

Peter G. Underwood, Guest Editor

Information workers, information managers, resource centre managers, librarians: we have many names and occupy many types of post in organizations. I shall use the neutral term 'information workers' because it embraces all who work within this domain.

We are confident that our work adds to social, educational and (perhaps) economic development. We work hard; many of us have spent long years and large sums of money in gaining an appropriate education and refining this through periods of training. And yet – if only politicians, company boards and other levels of management would recognize the fact. Worldwide, many of us feel undervalued and unrecognized and the library and information service climate in South Africa is no exception.

The southern region of Africa contains diverse cultures and language groupings, economies that are in many different stages of development and health and social issues that are complex, costly and difficult to address. The role of the information worker is potentially demanding, especially if one considers the rural and remote areas and the needs of those that that gather, often in improvised shelter, around urban areas. Serving the needs of these communities requires a strong social commitment as well as knowledge.

Indigenous knowledge within the region has previously been described as an unrecognized resource. However, its utility has always been apparent to the communities that first became aware of it – and it is incumbent upon information workers to recognize the potential value to a community of such knowledge and to seek to ensure that its interests are protected rather than exploited. This applies as well to social and cultural matters as it does to technological or biomedical aspects.

South Africa can offer delegates to the IFLA World Library and Information Congress a profile of a country in transition and of a nation in the course of building. The most significant moment of recent times is, without doubt, the 1994 election – the first held after the abandonment of apartheid and thus the first held on a non-racial basis. The Freedom Day Public Holiday (27th April) is celebrated to mark this point of transformation.

Prior to this, many information workers assisted in the development of policy guidelines relating to governance issues of importance to the sector. It was, perhaps, tempting to suppose that in those first days following the inauguration of the Government of National Unity (27 April 1994–3 February 1997) there would be rapid progress as incoming ministers considered and adopted our ideas. Much was done but it soon became clear that the inheritance of the past was not easily dismantled or replaced and that many levels of social transformation were also required. Of major importance has been the work of the Truth and Reconciliation Commission (1995–1998), which investigated human rights violations, the need for reparation to victims and rehabilitation of offenders, and pleas for amnesty.

Some 13 years later, our domain shows some signs of progress and improvement, though many would argue that the response to the policy suggestions has been muted and inconsistent. Successive administrations have highlighted the importance of the Information Society as a vehicle for social, educational and economic development – yet public libraries, until very recently, have been languishing in a muddle over governance and suffering from persistent underfunding. The adoption of Outcomes Based Education and resource-based learning has highlighted the need for information resources in all public and private schools – yet the provision of school libraries remains scandalously poor. Even higher (tertiary) education has not escaped: a programme of rationalization of public higher education institutions has seen formerly-independent institutions amalgamated – in some cases, across a binary division between universities and former technikons (technical colleges) – to form new multi-campus institutions, with the attendant problems of managing collections and staff across considerable distances. The assumption that information and communication technologies will

 IFLA Journal 33(2): 83–86.
ISSN: 0340-0352. DOI: 10.1177/0340035207080299

mitigate the effects is still largely unproven. The provision of health care information, advice for citizens and welfare information seem to rely upon individual enthusiasm and concern rather than in a planned and coordinated fashion. The continued infliction of Value Added Tax (14 percent) on the sale of books in South Africa has been the subject of a campaign for its removal, since many aver that it represents a tax on knowledge affecting principally the poor.

Yet, there is hope. The launch of the National Council for Libraries and Information Services at last provides a statutory body with a broad remit, including education and training for library and information services, to overview the domain of the information worker. The recent decision to provide an injection of cash for public libraries will do much to improve provision and improve the morale of staff and users, especially when it is combined with the recent announcement of moves to deal with the long-standing uncertainties over the governance of public libraries. Similarly, the present Minister of Education, Naledi Pandor, has several times highlighted the important role of school libraries.

The growth of the Information Society and the networked culture in South Africa is apparent. Cellphones are ubiquitous and easily outnumber fixed-line installations: the technology has provided telecommunications services for many communities that would, otherwise, be unlikely to be connected to a fixed-line service. However, provision of either type of service to rural areas remains patchy. Many commentators have drawn attention to the very high cost of network access, especially broadband, in South Africa and have suggested that this constitutes a brake on economic development. The present Public Enterprises Minister, Alec Erwin announced in February 2007 the launch of a new state-owned company that will provide broadband supply not on a model of profit maximization but, rather, to ensure affordability.

Also part of the social transformation has been the establishment of the Library and Information Association of South Africa (LIASA), formed in 1997 out of two earlier organizations; the Library and Information Workers Organisation (LIWO) decided to remain independent. The need for a point of reference, if not a unified voice, for information workers is crucial and LIASA has recognized this through membership campaigns, lobbying and the development of a programme for Continuing Education and Professional Development.

Our orientation, as information workers, to our various communities also requires attention. The provision of information, the inculcation of information literacy and the development of literacy and a love of reading are service objectives best pursued in partnership with others, such as educators – but we must be confident in our role and secure in the knowledge that our special view of information and its use is not only valuable, but vital, for this – and all – societies. Much remains to be done. There is a path to sustainable change, but its course is sometimes unclear: in this, there is excitement and opportunity.

The first paper in this issue, 'Library and Information Services in South Africa: an overview', by Christine Stillwell, aims to introduce the host country for this year's WLIC in Durban, both to delegates to the Congress and to those unable to attend. The paper opens with a review of information policy and goes on to describe South Africa's information sources, systems and services in the context of the wider national information system. The current state of the library and information education and training sector and the organized profession are also included.

The next paper is also from South Africa. In 'Towards Establishing an Integrated System of Quality Assurance in South African Higher Education Libraries', Karin de Jager describes the work of the Committee for Higher Education Librarians in South Africa (CHELSA) in developing an agreed set of criteria, standards and models for quality assurance in university libraries. CHELSA's Quality Assurance Subcommittee set out to provide libraries with clear and practical direction in preparing for mandated national higher education quality audits and to operationalize an ongoing process of library performance evaluation according to agreed measures. The paper charts the progress towards building consensus and establishing an integrated system and process of quality assurance at South African university libraries on the basis of international standards.

The third paper in this issue comes from Zimbabwe. In 'The Challenges Faced by African Libraries and Information Centres in Documenting and Preserving Indigenous Knowledge', Jabulani Sithole discusses the challenges faced by African

libraries and information centres in respect of the documentation and communication of indigenous knowledge. These include the lack financial resources, human capacity, technology shortages and its absoluteness and the lack of legal frameworks at national and international level to support the library efforts to document and communicate indigenous knowledge. The fast developing information and communication technologies continue to pose challenges on how best libraries can document and disseminate this oral and community based knowledge to a globally accepted knowledge base. The paper considers some of the lessons learnt and the best practices that have emerged in dealing with them.

In the fourth paper, 'Modernization of Library and Information Services in Higher Education in Swaziland: Strategic interventions, 2000/2001–2005/2006', Paiki Muswazi and Dickson Yumba discuss the implementation of the University of Swaziland (UNISWA) strategic plan for 2000/2001–2005/2006.and assess the impact of the information technology, policies and procedures, collaboration, funding, management, human resources development, preservation, marketing and information service delivery strategies on the modernization of the University's library and information services . They argue that UNISWA has effected considerable staff re-skilling and made progress towards widening access to quality subscription-based electronic resources and optimizing the utilization of open access materials. However, they note that implementation was negatively influenced by low funding, limited local content on the web, inadequate information and communication technology infrastructure, scarce professional skills, and restrictive policies and procedures. They identify a need for further work, taking into account user needs for independent lifelong learning.

The next paper, 'Designing and Implementing Business Information Services in the SMME Sector in a Developing Country: the case for Namibia', by Elisha Rufaro T. Chiware, outlines the development and implementation strategies that can be applied in the deployment of business information services in the small, medium and micro enterprises (SMMEs) sector in Namibia. The paper is based on a doctoral project that was carried out at the University of Pretoria from 2005 to 2007 and looks at the stages of user needs assessment, the design of services and the implementation stage as well as impact assessment of the services.

We return to South Africa in the next paper in this issue, 'The Impact of Electronic Communications on the Science Communication Process – investigating crystallographers in South Africa', by J. Gretchen Smith. Adopting the premise that effective communication of scientific and technological information is pivotal to the success of technological innovation and sustained economic growth, and that this applies particularly to South Africa, the author notes that many factors are currently impacting on the information communication process, not least of which are the burgeoning information industry, globalization, and rapid technological advances. The community of scientists engaged in crystallographic research in South Africa was selected as the study population for an investigation in this area. The results showed that a significant increase in the use of electronic modes and systems did not affect the inherent structure of the communication process, but did, nevertheless, create a far wider range of modes of communication and had a positive influence on the ease of communication and collaboration, particularly in respect of cooperation with the international research community.

The next paper, 'Intellectual Property, Libraries and Access to Information in Zimbabwe', by Kathy Matsika, addresses some of the issues affecting access to information and knowledge in Zimbabwe. It looks at the major challenges posed by finances, technology, infrastructure, the Intellectual Property Laws and the Copyright Act, and discusses the role of ZIMCOPY, the Reproduction Rights Organization of Zimbabwe, in the information chain in Zimbabwe. The paper pays particular attention to what Zimbabwe has done in trying to harness the potential of information and communication technologies (ICTs) in accessing information, including the availability of the Internet and constraints of bandwidth. It describes attempts that have been made to provide access to information to both urban and rural communities of Zimbabwe and considers how the current economic challenges facing Zimbabweans have made information a luxury when set against the daily problems of food provision and survival. The paper concludes by asking, "Can improved access to information provide answers to some of the immediate problems facing the Zimbabwean society?"

The final paper in this issue is not from Southern Africa, but from Nigeria. In 'Libraries and Women's Participation in Nigerian Politics', Ghaji Badawi

notes that cultural factors continue to affect the development and prominence of Nigerian women in their roles in politics. Among the factors inhibiting women to vote or contest in elections is lack of information about politics and politicians. Because most women in Nigeria dwell in rural areas and their votes are needed to ensure their full participation in politics, there is a need for libraries to find ways in which women can be informed about and encouraged to participate fully in the 2007 election. This paper discusses how libraries in Nigeria are gearing up, and what more they could do, to fully take part in mobilizing women to participate and contest for political offices now and in future.

We hope that readers will find in these papers at least a foretaste of the variety of professional themes and issues to be explored and discussed during the forthcoming World Library and Information Congress in Durban – and we hope to see you there!

Library and Information Services in South Africa: an overview

Christine Stilwell

Christine Stilwell is Professor and Head of the Information Studies Programme, University of KwaZulu-Natal, in Pietermaritzburg, South Africa. She has a PhD from the University of Natal which investigated the role of public libraries in a democratic South Africa. She is a founder member of the editorial committee of the journal *Innovation: Journal of Appropriate Librarianship and Information Work in Southern Africa* and serves on the editorial board of *South African Journal of Libraries and Information Science.* She has broad interests in the field of library and information work and a particular interest in the role of public libraries in addressing social exclusion. E-mail: stilwell@ukzn.ac.za

Abstract

Opening with a review of information policy, the article describes information sources, systems and services in South Africa, embedding them in the wider national information system. A description of the library and information education and training sector and the organized profession follow. This overview is based on literature retrieved from the available, mostly electronic, databases.

Keywords: library and information systems; library and information services; access to information; education and training; South Africa

Introduction

Access to information is a global problem and not one peculiar to less developed countries. Kay Raseroka, former President of the International Federation of Library Associations and Institutions (IFLA), refers to IFLA's position on access to information, that to address the information divide it is necessary to create in libraries and information centres an environment that allows for free and fair access to information as well as freedom of expression and participation in the knowledge society (Raseroka, 2003).

The *IFLA Internet Manifesto* (International Federation of Library Associations and Institutions, 2006) adds to this recognition when it states that "unhindered access to information is essential to freedom, to equality, global understanding and peace". In particular the manifesto recognizes the need for:

- The provision of unhindered access to the Internet by libraries and information services in supporting communities and individuals to attain freedom, prosperity and development.
- The removal of barriers to the flow of information, especially those that promote inequality, poverty, and despair.

Kofi Annan (2003), former United Nations Secretary General, stresses the connection between access to information and democracy: "timely access to news and information can promote trade, education, employment, health and wealth . . . [a] crucial ingredient of democracy". An address by Professor Archie Dick (2006) of the University of Pretoria reminds library and information workers in South Africa how much has yet to be achieved in terms of freedom of information in this country and region.

This article provides an overview of South African library and information services (LIS), embedding them in the wider national information systems and infrastructure. The article is based on a literature review of materials retrieved from the available, mostly electronic, databases. This review is descriptive rather than analytical. In view of the enormity of the task and the space

 IFLA Journal 33(2): 87–108.
ISSN: 0340-0352. DOI: 10.1177/0340035207080300

available, the picture painted is one of bold brush strokes.

Opening with a review of information policy, the main body of the article describes information sources, systems and services in South Africa. A review of the library and information education and training sector follows, together with an overview of the organized profession. The article then concludes.

Information Policy, Legislation and Implementation

The apartheid government largely abrogated responsibility for the provision of library and information services, preferring to leave this development to market forces. As Darch, Rapp and Underwood (1999: 25) point out, progressive library and information workers "adopted vigorous protest and lobby actions against an approach to library and information work informed by rigidity, conservatism and an undeclared alignment with government policies of the period". These efforts contributed to initiatives to transform and restructure library and information services. This process of change, the article will argue, is far from complete and many of the challenges of the last decade remain today.

Hamilton (2005) discusses various criteria which influence information and communication technology (ICT) access and use. One of these is the existence of legal and regulatory frameworks for Internet use within countries. He asks how regulations affect the use of technology and "what changes are needed to create an environment that fosters its use". His argument is that use "is very much connected to the government's information policy". Other criteria relate to the local and macroeconomic environment, with the latter, under the auspices of national economic policy, needing to be conducive to the widespread use of technology.

At the national level, policy ultimately facilitates cheaper access to ICT and related services by libraries. National, provincial and local policy and its implementation impact on the ability of libraries to provide and sustain such services to users. The presence of 'enabling' policies at higher levels generally facilitates the provision of such initiatives (Stilwell, Gentil and Leach, 2006: 46). For example, most European countries have a library policy at national level which specifies that public libraries have to provide access to Internet services (Pors, 2002). As public libraries serve the general public, rather than specific groups within it, they are key players in access to information for all.

The final criterion for creating 'real access' for users in a given country in Hamilton's (2005) view lies in political will and, specifically, "to do what is needed to enable the integration of technology throughout society". He suggests that political will moves the debates concerning access to the Internet "some considerable distance from simple questions of a computer and a network connection" (Hamilton, 2005).

Stilwell, Gentil and Leach (2006: 47) suggest that a good example of legislation other than library specific legislation facilitating the access of library users to the Internet is the 'E-rate' by which public libraries (and schools) in the United States obtain discounts ranging from 20 to 90 percent on telecommunication services, Internet access and other closely related costs: "with more than USD 350 million in discounts since 1998, the E-rate has helped change the public library's information technology landscape" (American Library Association, 2006). By contrast it is generally acknowledged that telecommunication costs in the South African context are high (Stilwell, Gentil and Leach, 2006: 47). This view is endorsed by Schimper (2004: 93) who sees local costs as "the biggest threat to the sustainability and extension of library-based ICT services" at the Free State provincial public library service. A second provincial library service, Mpumalanga, also experiences high interconnectivity costs and as a consequence is investigating the possibility of lower inter-connectivity rates for public libraries (Hendrikz and Smit, 2004: 100).

While Mostert (2005: 52) describes the information sector in South Africa as well developed, with access to "a myriad of different information sources, systems and services", Lor and van As (2002) take a more critical stance in summarizing the major changes regarding access to information following the birth of the democratic South African state. Many measures were directed at freedom of expression and access to information; for example, the Constitution of the Republic of South Africa (*Constitution of the Republic of South Africa*, 1996) has a Bill of Rights which addresses the right of access to information held by the state.

Lor and van As note that changes include initiatives regarding reorganizing government printing, restructuring the government's public information services, making government information accessible on the Internet, and extending Internet access and telephony to poor communities. The Promotion of Access to Information Act (2000) seeks to ensure access to information held by the state and public bodies (Lor and van As, 2002: 104).

The Legal Deposit Act (1997) provides for the creation of official depositories for publications. The Act is intended to ensure the preservation, collection, bibliographic control and availability of the national intellectual and cultural heritage (Behrens, 2000) in a variety of formats. The legal deposit libraries include the National Library of South Africa, the Library of Parliament in Cape Town, the Msunduzi Public Library in Pietermaritzburg, the Bloemfontein Public Library and the National Film, Video and Sound Archives in Pretoria. The Department of Arts and Culture designated two new legal deposit sites as official publications depositories in 2006, the Constitutional Court Library in Braamfontein, Johannesburg and the Phuthaditjhaba Public Library in the Free State. There are seven legal deposit sites in total (National Library of South Africa, 2006).

Schedule 5 of the Constitution lists "libraries other than national libraries" as "functional areas of exclusive provincial competence" (*Constitution of the Republic of South Africa*, 1996) which, in the words of Lor and van As (2002: 104), makes it "difficult to develop national policies for library and information services, including policies on facilitating access to government information".

A new Government Communication and Information System (2007) was introduced in 1998 (Government Communication and Information System, 2000; Lor and van As, 2002: 107; Sonderling and Bothma, 2005: 27). In 1999 the government's new website South Africa Government Online (2007) was launched to facilitate

Figure 1. Msunduzi Municipality Public Library, Pietermaritzburg. Courtesy of Jenny Phoenix of Msunduzi Municipality.

Figure 2. Msunduzi Municipality Public Library, Pietermaritzburg, Children's Reference on a Saturday morning. Courtesy of Jenny Phoenix of Msunduzi Municipality.

access to government information on the Internet. It was to be updated regularly by the Government Communication and Information System (GCIS) but in 2002 Lor and van As (2002: 109, 112) found that the information available was "uneven and fragmented".

The GCIS included the provision of development information through the establishment of multi-purpose community centres (MPCCs). The idea was to enable people on the ground to take advantage of socio-economic opportunities (Government Communication and Information Service, 1999). The GCIS was also to work with the Universal Service Agency (USA) to establish and service telecentres (Strydom, 1998, cited in Lor and van As, 2002: 107). The USA, in turn, was tasked with the promotion of the extension of telephone services to rural and other areas where such services were lacking. Benjamin (1998) reports on attempts to do the latter through the establishment of telecentres, but recent assessment (Universal Services Agency, 2002) suggest there are still many obstacles to be overcome. Some of these impediments are occasioned by the lack of ICT infrastructure in rural areas and the monopoly on telecommunication services held by the South African provider, Telkom, which also leads to the high costs described above.

A National Council for Library and Information Services (NCLIS) was appointed in 2003 by the Minister for Arts and Culture[1] (*National Council for Library and Information Services Act*, 2001; Walker, 2005: 35) to serve as a focal point for coordinating policy in the field. Intended to be a significant body for the sector, its role was envisaged as advising the two separate departments which oversee libraries, the Department of Arts and Culture and the Department of Education (Ledwaba, 2002: 5). The Council is currently working on a Transformation Charter (Walker, 2006). Its larger impact has yet to be assessed.

Readers are referred to the detailed account of the various developments regarding government initiatives provided by Lor and van As (2002). They suggest that it has proved difficult for government to translate principles into practical implementation and in particular there has been a failure on the part of policy-makers to grapple with the crucial role to be played by libraries

in all these initiatives. These authors comment favourably on the style of government decision-making which reflects greater transparency and public participation. Lor and van As (2002: 101, 113) conclude that

> the government has not developed a clear policy framework within which the various initiatives can be co-ordinated, and it is far from clear whether the government is prepared to establish and fund the mechanisms to implement its policies on access to government.

Lor and van As (2002) cite van Audenhove (2000) who adds that South Africa has developed "a rather complex vision on the information society . . . based on a central belief in the possibilities for ICTs for social change. But this vision is not set out in a formal policy document, nor is there a broad strategic policy plan to arrive at the information society".

For school libraries the development of standards and policy falls under the Department of Education. The actual provision of school library facilities is a competence shared by the National Education Department, the provincial authorities and the school governing body. De Vries and van der Merwe (2004) explain how the *National Norms and Standards for the Funding of Schools* (Department of Education, 1998) were to be implemented in the provinces and were implemented in the Northern Cape, in 1999. The adoption of this framework led to an improvement in funding for schools in this province.

In 1999 a national survey of school libraries was undertaken to inform improvements in "the capacity of the Department of Education to systematically take stock of its school library resources in terms of their quality, quantity and spatial distribution" (Department of Education and Human Sciences Research Council, 1999: iii). Seven years later, the total void in terms of legislated school library policy at national level appears to be receiving attention at last. A national policy for school library norms and standards supported by the Minister of Education, Naledi Pandor, was expected to be passed late in 2006. Pandor also resurrected the 1997 *National Policy Framework for School Library Standards* and made an explicit connection publicly between the development of school libraries and literacy levels (Department of Education, 2005; Zinn, 2006: 23). Zinn (2006: 23), however, states "the policy and its implementation still have a long road to travel".

Information Sources, Systems and Services in South Africa

Governments are major producers, publishers and processors of information (Behrens, 2000) and South Africa is no exception. Numerous sources produced by governments are grey literature, which poses special challenges of bibliographic control and accessibility (Mostert, 2005: 51). In an attempt to address access issues, many local government departments have developed websites and these are discussed below.

Boon's four broad categories (1992) for the information sector (see below), as elaborated on by Mostert (2005), are used for structuring much of this article. There is some overlap between the second and third categories in terms of systems and services.

Sector Concerned with Inventing, Generating and Collecting Knowledge

This sector includes the units that invent, generate and collect knowledge and hence describes scientists, other knowledge workers and various 'collectors' of data. (Mostert, 2005: 52). South Africa has many research organizations and information brokers specializing in a range of fields. Apart from the universities, South Africa has three major research institutions which lead the creation and dissemination of original and current research: the Council for Scientific and Industrial Research (CSIR), the Human Sciences Research Council (HSRC) and Markinor. Government commissions these units to do research (Mostert, 2005: 55). In addition the National Research Foundation (NRF) is tasked with the promotion of research, particularly in building capacity in the designated groups.[2]

The LIS sector's research capacity is based mainly in the LIS departments in higher education. The availability of funding through foundations such as the NRF for research projects, as well as for more applied projects funded by Carnegie Corporation of New York, stimulates such endeavour. Collaborative research projects which address past inequities in LIS provision are well established, with one of the best known being

the work undertaken for the National Education Co-ordinating Committee's (NECC) National Education Policy Investigation (1992) and the *Library and Information Services Report* it produced.

Sector Concerned With Packaging, Storage, Organization, Recall and Duplication of Information

Publishing, Printing and Bookselling

The *Directory of South African Publishers* (1998/9) listed 2,951 publishers as active in the given year, while a perusal of the *Europa World Yearbook* (2001) reveals the variety of subject areas covered in the official languages of the country. The Government Printer of South Africa is responsible for publishing the official publications of government and of provincial departments and local authorities, and its scale of operation is seen in its handling of some 6,000 plus print orders in 2000 (Mostert, 2005: 55).

The LIS sector has four local library and/or information management journals (Stilwell, 2006a) as well as those covering the archives and museum sectors. Journals and newsletters aimed at practitioners, such as those of the provincial library services, serve both practitioner and academic constituencies. Monographs devoted to specialized topics as well as published proceedings from annual and occasional conferences add to the store of local publications. In addition most international publications are relatively easily accessible for those served by well equipped and resourced libraries.

South Africa also enjoys a variety of local online bookshops such as Kalahari.net (2007) as well as access to online international suppliers. Hendrikz (n.d.) reports that more than 180 retail outlets are reflected in *Braby's Commercial Directory* (2000) for Johannesburg, Cape Town and Durban, while the former township areas have very few (Mostert, 2005: 55).

Libraries and Information Centres

In 1999, 5 years after the birth of the democratic South African state, Darch, Rapp and Underwood (1999: 24) stated that the library and information service sector in the country was characterized by "pockets of excellence, and relative technological sophistication while the majority of citizens, many of whom live in rural areas or townships, do not have access to even the most rudimentary library and information services". This duality in access is a re-echoing theme in the literature describing the various areas of library and information provision in South Africa.

South Africa has a population of 42 million (Mostert, 2005: 61). There are differences in quality of life between provinces and between so-called race groups. South Africa has a diversity of languages with eleven official languages, of which nine are African languages. English and a creolized form of Dutch, Afrikaans, are the others (Darch, Rapp and Underwood, 1999: 23).

Literacy rates in South Africa vary from 52 percent in metropolitan areas to 26 percent in rural areas and differences across race groups are large (Darch, Rapp and Underwood, 1999: 23).

Lor, van Helden and Bothma (2005: 269) articulate a common perception that in the 1990s, during South Africa's transition to democracy, reliable statistical data on public libraries was difficult to obtain. A further complication in the case of public libraries is confusion in reporting between libraries per se and service points, which may be branches. In the case of school libraries the KwaZulu-Natal school library policy (KwaZulu-Natal. Department of Education, 2003) provides for a range of models from a standard library to a book box and this also has potential for confusion in statistical reporting.

South Africa has one national library, 1,253 public or community libraries (Lor, van Helden and Bothma, 2005: 270), 456 special libraries (Witbooi, 1997: 4), 90 government libraries and 36 university (Darch, Rapp and Underwood, 1999: 25) and university of technology libraries (Mostert, 2005: 22). In addition there are college libraries (see below). Of the public and community libraries, ten are independent but enjoy grants from the province. The National Library for Blind in Grahamstown serves the visually impaired.

Ledwaba (2002: 12), using the figures from the *South African School Library Survey* (Department of Education and Human Sciences Research Council, 1999: iii), states that of the 22,556 schools in South Africa, 25 percent have a centralized

library, while an additional 17 percent have a library collection or book box collection of some sort. Some provinces were better served in this regard than others.

An estimate of the aggregated figure for the nation's total number of libraries would be 11,372. The national book stock approximated 47 million items[3] in 1999 (Darch, Rapp and Underwood, 1999: 25).

The new constitutional dispensation (noted earlier) presents particular problems for provincial and local authorities in seeking to fund school libraries and public libraries (Dominy, 2003; Leach, 2006; Lor, van Helden and Bothma, 2005). In the province of Mpumalanga, for instance, the lack of public library infrastructure is "one of the biggest challenges facing library authorities" (Le Roux and Hendrikz, 2006: 626). In addition, the restructuring of local government has serious financial implications for public and community libraries in the light of new funding priorities. A recent assessment by the Mpumalanga public library authorities established that there is a need for 98 public libraries in the rural areas of this province (Le Roux and Hendrikz, 2006: 620, 627).

Changes in the funding formulae for library materials for schools mean that such library funds are no longer ring-fenced (Zinn, 2006: 33). Boekhorst and Britz (2004) reported on the state of information literacy at school level in South Africa in relation to the role that libraries could play in this regard and found that the role of the library was undervalued. Zinn (2006: 33) notes that there is a much more energetic campaign around reading per se rather than around libraries as enablers of reading. Poorly integrated ICT programmes and a tendency to prefer driving ICT programmes to focussing on libraries and books further impedes the development of holistic library-based information literacy programmes.

National libraries

The National Library of South Africa (NLSA) has sites in Pretoria and Cape Town. The collection comprises rare and contemporary materials, donations reflecting the country's indigenous and colonial heritage, as well as special collections of African manuscripts, rare maps and atlases, fine art, photographs and news clippings (Burger, 2002; Mostert 2005: 56). The Library's website (National Library of South Africa, 2007) provides access to the online public access catalogue, to the services of a reference librarian and a document delivery system.

The Pretoria site of the NLSA coordinates the Southern African Interlending Scheme (SAIS) which makes it possible for some 700 Southern African libraries and organizations affiliated to the scheme to share resources. Participating libraries contribute to a union catalogue, SACat. Contributing libraries can request items via the NLSA or, if they subscribe to the South African Bibliographic and Information Network Online (SABINET Online, 2007), online requests can be made through the ReQuest service (Behrens, 2000).

In 2005 the NLSA was tasked with reporting on digitization activities on the African continent (Tsebe, 2005). Such digitization is not without controversy (see Peters, 2001 cited by Kaniki and Mphahlele, 2002) and Britz and Lor (2004) have invited reflection on the moral and access issues involved in wide scale digitization.

The Digital Imaging Project of South Africa (DISA) has played a pivotal role in investigating and implementing digital technologies to allow access to material of high socio-political interest (Tsebe, 2005). SABINET Online (2007) has digitized more than 180 online versions of South African journals formerly available only in hard copy. Access to these is provided through SA ePublications. SABINET is also digitizing South African government publications (Tsebe, 2005).

Government libraries

These libraries support the work of various government departments and can be regarded as special libraries (Witbooi, 1997: 4). Information obtainable from the various government websites is covered below.

Parliamentary libraries

Mostert (2005: 51, 54) stresses the close relationship between sustaining democracy and access by parliamentarians to information. The Library of Parliament situated in Cape Town boasts a book stock of approximately 96,506 items. The collection includes all official publications dating back to 1910, audiovisual materials, newspapers, journals, and legal deposit items. The library

Figure 3. Photo impression of the exterior of the new National Library of South Africa (Pretoria Campus) building. Courtesy of the National Library of South Africa. The design of the Library is a joint venture between Jeremy Malan Architects, Impendulo Architects and Ghandi Maseko Architects.

Figure 4. Photo impression of the interior of the new National Library of South Africa (Pretoria Campus) building. Courtesy of the National Library of South Africa. The design of the Library is a joint venture between Jeremy Malan Architects, Impendulo Architects and Ghandi Maseko Architects.

Figure 5. Photo impression of the entrance foyer of the new National Library of South Africa (Pretoria Campus) building Courtesy of the National Library of South Africa. The design of the Library is a joint venture between Jeremy Malan Architects, Impendulo Architects and Ghandi Maseko Architects.

provides access to various online and CD-ROM databases and the Internet (Mostert, 2005: 56).

Parliamentarians in the Provincial Parliamentary Legislatures are served by libraries containing small book collections, journals and newspapers and a variety of information sources (Mostert, 2005: 56).

Public, community and provincial libraries

Positive socio-political change in the local LIS sector has been evident since the mid-1990s, as a result partly of the energetic campaign around alternative forms of provision referred to by Darch, Rapp and Underwood above and to the influential Zaaiman report (Zaaiman, Roux and Rykheer, 1988) in the late 1980s. The impulse towards change has also been subjected to many setbacks, which this article describes sector by sector. Stilwell commented in 1996 that the provincial library services, which provide the infrastructure for most South African public libraries, had started seeking to address equality in service provision (Stilwell, 1996), while Leach (1998) identified barriers to such public library development post-1994.

To address deficiencies in the reliable reporting of public library data, a geographic information system was used to plot the distribution of public and community libraries for the Public and Community Libraries Inventory of South Africa (PaCLISA) project (Lor, van Helden and Bothma 2005: 269). In addition this project produced the *Public and Community Libraries Directory* (2002). Lor, van Helden and Bothma (2005: 268) state that South Africa's public libraries face "huge challenges" because the "distribution and impact of these libraries have been skewed by the inequalities of the apartheid system". They echo Darch, Rapp and Underwood above when they conclude that there are "areas of neglect and pockets of excellence" (Lor, van Helden and Bothma, 2005: 268–269).

Lor, van Helden and Bothma (2005: 272) refer to De Jager and Nassimbeni's (2005: 43) efforts to arrive at performance measures for South African public libraries. For them the PaCLISA project and its research was "only the beginning of a culture of assessment". Stilwell (2006b: 22) suggests how the methodologies used for assessment in the Available Evidence Project (see Wavell et al., 2002) in the United Kingdom could provide useful examples, for instance, about the types of data which funders found persuasive regarding the value of public library services.

Lor, van Helden and Bothma (2005: 268) saw as one of South Africa's public library challenges the realigning of libraries in the new democracy. Some public library managers have renamed their services community libraries (Lor, van Helden and Bothma, 2005), an approach which Stilwell (1997) has pointed out was, in many cases, somewhat superficial as opposed to a system-wide approach. It is in this more traditional mode that public librarianship has largely continued, but with considerable expansion of service points into formerly unserved areas (Lor, van Helden and Bothma, 2005: 269). A recent example of an innovative project is the Smart Cape Access Project which used the public library as a base from which to target groups which had been excluded from access to ICTs in the Western Cape (Valentine, 2004).

Stilwell (2006b) raises issues of social exclusion and asks to what extent the South African government today recognizes the role of the library in building the inclusive society envisaged in the Bill of Rights in the Constitution (Constitution of the Republic of South Africa, 1996). She notes the positive indication in Arts and Culture Minister Pallo Jordan's announcement in February 2006 of an injection of ZAR 1 billion as a "massive, massive intervention" to revitalize the country's deteriorating public libraries (R1bn boost for libraries, 2006). A further noteworthy development is a research project of the Department of Arts and Culture which should resolve some of the pressing issues about responsibility for funding public libraries (Department of Arts and Culture, 2006).

Special libraries

Special libraries are attached to private companies, to government departments or to private individuals and are not generally open to the public. The majority are found in the private sector, in mining houses, financial institutions and large law firms. Some major special libraries are attached to parastatal structures such as the research institutions referred to above, the CSIR and HSRC (Witbooi, 1997: 4). Many participate in SAIS, thus making their materials accessible to external borrowers (Mostert, 2005: 55).

University, university of technology and college libraries

University or academic libraries serve their institutional clientele and the wider community, the latter usually by special arrangement. All of these libraries participate in SAIS (Mostert, 2005: 56) and hence share their resources with a wider public.

The skewed provision of resources in the apartheid state, however, continues to impact on higher education (Darch, Rapp and Underwood, 1999: 24). South Africa's higher education institutions are governed by a new Higher Education Act (1997). Most of the higher education institutions have undergone radical restructuring and extensive merger processes in the last few years in terms of this act and the *National Plan for Higher Education* (Ministry of Education, 2001). This process of restructuring reduced 36 University and Technikon libraries to 21 institutions (Ledwaba, 2002: 14).

The merger processes were intended to redress disparities between historically disadvantaged institutions and their better endowed, usually urban, counterparts. Many of these institutions

Figure 6. Cory Library for Historical Research, Rhodes University, Grahamstown. Courtesy of Rhodes University.

Figure 7. African Studies Library, part of the south wing of the Chancellor Oppenheimer Library, University of Cape Town. Courtesy of Fiona Jones, Head: Science & Engineering Library and Web Librarian, University of Cape Town Libraries.

still struggle with inadequate campus networks and low-grade bandwidth. Distinctions between universities (degree granting institutions) and technikons (diploma granting institutions for technical and vocational subject areas) were blunted nominally by the introduction of degree qualifications into technikons in the mid-1990s (Darch, Rapp and Underwood, 1999: 26–27).

Merger processes have also impacted on higher education libraries. Many libraries have to provide resources and services on budgets that fall considerably below the 5 to 6 percent of the institutional budget recommended by Willemse (2002). Ironically the merger processes entailed additional expense and mammoth amounts of extra work, such as the moving and recataloguing of collections, usually without an increase in the temporary staffing budget.

Prior to the mergers, in order to address some short- and medium-term problems, university libraries established consortia. An important driver was the decline of the South African currency. Essentially the formation of consortia was "a tactical response to the organizational problems of the long term" (Darch, Rapp and Underwood, 1999: 25, 28) and Darch, Rapp and Underwood suggest that

consortia did not develop earlier because of the fragmentation of the sector "along the apartheid fault lines of race and language".

Reddy (1998) identified eleven higher education consortia in South Africa, with five having a library focus. Two major consortia are found in Gauteng and the Western Cape. Consortia have benefited from funding from abroad, for instance, the Andrew W. Mellon Foundation allocated funding to the Cape Library Cooperative (CALICO) to implement a single flexible online library system. CALICO has sought to exert pressure on Telkom to permit differential tariffs for network connectivity (Darch, Rapp and Underwood, 1999: 27). Late in 2006 a new fixed line service provider for South Africa emerged and this development should impact favourably on access and cost of access.

Darch, Rapp and Underwood (1999: 28) were far-sighted in their predictions of the burning issues for this sector, that is, the provision of high-bandwidth connectivity at a low tariff, and large-scale information literacy education and training through consortia. A recent study by Lwehabura (2007) reveals that South Africa is well placed on the continent to lead such initiatives, with the University of Pretoria securing undergraduate enrolments in information literacy of some 6,500 in 2006 (Bothma, 2006).

The 152 former Technical Colleges have been merged to form 50 Further Education and Training institutions. About 60 percent of these are estimated to have libraries (Ledwaba (2002: 13).

School libraries

In 1999 fewer than 30 percent of South African schools had functional libraries (Department of Education and Human Sciences Research Council, 1999). Zinn's recent survey results (2006: 30) mirror these findings. Rural areas were even worse off in 1996 than their urban counterparts with the *School Register of Needs Survey* (Department of Education, 1997b: 8) reporting that primary school libraries in the highly rural provinces were virtually non-existent. In some provinces, as few as 2 percent of schools had libraries. As in 1996 there was a national shortage of 57,499 classrooms (Department of Education, 1997: 9); the building of classrooms was prioritized above the building of libraries (Le Roux and Hendrikz, 2006: 623). By 2002 a vast proportion of schools, 78 percent, were still without a school library (Zinn, 2006: 23). In the Western Cape the figure is much lower, with 46 percent of schools having no libraries (Bot, 2005: 6).

Drawing on the literature on education in South Africa, for instance, Bot (2005), and on the North American authorities, Fiske and Ladd (2004), Zinn (2006: 22) argues that the central problems emerging in this sector are those of quality and socio-economic class. South Africa has adopted a system of outcomes-based education, refined in Curriculum 2005, hence the role of the school library as a provider of learning resources should be one of paramount importance. There is, however, little evidence of a high regard for the role of libraries within the system.

Implementation of the outcomes-based curriculum has been most successful in middle-class schools, the formerly white schools where parents pay fees to employ additional teachers and improved resources to support a higher standard of teaching (Chisholm, 2005: 211). De Vries and van der Merwe (2004: 128) add that "the gap between affluent schools and the disadvantaged schools" has not really been reduced, "poor people have to contribute a disproportionate share of their income to the education of their children". This is a matter of considerable concern because in these schools "class has replaced race as a condition of entry" (Zinn, 2006: 22). Ten years into the new democracy Fiske and Ladd (2004: 234) found that for previously coloured and black schools in working class areas, equity in education remained elusive. In 2007 measures are in place to alleviate the plight of poor families in terms of fees (Waka-Zamisa and Shoba, 2007), but the funding of school libraries remains uncertain.

Zinn describes how the education authorities continue to demonstrate what Karlsson (2005) terms their 'blind spot'. Despite tests revealing low reading levels among grade 3 learners, the Western Cape Education Department (WCED) devised solutions that ignored the role of the school library (Zinn, 2006: 23). At national level, as noted above, until very recently there has been a total void regarding champions for the library and information sector's role in education. In the absence of school libraries, the provision of support for schools passes to public libraries (Hart, 2006). Le Roux and Hendrikz (2006: 618) identify

substantial 'backlogs' in the development of both public and school libraries, in remote rural areas in particular.

On a positive note, however, Zinn reports that schools have begun to establish new school libraries and to re-establish old ones. In addition there is the resurrecting of the 1997 national policy framework by Minister Pandor (Department of Education, 2005; Zinn, 2006: 22–23). Zinn also reports on two research studies by the Western Cape Education Department (2005 and 2006) which stress the importance of school libraries.

The 2005 study, a systemic evaluation of grade 6 learners, identified access to information as key to learner achievement and recommended that school libraries, trained school library staff, well-stocked libraries and pre-service educator training in school library management be prioritized (Western Cape Education Department, 2005: 101–102,108). Zinn heralds this development as "a groundbreaking finding for South Africa" and one that paves the way for more evidence-based research of the correlation between access to school libraries and learner achievement (Zinn, 2006: 23). The second study (Western Cape Education Department, 2006) focussed on ICT literacy as well as school library provision.

With regard to ICT infrastructure the *White Paper on e-Education* (Department of Education, 2004) revealed that many local schools lacked basic ICT infrastructure. Zinn reports a growing awareness of computers and found that 95 percent of her respondents' schools had access to computers, with 72 percent having Internet access. All high schools had at least one computer laboratory, but most still did not use computers to generate knowledge or to integrate ICT across the curriculum. A further study by Wilson-Strydom, Thomson and Hodgkinson-Williams (2005: 79), which evaluated the *Intel® Teach to the Future* (2000) programme in South Africa, confirmed aspects of the findings of a prior study by Lundall and Howell (2000) cited by Zinn (2006: 24), that computers in schools are mainly used for administrative purposes.

Le Roux and Hendrikz (2006: 618, 630, 634) argue for the use of partnerships in supporting access to computing for schools and describe a project in the Maphotla community in Mpumalanga involving various stakeholders. The aim of the project was to address provision to remote rural areas through the use of joint school/community libraries which would form the central node for a cluster of schools. Variations on their cluster model have been explored for use in the remote rural areas of KwaZulu-Natal by Nzimande (2007) in an attempt to find a way forward for this sector.

The provision of suitably qualified and motivated staff is an issue for school libraries. The *South African School Library Survey 1999* (Department of Education and Human Sciences Research Council, 1999) found that in all provinces except Gauteng, less than 20 percent of the staff responsible for the school library was appropriately qualified. Over the last 10 years teacher librarians have been retrenched or assigned to other duties (Le Roux and Hendrikz, 2006: 620). Le Roux and Hendrikz (2006: 621) and Hart (2006) raise the issue of public librarians being expected to play a role in serving school learners and in developing lifelong information literacy.

How can this lack of qualified staff be addressed? A new education and training development, which is at present limited to one province, is described by Hoskins (2006: 59). Access to education and training is supported by bursaries for an Advanced Certificate in Education (ACE) for School Library Development and Management students at the University of KwaZulu-Natal (UKZN) in partnership with the KwaZulu-Natal Education Library and Information Technology Services (ELITS). The funding stems from a partnership between ELITS and the Royal Netherlands Embassy which requires that the programme be delivered at remote rural resource centres in KwaZulu-Natal.

Archives, Record Centres and Museums

The role of the archive in the new democracy has been the subject of extensive debate. Merrett (2005: 18) states that "archives are a key component in the complicated structure that is the national information system". The Truth and Reconciliation Commission's work of confronting the past revealed how many records have been lost (Harris, 2002).

The preservation of archival materials in South Africa is regulated by Schedule 5 of the *Constitution of the Republic of South Africa* (1996) and the National Archives Act (1996). The Act defines the separation of functions between the national government and the nine provincial governments. It also provides for a National Archives Advisory

Council. The National Archives and Records Service of South Africa (NARSA) and the provincial archives services fall under the Department of Arts and Culture. All the provinces have a provincial archives service. These are located in King William's Town, Bloemfontein, Ulundi, Giyani, Nelspruit, Kimberley, Mmabatho and Cape Town. There are repositories in Pretoria, Port Elizabeth, Umtata, Pietermaritzburg and Durban. The National Film, Video and Sound Archive in Pretoria is a legal deposit collection, as indicated above (Ngulube, 2003: 15–17, 410–412).

South Africa has some 90 archival repositories (Leach, 2007) and enjoys a wide variety of archives covering various topics such as contemporary history, Africana, newspaper archives, popular memory, religious materials, languages and eminent political figures and structures (Mostert, 2005: 56). In addition various institutions such as the universities have their own archives and special collections including the Campbell Collections and Alan Paton Centre at the University of KwaZulu-Natal.

Another sector whose role has been hotly debated is that of museums, many of which are seeking to broaden their appeal to the wider South African public. South Africa has museums in most cities and small towns. There are national and provincial museums. Provincial museums focus mainly on preserving and giving access to local history (Mostert, 2005: 57).

Non-Governmental Organizations (NGOs)

NGOs play an active role in information provision and they cover a wide variety of subject areas. South Africa has a rich history of alternative provision, for instance, the NGO community resource centres that emerged in the 1980s to support the Mass Democratic Movement. After 1994 this funding was largely diverted to government, thus representing a further substantial loss of funding for the library and information sector. As a consequence, of 120 resource centres in existence in 1990, only some 50 percent had survived by 1999 (Stilwell, 2001: 209).

Through their Resource Centre fora, resource centres have had an influence on the transformation of library and information services for the new democracy (Stilwell, 2001), as indicated above. Some significant centres have survived, for example the Workers Library and Museum in Newtown, Johannesburg which has "a reading library for workers and disadvantaged readers going back 80 years". This centre has been incorporated into Khanyi College and Resource Centre (Kaiser, 2006). Others are highly specialized and could be classed as special libraries.

An emerging NGO that is playing a significant role in addressing social exclusion in the rural areas is the Family Literacy Project (Aitchison, 2006). For this reason the membership of the Pietermaritzburg branch of the Library and Information Workers Organisation (LIWO), upon its dissolution in 2005, voted to make a grant of its remaining funds to this NGO for such development (Bell, 2007).

Embassies

Since its emergence as a democratic state South Africa has hosted an increasing number of foreign embassies which provide information about their own countries. Some of these also have libraries and have played a role in capacity building in the LIS sector, for instance the British Council and United States Information Service.

Commercial Database Industry

South Africans have access to both international and locally produced databases. SABINET Online (2007) is a major local service which provides access to 1,000 different bibliographic and full-text databases. The National Inquiry Services Centre South Africa (n.d.) produces databases of local and African resources such as *South African Studies* (n.d.) and provides access to NISC's international databases (Mostert, 2005: 57).

Services such as EBSCO Information Services (2007), Emerald Insight (n.d.) and ProQuest (2007) provide access to full text databases.

Indigenous Knowledge

South Africa has a rich store of indigenous knowledge, much of which eludes capture and documentation. Kaniki and Mphahlele (2002: 2,12) discuss this knowledge store in relation to knowledge management, noting that indigenous knowledge can have "value not only for the culture from which it evolves, but also for scientists and planners outside that culture". Their article gives a sense of the range of subjects involved. A popular local example is the issue of intellectual property rights for the San Khomani tribe for the use of the

Hoodia cactus in staving off hunger in anti-obesity drugs developed by Phytopharm, United Kingdom and Pfizer in the late 1990s.

In recognition of the potential value of indigenous knowledge, the NRF has established a focus area for indigenous knowledge systems (Kaniki and Mphahlele, 2002: 12). The Campbell Collections of the University of KwaZulu-Natal have embarked on a digitizing project to preserve and make accessible rare and fragile collections which embody the indigenous knowledge of the region going back many decades. This project which is linked to the Digital Imaging Project of South Africa initiative relates to indigenous art, ethnographic objects and historic photographs. Peters (2001), cited by Kaniki and Mphahlele (2002: 13), describes the Digital Imaging Project of South Africa project and also raises concerns about opening such cultural heritage materials to commercial exploitation. This debate is likely to be ongoing.

Sector Concerned with the Dissemination of Information

Mass Media

South Africa has a well-developed mass media network and relative press freedom (Merrett, 2005: 18). Apart from newspapers and magazines, South Africa has the usual array of broadcasting services, radio and television.

With regard to the press, however, concern was expressed by Dick (2006) at a recent launch of the journal *Innovation* in its new format, when he asked librarians to "join other civil society organizations to condemn growing censorship across the country, the region and the continent". He lauded the emergence of the African Progressive Librarian and Information Activist's Group (PALIAct) which is linked to similar groupings in Sweden and the United States.

Broadcasting

The South African Broadcasting Corporation (SABC) is the major broadcasting corporation in the country and it controls radio and television services on national and local levels. Twenty-four-hour national services in English and Afrikaans are backed by a multitude of regional services. An external service offers coverage in English, Portuguese and various African languages (*Europa World Yearbook,* 2001: 3597; Mostert, 2005: 58).

Television services are provided by the SABC, by a private subscription service, and by digital satellite broadcasting offerings from Multichoice Africa. A free-to-air service, etv, is also available (Burger, 2002; Mostert, 2005: 58).

Newspapers and magazines and newspaper archives

A variety of national, regional and local newspapers is found as well as free 'knock and drops' (Behrens, 2000). There are 17 dailies, 7 Sunday papers and 21 weeklies, as well as weekly community newspapers which report on local news. The languages of publication are English, Afrikaans and isiZulu (Burger, 2002).

Subscriptions and access via shops are on offer for approximately 300 local consumer magazines. There are some 500 plus trade, professional and technical publications (Burger, 2002).

Larger publications have online websites and most major newspapers, both local and international, are available online. The *Mail and Guardian Online* (2007) provides archived material back to 1994. There are two popular local newspaper portals, Independent Online (2007) and News24 (2007).

Internet and online-government information

Apart from the Internet sources described so far, Mostert (2005: 59) lists the local sites that provide government and legal information. A few examples only are given here.

The Government Communication and Information System (2007) is the major government site and has been described above. It is accessible online and provides an entry point to various publications, including the *South African Yearbook* (2005/2006) and annual reports (Mostert, 2005: 59). It also allows access to important directories such as the *Contact Directory* (2006) and *South African Government Directory* (2007) which give contact details for officials as well as bodies, structures and task groups at national and provincial level. The website South African Government Online (2007) provides information about departments, provinces and other bodies and is linked to the GCIS site (Mostert, 2005: 59).

Information is provided by the websites of all but three government departments and Mostert

(2005: 60–61) describes an evaluation of these sites, listing details about the information they offer on publications, access to speeches, reports and so on. An in-depth study of the South African Police Services (n.d.) website is reported on by Sonderling and Bothma (2005), who note that it was revamped after a GCIS audit of government websites in 2001. In particular, these authors seek to establish the website's level of success in achieving user-friendliness in an effort at 'democratic outreach' in this crucial department.

Sector Concerned with Information Technology

Statistics on Internet connectivity worldwide suggest the extent to which the ICT access envisaged in the *IFLA Internet Manifesto* (above), is able to be realized. Internetworldstats.com's (2007a) Internet Usage and World Population Statistics site gives Internet usage figures (in percentages) to show the rate of penetration in relation to the population by region as follows

Africa	3.6%
Asia	10.7%
Europe	38.9%
Middle East	10.0%
North America	69.7%
Latin America/Caribbean	17.3%
Oceania/Australia	53.5%
World total	16.9%

Africa has the lowest rate of penetration, but this site shows that Africa has the highest use growth rate for 2000 to 2007 of 638.4 percent, followed by the Middle East at 491.4 percent. Hence Darch, Rapp and Underwood's observation that the spread of connectivity and access to the Internet across Africa had been dramatic is supported. Darch, Rapp and Underwood (1999: 24) suggest, however, that the spread of connectivity masks "startling differences in provision, both within and between countries" and that the concept of an electronic global village "represents a major technological and social challenge".

Access to telecommunications in South Africa is uneven, as indicated in several contexts above. In order to promote e-government the Department of Communication in South Africa has installed public Internet terminals (PITs) in Post Offices using smart card technology to gain access (Burger, 2002).

In 2007 South Africa has some 5,100,000 Internet users with a population penetration of 10.3 percent, which places this country seventh on the continent. Higher rates are found in Mauritius, Morocco, Réunion, Saint Helena, San Tomé and Príncipe, and Seychelles (Internetworldstats.com, 2007b). South Africa's use growth rate from 2000 to 2007 of 112.5 percent is low compared with other African countries, with only Sierra Leone, Réunion and Liberia having a lower use growth rate on the continent.

The importance of equity in access is clearly high on the agenda of Public Service and Administration Minister Geraldine Fraser-Moleketi, who argues that public service delivery to all citizens could be improved by the use of technology and that slow forms of development in this regard need to be leapfrogged (Emdon, 2002 cited in Sonderling and Bothma, 2005: 36). Of relevance to the need for leapfrogging, Darch, Rapp and Underwood (1999: 24) suggest that cellular technology may well offer "a more attractive development path than fixed wire technologies" and the statistics in the next paragraph, which seek to establish the current state of access to telephony, bear on this issue.

Mostert (2005: 61) sees the telecommunications system in South Africa as well-developed. By March 2002 the country had 4.96 million telephone lines (Jensen, 2002). Substantial developments with fixed-line prepaid lines, payphones and Integrated Services Digital Network channels are reported by Burger (2002). Mobile phone sales totalled 15 million in 2003 and were expected to grow to 21 million in 2006 (Burger, 2004). Three service providers of mobile services provided coverage of 95 percent of the population in 2005 and teledensity was calculated at 1: 3 (Mostert, 2005: 61). Clearly, this form of ICT access holds promise for addressing access and equity issues in the future.

Education and Training

This sector has experienced considerable change since 1994 in response to policy frameworks (Raju, 2004: 4–7) such as the National Commission for Higher Education's (NCHE) *Policy Framework for Higher Education Transformation* (1996) and the subsequent white paper (Department of Education, 1997a), the *New Academic Policy for Programmes and Qualifications in Higher Education:*

Discussion Document (Council on Higher Education, 2001), and the *Approved Academic Programmes for Universities and Technikons: 2003–2006* (Ministry of Education, 2002).

Education for library and information work in South Africa commenced in 1933, when the professional body, the South African Library Association, began correspondence courses which largely followed the British model. Responsibility for these courses passed to the University of South Africa (UNISA) in 1955. By then the Universities of Pretoria (UP: 1938) and Cape Town (UCT: 1939) also had LIS programmes. Offerings proliferated (Musiker, 1986: 91) and in the late 1980s, as Raju (2005: 74) states, a Committee of University Principals' review (1990) recommended that some programmes be closed. Several programmes did close over the next decade or so, but not, apparently, in response to this report, and today eleven institutions offer such education and training.

The nomenclature of the programmes varies considerably, with two devoted mainly to Knowledge and Information Management. UCT has a Centre for Information Literacy. While offering Information Literacy as a compulsory core module (Bothma, 2006), UP leans more heavily towards information science and multimedia. UKZN has a strong records and documents management component as well as a substantial school library programme.

There is a range of offerings and qualifications with 3- and 4-year degrees, 3-year diplomas in the universities of technology and postgraduate diplomas following on a bachelor's degree. Most university-based programmes offer honours, masters and doctoral programmes. The universities of technology offer a Bachelor of Technology degree. The distinctions between their offerings and those of the universities are addressed by Raju (2004).

Education and training programmes have had to be innovative in their response to changing needs. The offerings in the handbooks and web pages of the local institutions reflect the varied response of programmes to shifts in demand, as do the options for delivery. Some institutions operate largely or exclusively by distance, for example, the University of Johannesburg (UJ) and UNISA. Others, such as UKZN, use mixed mode, for example, for delivering the ACE. The University of the Western Cape (UWC) offers its ACE via a series of short courses.

A major change since 1994 has been the patronizing of local LIS programmes by colleagues from elsewhere in Africa. These candidates find South Africa a convenient and relatively cheap option. Their presence has added greatly to the vitality of local offerings and to the emergence of a substantial body of collaborative regional research endeavour, with examiners for theses drawn from many different African countries.

Since the publication of the *Library and Information Services Report* (National Education Co-ordinating Committee. National Education Policy Investigation, 1992), and in response to the national policy documents above, there has been concern about articulation between institutions and their offerings and especially for those wishing to move from the paraprofessional training of the universities of technology to professional education and training in the universities. The Research, Education and Training Group (RETIG) of the Library and Information Association of South Africa (LIASA) has played a crucial role more recently in guiding these deliberations and in ensuring coherence across programmes. Offerings are also under discussion by the Standards Generating Body for Information and Library Services appointed by the South African Qualifications Authority within the National Qualifications Framework (Walker, 2005: 35). It is expected that further significant deliberations about core offerings will take place in breakaway sessions linked to the 2007 World Library and Information Congress.

The Organized Profession

Walker (2005) traces the development of the library and information associations in South Africa, commencing in 1930. Since July 1997 library and information workers have been represented primarily by LIASA, which had 2,207 paid up members in 2002 (Ledwaba, 2002: 3). LIASA enjoyed financial support from the Carnegie Corporation for a 3-year period from 2000 to develop an administrative structure for the association (Rosenberg, 2006: 111).

LIASA has established ten branches in nine provinces and has strong interest groups in the following areas: Public Libraries, Bibliographic Information, Acquisitions, Inter Library Loans, Higher Education Libraries and Research, Education and Training. LIASA also publishes

a magazine and a newsletter, both quarterly (Walker, 2005: 33–34).

The association has had a successful Library Leadership Project, funded by the Mellon Foundation, which was followed by a Carnegie Corporation-funded second phase. This is headed by a Centre for Information Career Development (CICD) which seeks to provide sustainable continuing professional education and training (Walker, 2005: 35).

LIASA has been recognized by IFLA as a new member of the international association and is a member of the Standing Conference of East, Central and Southern African Librarians (SCECSAL) and of the Commonwealth Library Association (COMLA) (Walker 2005). LIASA hosts the 2007 World Library and Information Congress in Durban.

There are ongoing discussions about LIASA becoming a statutory body in order to play a more engaged role as part of the progressive new labour dispensation in South Africa (Raju, 2006).

Conclusion

This article has only scratched the surface of the diversity of the South African library and information sector. It has provided an overview of information policy and information sources, systems and services in South Africa. The education and training sector has been described and developments in the organized profession reviewed. Future challenges for the sector are touched on here and addressed more fully in Stilwell (2007).

Notes

1. In 2002 the Department of Arts, Culture, Science and Technology (DACST) became two departments, Arts and Culture, and Science and Technology (Ngulube, 2003: 15).
2. Darch, Rapp and Underwood (1999: 29) identify one of the contradictions of the new South African state, that while discrimination by race, gender and sexual orientation is outlawed by the 1994 Constitution the old racial categories, black, coloured, Indian and white continue to be used in an attempt to address inequities in terms of the Employment Equity Act, for example.
3. The number of unique titles could be estimated at 2 million.

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Towards Establishing an Integrated System of Quality Assurance in South African Higher Education Libraries

Karin de Jager

Karin de Jager obtained her PhD in Information and Library Studies at the University of Cape Town in 1995. She currently holds the position of Associate Professor in the Department of Information and Library Studies at this University. Her research interests include library performance assessment and information literacy. She is a member of the Quality Assurance Subcommittee of the Committee for Higher Education Librarians in South Africa (CHELSA). She may be contacted at: Department of Information and Library Studies, Centre for Information Literacy, Hoerikwaggo Building 4.05, University of Cape Town Upper Campus, Rondebosch, Cape Town 7701, South Africa. Tel. +27 21 650 3094. Email: Karin.DeJager@uct.ac.za

Abstract

Recent demands for evidence of quality and the impact of library services on teaching and research require libraries to demonstrate accountability and responsiveness to a divergent range of user needs. In 2004 the Committee for Higher Education Librarians in South Africa (CHELSA) recognized a need for an agreed set of criteria, standards and models for quality assurance and the critical success factors for self assessment in university libraries. CHELSA therefore established its own Quality Assurance Subcommittee to provide libraries with clear and practical direction in preparing for mandated national higher education quality audits and to operationalize an ongoing process of library performance evaluation according to agreed measures. The author, a member of this Subcommittee, charts the progress towards building consensus and establishing an integrated system and process of quality assurance at South African university libraries on the basis of international standards.

Keywords: performance measures; quality assurance; academic libraries; South Africa

Introduction

Academic libraries in South Africa traditionally regarded issues of performance measurement and quality as matters of internal concern if they were considered at all. During the 1980s and 1990s, university libraries were required to submit basic measures of their activities to the national educational statistical authority. Known as the South African Post-Secondary Education (SAPSE) Information System, it was established in 1978 to collect standardized sets of unambiguous data on all aspects of all South African universities on an annual basis. Library statistics formed but a very small part of this process, but basic data regarding costs, stock, acquisitions, space and circulation had to be submitted every year, although compliance was erratic at some institutions.

Data of this nature is not particularly suitable for calculating performance indicators, but a few attempts were nevertheless made. It was, for example possible to draw ratios such as circulation per full time equivalent student at different institutions for comparative purposes; as well as very basic indicators of stock use such as turnover rate, which is the ratio of holdings against annual circulation, and indicators of cost-effectiveness, such as cost per use and costs per user ratios.

By 1995, however, the Inter-University Library Committee (IULC) had become aware of international developments in the field of library performance evaluation and interested in developing a common set of indicators for university libraries to evaluate their services. At two IULC workshops in 1997, a 'toolbox' of indicators

 IFLA Journal 33(2): 109–116.
ISSN: 0340-0352. DOI: 10.1177/0340035207080302

was developed through a process of consultation and discussion with library directors. Participants considered the various common performance measures and indicators proposed in then brand-new texts such as *The Effective Academic Library* (1996) and the IFLA guidelines by Poll and Te Boekhorst (1995). By a process of consultation and elimination, consensus was reached that the following issues were the most important:

- user satisfaction; general and with specific services
- library expenditure per full-time equivalent student (FTE)
- integration
- annual circulation per FTE

Libraries were encouraged to begin experimenting with these performance measures and a few attempts, such as user and availability surveys and ratios calculated from SAPSE submissions, were reported to the IULC in the following year (1998). The impetus towards measuring, however, soon faded as university libraries were in the next few years faced by consuming demands such as reconfiguration of the higher education landscape as a result of major political changes in South Africa and financial difficulties resulting from sharp decreases in the value of the South African currency.

New Developments

By 2004 the now very obsolete SAPSE information system was replaced by a new higher education statistical reporting and management information system for students and staff, HEMIS. From the point of view of higher education libraries, however, HEMIS is seriously flawed as it makes no provision for data about libraries at all. Libraries were therefore no longer required to collect comparable data for central submission; some continued collecting SAPSE-type data, others stopped immediately and collected data in their own way, or not, as they pleased.

The Higher Education (HE) landscape in South Africa at the beginning of the 21st century was in a state of flux. Institutions known as 'Technikons,' similar to the former British Polytechnics, were being restructured into Technical Universities. A number of some very disparate institutions were merged to address inequities of the past, to form new universities at times spread over different campuses. The Inter-University Library Committee was dissolved, as was the Council for Technikon Librarians and a single joint committee of all higher education librarians re-emerged in 2004 as the Committee for Higher Education Librarians in South Africa (CHELSA), a new body of the heads of libraries of both the established and the newly reconfigured universities.

By 2004, another recently created body, the South African Council for Higher Education, through its Higher Education Quality Committee (HEQC) had become responsible for quality assurance in all higher education institutions. National institutional audits were mandated, requiring higher education institutions to provide evidence of the quality of their processes, programmes and services, including library services. All HE libraries would from now have a role to play in the HEQC evaluations in their institutions and have to contribute to providing evidence of the quality and impacts of library services on teaching and research.

In order to assist libraries in their preparation for their institutional audits, CHELSA established its own Quality Assurance (QA) Subcommittee to work on an agreed set of criteria, standards and models to provide HE libraries with clear and practical direction in preparing for the quality audits and to institute an ongoing process of library performance evaluation. The early activities of the QA Subcommittee were discussed at some length at the 6th Northumbria conference in 2005 (De Jager, 2006).

The QA Subcommittee decided at its establishment in 2004 to address two separate but related issues:

1. To agree on a set of performance measures for HE libraries to collect relatively basic but comparable data on an ongoing basis and thereby begin to develop a culture of assessment.
2. To develop a set of guidelines to assist institutions in preparing their portfolios for the Quality Audits at their own institutions.

There was originally some pressure from libraries to focus on the second of these, the guidelines for the quality audits, but the Subcommittee was convinced that the most basic prerequisite for effective quality assurance is data about library activities in the form of statistics that are gathered in a uniform manner so that benchmarks can be

established and libraries can really find out how they are doing compared to others in an area, or of the same size, or with a similar student body profile. The Subcommittee therefore set as its first aim the compilation of a 'basket' of simple but potentially meaningful measures according to which libraries could collect data on their own activities in a standardized format, to form the basis for their own quality assurance processes.

Measuring for Quality

Using the internationally recognized measures collected by bodies such as the Association of Research Libraries (ARL), the Council of Australian University Librarians (CAUL) and the Society of College, National and University Libraries (SCONUL) as points of departure, a basket of practical and feasible measures was assembled. As it was essential for all libraries to 'buy into' these measures, the document was circulated to CHELSA members at the end of 2004 for comments, which were incorporated into a second draft of the document.

Typically there were two kinds of responses from CHELSA members: those who wanted to collect very much more detailed and specific measures, and those who wanted ready-made answers, as if the data were already available. In an attempt to reach consensus, the next meeting of CHELSA, in May 2005, convened a morning workshop, in which the second draft of the proposed document, *Measures for Quality*, was presented and extensively discussed, with the intention of getting everybody to agree to the importance of collecting and sharing standardized data.

The selected measures (together with standard definitions, subdivisions and instructions for counting and calculation) are common to anybody familiar with data collection in libraries:

1. Provision of Stock
2. Annual Additions to Stock
3. Subscriptions to Electronic and Continuing Resources
4. Study Places/Facilities
5. Number of Libraries
6. Hours Open per Year
7. Clientele
8. Library Staff
9. Use of Library Services
10. Expenditure

It emerged at the workshop that some librarians present were not convinced that measures such as these were the indicators of quality that they required for the HEQC audits. The last part of the Workshop therefore focused on the kinds of indicators that could be extracted from the measures and the meaning that could be derived from them. It was emphasized that libraries offering quality services should be able to show their commitment to quality by having in place systems of quantifying, identifying, assessing and benchmarking their activities.

After considerable further discussion, members of CHELSA accepted the measures in principle, although they recognized that as a document-in-progress, it remained subject to change as required. They also agreed that the next step would have to be the establishment of a database and a website to host their institutional statistics. The development of this database is still in progress, but individual libraries and some consortia have begun to experiment with gathering data in this standardized format and individual institutions have also started sharing data to some extent.

Benchmarking and User Surveys

The HEQC has repeatedly pointed out that self-assessments are to be evidence-based and that actual evidence should be provided for all claims that are made. It specifically calls for the use of "benchmarking, user surveys and impact studies" and encourages benchmarking as a "source of information for goal-setting and continuous self-improvement" (Council on Higher Education, 2004: Criterion 18).

The process known as benchmarking is recognized as an important source of evidence of improvement in a self-assessment procedure. Kinnell, Usherwood and Jones (1999:140) give the following definition:

> Benchmarking is the comparison and review of service performance or processes against best-in-class organizations. The aim is to identify and implement possible areas for improvement. Benchmarking is an inherent concept of the self-assessment process.

Self-assessment and user feedback allow library and information services to identify areas that will particularly benefit from benchmarking. One

therefore aims to achieve excellence at one's own institution by comparing identified departments or procedures with those deemed to be of a high standard – by comparing local practices with best practices. It is recommended that libraries select a peer group of institutions with comparable missions and goals, sizes, user groups or other attributes for comparative purposes (Association of College and Research Libraries, 2004: 536).

Accurate data collection and measurement allow for the calculation of indicators that illustrate aspects of performance, which in turn enable the establishment of quantifiable benchmarks in order to track performance over time at a particular institution and to facilitate comparison between information services at different institutions. One of the prime reasons for compiling *Measures for Quality* had been to enable and facilitate benchmarking processes.

As noted above, user surveys are recognized by the HEQC as "important instruments in evaluating the effectiveness of institutions" (Council on Higher Education, 2004: Criterion 18). In response, the QA Subcommittee originally considered proposing a standard format for library user satisfaction surveys. In 2005, however, a significant and parallel new development saw seven Higher Education libraries in South Africa participating in the internationally standardized and validated user survey instrument, LibQUAL+.

This survey has in recent years gained worldwide recognition. LibQUAL+ results provide a reliable and internationally benchmarked indication of the quality of a range of information services and activities at a particular institution, as well as provide comparable data for different libraries both nationally and internationally. The results of the first South African LibQUAL+ surveys are enabling libraries and information services to look afresh at their users and services and are already providing rich benchmarking opportunities.

The CHELSA Subcommittee supports benchmarking practices and regular user surveys as essential tools in the assessment of quality in library and information services at institutions of higher education in South Africa. It has therefore recommended that individual libraries conduct LibQUAL+ surveys on a regular basis and furthermore initiate their own benchmarking activities based on data derived from *Measures for Quality*.

Guidelines for Quality Audits

The Subcommittee's second task, of developing guidelines for Quality Audits, was the more challenging. Libraries are not given a great deal of assistance from the HEQC in preparing their Audit portfolios. Of the nineteen Criteria in the document *HEQC Criteria for Institutional Audits* (Council on Higher Education, 2004), only Criterion 4 specifically relates to support services such as libraries and provides very broad guidelines for institutions to help frame their Audit responses. It reads:

> Academic support services (e.g. library and learning materials, computer support services, etc.) adequately support teaching and learning needs, and help give effect to teaching and learning objectives.
>
> In order to meet this criterion, the following are examples of what would be expected:
>
> (i) Academic support services which adequately provide for the needs of teaching and learning, research and community engagement, and help give effect to teaching and learning objectives. Efficient structures and procedures facilitate the interaction between academic provision and academic support.
> (ii) Academic support services which are adequately staffed, resourced and have the necessary infrastructure in place. The institution provides development opportunities for support staff to enhance their expertise and to enable them to keep abreast of developments in their field.
> (iii) Regular review of the effectiveness of academic support services for the core functions of the institution.

These stipulations are not prescriptive, but require that each HE institution displays its own fundamental understanding of quality and the unique and distinctive features that add value to its own institution. They are also very brief and not nearly as explicit as the Association of College and Research Libraries' "final, approved" document of quality standards for libraries in higher education (Association of College and Research Libraries, 2004). The Subcommittee nevertheless decided to use the criteria to provide a framework for libraries to demonstrate the quality of their services, as the

following key objectives of QA in HE libraries may be deduced from the HEQC criteria:

- integration with institutional core functions, goals and objectives and evidence of the extent to which goals and objectives are achieved
- adequate provision for the needs of teaching and research
- that the library is indeed run efficiently and effectively, is adequately resourced and provides suitable development opportunities for staff
- that the impact of library and information services on learning, teaching and research should be measurable
- regular review of the effectiveness of information services in order to ensure continuous improvement.

Stages in the Assessment and Management of Quality of LIS

The aim of the Subcommittee was to develop a Guide that would take into account the HEQC's audit framework and criteria, and to provide an inventory and manual of good practice to assist LIS managers in framing their own self-audits, although it could be neither prescriptive nor exhaustive.

In LIS, just as in any other system, four stages of activity may be identified:

1. input
2. process
3. output and outcome
4. review

These stages formed the basis for a proposed framework for managing the quality of library and information services, and was depicted as follows.

Critical Success Factors for Self-Assessment

The QA Subcommittee therefore proposed that library self-assessments for the HEQC audits could be structured according to the evaluative stages of

Inputs → Processes → Outputs → Outcomes → Review

as shown above. These stages were interpreted in terms of seven "critical success factors" (Kinnell, Usherwood and Jones, 1999:123) which together could provide a comprehensive and holistic view of the quality of information services at a particular institution.

The Subcommittee then set about preparing a document consisting of definitions of each critical success factor, followed by a list of suggested documentary and other supporting evidence that could be used to demonstrate how information services interpret each critical success factor. It was shown how indicators derived from the standardized datasets stipulated by *Measures for Quality* can be calculated and preferably provided in some context, for example by presenting comparable data over time or in comparison with a benchmark partner, to produce a 'rich picture' of quality. Not all the indicators proposed under each critical success factor would be relevant to libraries at all institutions, but each could select its own 'basket' of indicators and other evidence from each of the seven critical success factors, choosing those that most clearly express various aspects of its own quality.

The critical success factors proposed in the document *Towards a Guide to the Self-review of University Libraries* were:

1. Integration

The library has a clearly expressed mission and purpose with goals and priorities which are responsive to and integrated with those of its parent institution. Adequate human, financial and infrastructural resources give effect to these goals and priorities. The library is involved in institutional decision-making and in institutional budgetary processes (University of the Witwatersrand, 2005:3–4). A commitment to quality management through strong leadership that translates mission into policy and strategy is evident.

The critical success factor of Integration comprises of three subdivisions:

1.1 Integration with institutional goals and objectives
1.2 Integration with institutional structures, systems and financial planning
1.3 Quality management

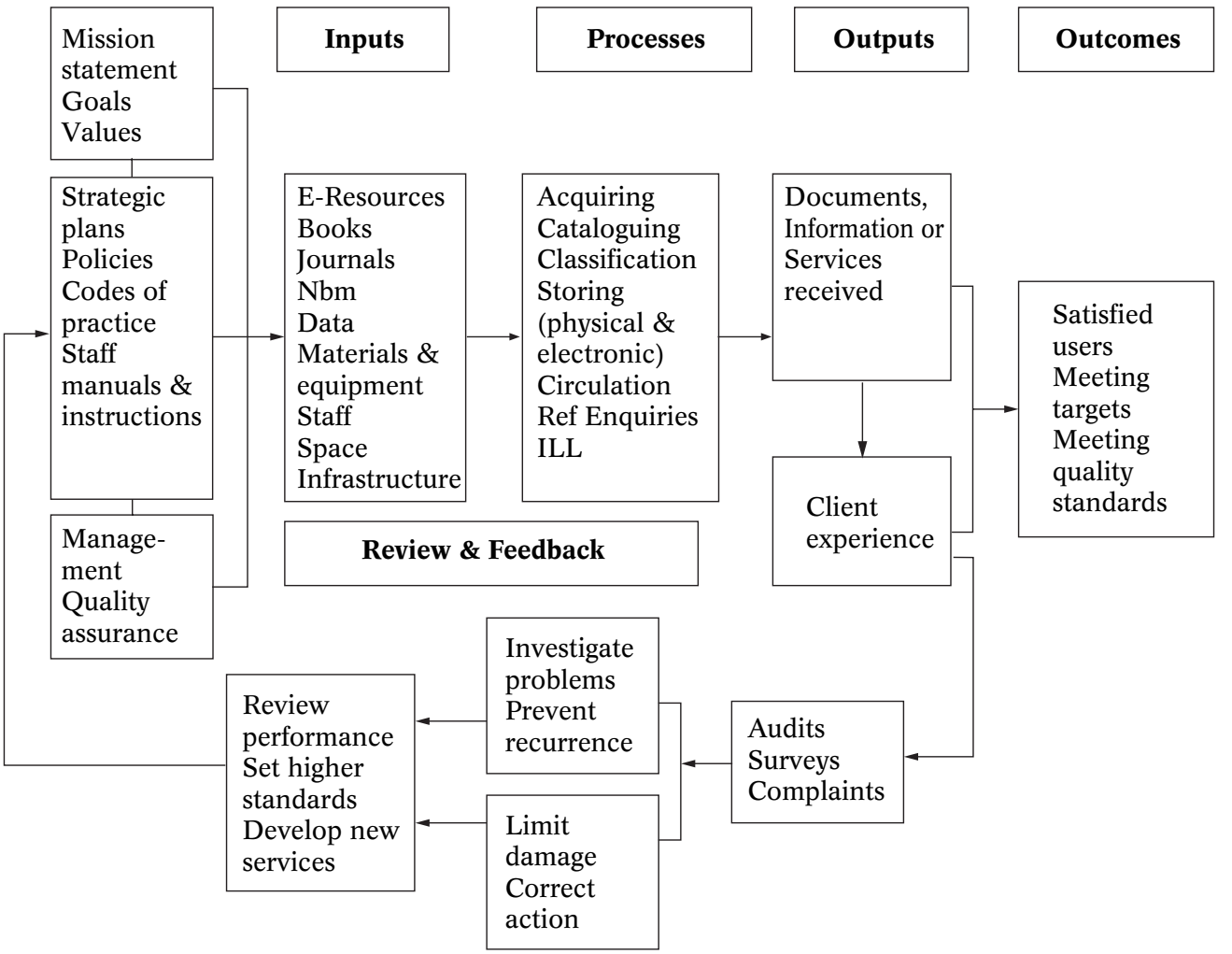

Figure 1. Map of quality concepts. Reconceptualized with input from Brophy and Coulling, 1997: 46, 66.

2. Resources

Together with staff, Resources comprise the 'inputs' into the system. In order to meet with the critical success factor of Resources, evidence that the library is adequately resourced to meet the needs of its entire range of users is required.

Two subdivisions of resource provision may be identified.

2.1 Infrastructural resources
2.2 Information resources

3. Human Resources

The library has sufficient, highly motivated and suitably trained and qualified staff able to support the library's mission, goals and objectives and to provide appropriate service to all users. Development opportunities exist for staff to grow in their profession.

4. Processes

The library employs processes and procedures that ensure efficient administration and running of all its activities. Processes include all the activities required for the acquisition, organization, management and circulation of all the information resources. Data collected according to *Measures for Quality* may be used to derive many of the well-known efficiency indicators that demonstrate aspects of the quality of internal processes.

5. Access

All users of library and information services, whether local or remote and including users with disabilities, should have prompt and efficient access to all resources, both physical and electronic, as well as access to document delivery services (local, consortial and national) that provide information resources not owned or accessible by the library.

6. Service Quality

The library establishes, promotes, maintains and evaluates services that support the mission and goals of the parent institution (Association of College and Research Libraries, 2004: 538). Competent and prompt services reflect the outputs and eventually the outcomes of the library and are focused on the satisfaction of the teaching, learning and research needs of a diverse range of users.

As increasingly more information is available electronically, it has become evident that the expectations of users have increased significantly and that users are now also needing assistance in the assessment and evaluation of information quality. Changes such as these are giving rise to a changing role for information professionals that "suggests a closer partnership with users and a greater responsibility for the educational process" (Association of College and Research Libraries, 2004: 536).

Review and Feedback

Feedback is an essential component of quality assurance. It serves to keep an organization on the right track by continually incorporating changes in response to signals both from within and from the surrounding environment, as it does not function in isolation, but interacts with its environment.

The library therefore regularly has to review its effectiveness by seeking the views and opinions of all its stakeholders, to communicate effectively and to work collaboratively with them to optimize service delivery.

Growing Consensus

As the HEQC at present is particularly supportive of initiatives to assist institutions in preparing for their quality audits, it sponsored a meeting of CHELSA members to consider the draft document on indicators for quality at the end of March 2006. As the first round of HE audits had been completed at three universities in 2005, the librarians at two of those universities reported on the process and findings at their own audits, followed by a presentation of the draft guidelines, which were extensively discussed in group sessions afterwards.

From this meeting it became clear that librarians who barely a year ago had not shown a great deal of familiarity with practical aspects of data collection and quality assurance, had become a lot more knowledgeable and also concerned with these issues in the intervening period. They were very interested in the reports of the completed audits and also in the institutions that had done the LibQUAL+ surveys, and several expressed the intention of following suit.

Considerable appreciation was expressed for the work done by the Subcommittee and the guidance it was providing for the framing of LIS self-assessment reports. This growing interest in quality assurance in SA HE libraries is further evidenced by the fact that the Foundation of Tertiary Institutions in the Northern Metropolis (FOTIM), the largest HE consortium in SA, arranged to continue this conversation at the 2nd International Quality Assurance Conference in partnership with CHELSA in June 2006, where quality issues in libraries and information services occupied a separate 2-day track. A number of librarians reported on their own new quality assurance initiatives, or on their experiences with LibQUAL+.

This discussion has attempted to demonstrate that HE librarians in South Africa have in a period of barely 2 years grown an interest in and started to grapple with issues of accurate measurement of library activities and quality assurance. While it may therefore not yet be possible to say that HE libraries have a fully established and integrated system of quality assurance in place, they are on their way to becoming able to demonstrate the quality of their services according to comprehensive and logically structured guidelines.

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Note

Slightly expanded version of a paper presented at the World Library and Information Congress; 72nd Annual Conference, of the International Federation of Library Associations and Institutions (IFLA): 'Libraries: Dynamic Engines for the Knowledge and Information Society', Seoul, Korea. 22 August 2006.

The Challenges Faced by African Libraries and Information Centres in Documenting and Preserving Indigenous Knowledge

Jabulani Sithole

Jabulani Sithole holds a Masters of Science degree in Library and Information Science from the National University of Science and Technology in Bulawayo, Zimbabwe, a Bachelors degree in English and Communications studies from the University of Zimbabwe and a High National Diploma in Library and Information Management. He is currently working for the United Nations Development Programme as a Communications and Knowledge Management Analyst. He has been researching on indigenous knowledge, culture and globalization. His Masters degree dissertation was in communication and documentation of indigenous knowledge among women in response to the HIV and AIDS epidemic. He may be contacted at: PO Box A1696, Avondale, Harare, Zimbabwe. E-mail: jabulanis@yahoo.com

Abstract

African libraries and information centres are faced with a plethora of challenges in the documentation and communication of indigenous knowledge. These include the lack of financial resources, human capacity, technology shortages and the lack of legal frameworks at national and international level to support the library efforts to document and communicate indigenous knowledge. The fast developing information and communication technologies continue to pose challenges on how best libraries can document and disseminate this oral and community based knowledge to a globally accepted knowledge base. The paper discusses these challenges, looking at some of the lessons learnt and the best practices that have emerged in dealing with them.

Keywords: libraries; information centres; indigenous knowledge; Africa

Introduction

Indigenous knowledge (IK) was defined by Warren et al (1995) as "local knowledge that is unique to a given culture or society. IK is the systematic body of knowledge acquired by local people through accumulation of experiences, informal experiences and intimate understating of the environment in a given culture."

Indigenous knowledge is an essential resource for any human development process. It informs decision-making at any level. It has been used for many years in natural resources management and to answer a plethora of social problems including those related to health, poverty, agricultural production and food security. African communities are using this knowledge to respond and manage the HIV and AIDS pandemic in the care and treatment of opportunistic infections.

IK is a complete body of knowledge, know-how and practices maintained and developed by peoples, generally in rural areas, who have extended histories of interaction with the natural environment. These interactions set understandings, interpretations and meanings that are part of a cultural complex encompassing language, naming and classification systems, practices for using resources, rituals, spirituality and a worldview. It provides the basis for local-level decision-making about many fundamental aspects of day-to-day life such as hunting, fishing, agriculture and animal husbandry; food production; water; health; and adaptation to environmental or social change.

According to Fernandez (1994) indigenous knowledge is greatly affected by social stratification. Women have much more knowledge of soil classification for cultivation, hut construction and pottery, while men have more knowledge on livestock

 IFLA Journal 33(2): 117–123.
ISSN: 0340-0352. DOI: 10.1177/0340035207080304

management, as determined by their social roles. Critical to note is that the primary social differentiation among adult, economically active members of a society is based on gender. Specific spheres of activity become the domains of the different genders as they increase their knowledge and skill over time.

Indigenous knowledge is predominantly tacit, embedded in the practices and experiences of its holders. It is commonly exchanged through personal communication and demonstrations from the teacher to the apprentice, from parents to children, from neighbour to neighbour. IK is disseminated and preserved through various family histories, taboos, symbols, myths or legends, rituals, sounds or dances, festivals, proverbs, poetry, literature – *izibongo* (praise poetry) *lenganekwano* (folk stories) – drama, theatre, role plays, folklore and other systems.

This knowledge is vulnerable to attrition if not recorded for storage and wider transmission. In traditional societies there were assigned gatekeepers of specialist knowledge such as *griots* in West African culture and *imbongi* (custodians of genealogies) among the Zulu and Ndebele people. The World Bank has added a voice to the warning that IK faces extinction unless it is properly documented, analysed and disseminated and that within one generation the knowledge could be lost forever.

A number of strategies have been propounded with regard to the documentation of IK; these include the documentation and storage in international, regional and national archives and databases for wider communication outside their communities of origin.

The Importance of Indigenous knowledge

Indigenous knowledge has two powerful advantages over outside knowledge. It is cheap and readily available to most communities and social groups. Indigenous knowledge is socially desirable, economically affordable, a sustainable resource and involves minimum risk to rural farmers. IK improves understanding of local conditions and provides a productive context for activities designed to help communities. In addition, the use of IK "assures that the end users of specific agricultural development projects are involved in developing technologies appropriate to their needs" (Warren, 1993).

Documentation of Indigenous Knowledge

Very little indigenous knowledge has been captured and recorded for preservation, yet it represents an immensely valuable database that provides humankind with insights on how numerous communities have interacted with their changing environments, including resources of flora and fauna. Efforts to capture and preserve indigenous knowledge have concentrated on the documentation of good practices that can be transferred across cultures and communities. The indigenous knowledge of Africa needs to be codified into print and electronic formats for both audio and video to make it widely accessible through the global information infrastructure (Chisenga, 2000).

Equally important is the documentation of indigenous knowledge in languages understood by other communities when it ceases to be locally specific. The process of documenting IK is widely viewed as technically easy, yet it can be laborious, time-consuming, costly, and sometimes disappointing. The importance of documenting IK is to ensure that communities are not left impoverished as a result; just as the world needs genetic diversity of species, it needs diversity of knowledge systems (Labelle, 1997).

The World Bank has argued that the classic failure of different western oriented development models has forced development practitioners and the Bank to appreciate the importance and critical role of IK in fostering sustainable development. The former President of the World Bank, James D. Wolfensohn, quoted by Duer, said, "Indigenous knowledge is an integral part of the culture and history of a local community. We need to learn from local communities to enrich the development process." (Duer, 1999)

Furthermore the documentation of IK is important and provides an acceptable way to validate it and grant it protection from biopiracy and other forms of abuse. In the world of globalization and knowledge societies, IK has to be recognized and paid for. Documentation provides evidence that local communities are the owners of a complex and highly developed knowledge system. The

processes of documentation are necessary to establish the claims of local communities to share profits obtained from the commercialization of products derived from their knowledge.

Libraries and Indigenous Knowledge

The development of human society has been based on the efficiency of information exchange among its members. This involves the collection, organization and dissemination of information. The process of recording information and its dissemination through written and printed media gave birth to the concept of the library (Weerasooriya, 1997). The concept over the years developed gradually from library science to information science and to knowledge management. It has emancipated itself from traditional resources of the written and printed word to incorporate other communication media and digital technologies. For many years IK has been preserved and maintained worldwide by various institutions, such as governments, university libraries, church libraries, museums, public libraries, private libraries, historical research institutions, literary societies and national archives.

However, the situation has been different with African libraries. The development of libraries in Africa has not been glamorous; libraries were built initially for people whose knowledge was imported from colonial countries. Libraries were designed to serve the interests of the colonialist. They were small, served the minority and stocked books primarily of foreign content. When independence came to many African states it did not transform the African libraries. They remained largely foreign, as their development was ignored by the new governments concentrating on other critical issues to uplift the status of Africans to deal with poverty and other challenges of a new nation state. A number of states failed to enact laws to support library development, even though education was made a priority. Many countries that managed to have in place such laws faced a number of challenges of competing priorities for scarce financial resources for social services, which crippled the efforts to implement the laws.

A case to consider is Zimbabwe's National Library and Documentation Services Act, promulgated in 1986. This Act has remained on paper with nothing to show in terms of library development. Its major setback has been inadequate or no funding for planned programmes and the operationalization of the Act. What remains of the national documentation service is therefore a pipe dream for the many, shattering any hope for the documentation of indigenous knowledge.

The funding gaps created by national governments have seen international donors coming in to support different library initiatives. These have brought with them other problems that challenged the documentation of indigenous knowledge. The material and financial support given left many public libraries stocked with textbooks and other foreign literature from the donor countries.

A point of reference in Zimbabwe is the support availed to public libraries in Bulawayo (Zimbabwe's second biggest city) around the 1980s from the Nordic countries. The library collections grew considerably with western materials, while a few insignificant materials were collected locally and most of these were textbooks and other school-related materials (set books) meant to support the massive education drive in the country.

Another aspect to consider in Zimbabwe has been the innovative and successful concept of the Rural Libraries and Resources Development Programme (RLRDP). Launched in 1990 to provide relevant and appropriate print and non-print materials free of charge, the project has established 300 rural school community libraries and has ten donkey drawn mobile carts and 130 book delivery bicycles. However, the project has not involved itself with the documentation of the abundant indigenous knowledge of the people it serves.

Looking at libraries and the documentation of indigenous knowledge it is apparent that they have to redefine their roles. This will place into context the role of the library in harnessing African indigenous knowledge for its users. Libraries need to redefine their information and knowledge sources and be able to appreciate that African indigenous knowledge is important and critical to social development.

The Legal Framework – International Conventions and National Policies

The success of any documentation of indigenous knowledge process rests on solid frameworks put in place to support the initiatives such as the

Convention on Biodiversity (CBD), Agenda 21 and others. Both international agreements and national laws and policies are important frameworks and tools that libraries should be armed with to deliver on the documentation of indigenous knowledge.

Indigenous knowledge movements, indigenous knowledge campaigners and some local communities across the world have impacted positively on multilateral agreements such as the CBD. The international community has recognized the traditional dependence of many indigenous and local communities on biological resources, notably in the preamble to the CBD, which has been ratified by 178 countries. As of now governments are in the process of implementing Article 8(j) of the convention through their national biodiversity action plans, strategies and programmes. These are some of the challenges taking place globally, which are facing Africa in relation to IK developments.

Agenda 21, adopted at the United Nations Conference on Environment and Development in 1992, has also become an important framework supporting the documentation of IK. Chapter 26 'Recognize and strengthen the role of Indigenous people and their communities' calls for:

> Recognition of their values, traditional knowledge and resources management practises with a view to promoting environmentally sound sustainable development, and for the establishment . . . of arrangements to strengthen the active participation of indigenous people and their communities in the national formulation of policies, laws and programmes relating to resource management and other development processes. . . (United Nations, 1992)

National indigenous policies are pivotal in the recognition and documentation of IK. However, what remains a challenge to many countries is that these are not in place in many African countries.

> A government ministry or department or any other public body must be charged with the drawing up of policy guidelines for IKS. These guidelines should specify the tasks to be undertaken e.g. surveying and documentation, and who is to implement the process and who is to monitor the progress. (United Nations, 1992)

Speaking at the launch of South Africa's Indigenous Knowledge Systems Policy, Mosibudi Mangena, Minister of Science and Technology, noted that the South African IK Policy is an enabling framework that ensures that indigenous and local communities are able to realize their full potential in society, and constitutes a basis for a successful achievement of all other national goals and aspirations (Mangena, 2005).

Coordination

In many countries documentation of indigenous knowledge is not coordinated. Different players – libraries, information centres and non-governmental organizations – undertake different activities uncoordinated. The challenge facing libraries and information centres is to propose and undertake IK documentation through a co-ordinated mechanism. The coordination mechanism should be able to inform the different players what the other members are doing and provide a platform for the sharing of best practices and lessons learnt in the different approaches undertaken. The coordination framework can also serve to mobilize resources that individual institutions may fail to raise. It will also monitor and help to protect communities from losing their knowledge to piracy. In Malawi, coordination of these activities rests with the National Research Council, as stated in the National Information Policy: the Council and related institutions are required to identify and isolate sources of technical IK for special archiving and blending with cosmopolitan knowledge.

Partnerships

There are growing networks of regional and national indigenous knowledge resource centres involved in documenting the historical and contemporary indigenous knowledge of numerous ethnic groups around the world. The centres reflect new values that recognize indigenous knowledge as an important national resource. They are establishing national indigenous knowledge databases, giving recognition to their citizens for the knowledge they have created, providing a protective barrier for the intellectual property rights of knowledge that could be exploited economically by the country of discovery, and laying the foundation for development activities that build on and strengthen the existing knowledge and organizational base

produced through many generations of creative effort by local communities.

While documenting indigenous knowledge demands time and is costly, there is a need for libraries to find ways to deal with the high costs of documentation by establishing partnerships that bring different organizations and institutions with comparative advantages in the various aspects of the documentation. Among these could be organizations such as research institutions, media houses, farmer organizations, traditional healers' organizations like the National Association of Traditional Healers (ZINATHA) in Zimbabwe and many others.

African universities and other development organizations have provided the solid foundations for partnerships that have helped libraries and information centres to confront the documentation of indigenous knowledge. Among notable successes has been the emergence of telecentres providing some rural and periurban areas with access to some ICTs through the support of the United Nations Educational Scientific and Cultural Organisation (UNESCO), the International Development Research Center (IDRC), the World Bank, the British Council, the United Nations Development Programme (UNDP), the Food and Agriculture Organization of the United Nations (FAO), and the World Conservation Union (IUCN), among others. All these organizations have formed sound partnerships in the documentation of indigenous knowledge.

Some of the best practices that have emerged in the different parts of Africa include educational and cultural institutions working together in an attempt to transfer indigenous knowledge through educational tours and the teaching of music, dance and drama. The different programmes cater for different age groups and the libraries in these institutions have been a critical component. For example, the James Dugurd Memorial Library of the Zimbabwe College of Music has collected various pieces of traditional music in the country through recording cultural groups and bands through audiotapes, CDs, DVDs and other media to help in the teaching of this music.

Technology

Over the years the fast growing information and communication technologies (ICTs) have presented an opportunity for many libraries to scale up the documentation of indigenous knowledge. However, this has not been a reality for many given the associated problems in terms of cost, access and other issues. The level of development in most communities in Africa has made it difficult for libraries to document indigenous knowledge as they do not have access to these technologies. Electricity and telephone connections are still a pipe dream in many communities. The computer is still unknown in some communities, thus rendering ICTs inappropriate to boost the documentation of IK.

While this might sound like painting a dark picture of Africa, statistics show that since 1995 access to the Internet and the World Wide Web has developed at a faster pace than before on the African continent. The rapid growth has been mainly in the continent's capitals and secondary cities (Jensen, 2001). As of August 2001 it was reported that around 4.15 million people in Africa were using the Internet. This is still minimal and a very insignificant figure.

The costs associated with ICTs are a challenge to many libraries and information institutions. Technology is not only changing at a phenomenal rate that libraries can hardly cope with, they have also had to deal with old equipment that has no spares in case of breakdowns, is not supported and at times cannot be networked. Some of this equipment is donated, but the personnel that are supposed to be using it are often not trained, or are only trained when the equipment comes and thereafter there is no further training. When a breakdown occurs there is often no one able to attend to it; an expert has to be flown in from the country that donated the equipment and at times can only advise that the equipment is antiquated and cannot be repaired.

Individualistic Nature of IK

Documenting indigenous knowledge is greatly affected by its very nature, that is, it is individually based, making it difficult to disseminate it to other people. This knowledge is communicated to the child by the parents or by grandparents and ancestors through dreams, using incomprehensible language except to the recipient. It then becomes difficult for a library to successfully document the knowledge, even though it is important.

The other dimension of the individualistic nature of IK reinforces the concept of 'knowledge as

power'. Knowledge is a source of status and income, hence it is often guarded jealously and cannot be shared easily. Doubleday (1993), argues that it is important to appreciate that 'knowledge is power,' as certain individuals may not always be willing to share their knowledge with others. Local people are also often suspicious of the documentation of IK outside their customary oral exchanges; they fear it will be misused or stolen and used against them, or that if it is documented they will not have claim to it and will remain powerless.

Validation of IK

The validation – checking for authenticity of indigenous knowledge during documentation – is a challenge to many institutions and individuals. Magara (2002) noted from a SWOT (Strengths, Weakness, Opportunities and Threats) analysis that it is not easy to ascertain the authenticity of oral sources that are often forgotten. The challenge therefore, is on how to document this unrecorded knowledge without validation and still be able to claim that it works. An example is the discourse on treating HIV and AIDS through traditional medicine as opposed to addressing the opportunistic infections.

Protection and Copyrights

Documentation of indigenous knowledge is greatly challenged in the light of intellectual property rights. Intellectual property rights are legal rights attached to information emanating from the mind of a person if it can be applied to making a product. The inadequacies of many property rights instruments to appreciate the communal nature of indigenous knowledge, and their focus on the economic value of information, have failed to protect indigenous knowledge. This failure has made it difficult for libraries to document this knowledge. The most difficult aspects of indigenous knowledge in relation to property rights are the communality of the knowledge and the fact that it is oral, not written or recorded. The more controversial aspects of indigenous knowledge are in the field of traditional medicine, where no one can compel the healers to share their medicinal secrets.

While the challenge exists, there have been a number of initiatives to address it. Among these are the recommendations by the United Nations Economic Commission for Africa (ECA) that oral traditional knowledge in African communities be exploited in all forms of expression, recognizing its right to intellectual property rights.

Institutional Capacity – Human Resources Challenge

A lot of indigenous knowledge has not been documented owing to the capacity challenges of many documentation institutions. A study in Malawi to inform the National Biodiversity Strategy and Action Plan revealed that:

> . . . there is a lack of professional and institutional capability to document biological diversity information. As a result, biological diversity resources do not follow international and/or national documentation, classification and codification standard. (Phiri, 2002)

Documentation of indigenous knowledge has greatly suffered as a result of the human resources challenges in library and information centres. The brain drain and lack of capacity to undertake the tedious process of documentation among the staff that remain behind have hampered the documentation process. The 'Great Trek' of professionals has seen a number of library professionals in Africa leave for Europe or even other parts of Africa. Over the past few years a number of professional librarians have left Zimbabwe for neighbouring countries and beyond, dealing a great blow to the field.

While it has been recommended that the best way of documenting indigenous knowledge is to use the different information and communication technologies, many institutions have no capacity among their staff to use these technologies. There is a need to train staff locally or overseas to use some of the technologies that are critical in the documentation process; however, the dilemma is that there are no financial resources to send the staff for training.

Conclusion

There are a number of challenges confronting libraries in the documentation and communication of indigenous knowledge. However, the growing need for this documentation calls for the different

institutions to coordinate their efforts and form partnerships to address the issues of cost and capacity shortfalls, among other issues.

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Modernization of Library and Information Services in Higher Education in Swaziland: strategic interventions, 2000/1–2005/6

Paiki Muswazi

Dickson Yumba

About the Authors: page 135

Abstract

This is a discussion of the implementation of the University of Swaziland (UNISWA) strategic plan 2000/1–2005/6. The goal of the article is to assess the impact of the information technology, policies and procedures, collaboration, funding, management, human resources development, preservation, marketing and information service delivery strategies on the modernization of its library and information services (LIS). It is argued that UNISWA has effected considerable staff re-skilling and made some progress towards widening access to quality subscription based electronic resources and optimizing the utilization of open access materials. Implementation was negatively influenced by low funding, limited local content on the web, inadequate information and communication technology infrastructure, scarce professional skills, and restrictive policies and procedures. It concludes that further work revolving around the above factors, taking into account user needs for independent life long learning, is the key to deepening the modernization of LIS at UNISWA.

Keywords: university libraries; strategic plans; impact assessment; Swaziland

Introduction

Higher education institutions everywhere are increasingly under pressure to produce graduates who can effectively function in the information and knowledge economy. To this end, libraries play an important role in making available pertinent information resources and services, inculcating information literacy skills and fostering a culture of lifelong learning among students. The accomplishment of these responsibilities hinges on the availability of modernized library and information services (LIS) but many African university libraries, operating in harsh macro-economic environments, find themselves ill prepared to deliver on these mandates.

Willemse (2002) notes the serious inadequacies in the funding of African university libraries. Thus, although the Kingdom of Swaziland has only one university (University of Swaziland) the limited competition, if not its total absence, has not spared it the harsh realities of resource constraints. According to United Nations Development Programme (UNDP) standards, Swaziland is a medium human development country and donor funding is restricted to select socio-economic programmes which do not necessarily include university LIS. In recent times, the University of Swaziland Library (UNISWA) is increasingly under pressure to prove its worth and indeed to account for the expenditure it incurs. Rapid changes in the information environment threaten to relegate traditional library services to obsolescence. At the same time, shrinking government subventions force UNISWA to introduce cutbacks, especially the streamlining of journal subscriptions in order to cope with dwindling resources, introduction of new programmes, increased enrolment,

 IFLA Journal 33(2): 124–135.
ISSN: 0340-0352. DOI: 10.1177/0340035207080306

and the astronomical increases in the costs of information resources.

Against a backdrop of financial pressures, UNISWA was quick to realize that piecemeal cutbacks across its three campuses at Kwaluseni (the main campus), Luyengo (the agricultural campus) and Mbabane (the health sciences campus) are not the panacea (University of Swaziland, 2005). Systemic changes were essential to the modernization of LIS. To this end, UNISWA formed the Library Strategic Planning Sub-Committee (LSPSC) and embarked on a strategic planning process that resulted in the 2000/1–2005/6 strategic plan, the key elements of which are summarized in Table 1.

The planning process and the resultant plan provided clarity of purpose and a structured approach to the modernization of LIS at UNISWA. However, the real transformative work lay in the implementation of the plan. Muswazi (2002a) identifies the key issues influencing the UNISWA strategic plan, the related lessons and gives an initial assessment of implementation progress. In particular, he observes that by the end of 2003, limited implementation was achieved, confined to the information technology, physical infrastructure and management strategies. Since then, there is no evidence of a published overall review of the strategic interventions undertaken during the period 2000/1–2005/6 or of an assessment of impact on the modernization of LIS at UNISWA.

Objectives

The purpose of this article is to build on Muswazi's initial assessment. Specifically, the article seeks to provide a complete assessment of the strategic interventions and the cumulative impact on the modernization of LIS at UNISWA during the period 2000/1–2005/6.

Data

The data used in the assessment was collected from a review of the UNISWA website at http://library.uniswa.sz, documents (e.g. minutes and reports of the Library academic staff and Library strategic planning implementation sub-committee meetings); quarterly reports to the University Planning Centre; personal experiences of the co-authors; and literature on LIS in Swaziland.

Implementation Assessment, 2000/1–2005/6

Information Technology

During the period 2000/1–2005/6, UNISWA made considerable investments in electronic databases, the Internet and related infrastructure. In 2002, space at the lower ground floor of the Kwaluseni campus library was identified and cabled for the provision of computer laboratory facilities. Subsequently, additional mini-laboratories were set up at Kwaluseni in 2005 and Luyengo in 2006, respectively. In addition, the Library server was upgraded in 2006. The laboratories are an important venue for the delivery of badly needed online public access catalogue (OPAC), database and Internet information searching, orientation and training sessions.

Simultaneously, numerous electronic resources were acquired and the library website gives access to numerous subscription-based and open access databases as well as freely available web resources as shown in Table 2.

Complementing the Internet-based resources are 52 CD-ROM databases (17 subscribed and 35 donations).

By the beginning of 2006, UNISWA had also made a modest start on digitization. Specifically, the project entailed the scanning of past examination papers. The papers are accessible to students from the UNISWA library website.

The databases, laboratory facilities and an upgraded server are the foundation upon which further development of electronic services at UNISWA is anchored. One of the interventions envisaged in the strategic plan is the development of a proposal for the establishment of a position of systems librarian. Among other things, the incumbent would direct the harnessing of information technology to assist in the modernization of services. However, the position had neither been created nor filled by the end of 2006. Similarly, benchmarks such as the drafting of a proposal for an annual information technology budget provision and the drawing up of an in-house automation programme did not proceed. Cumulatively, this influenced the pace at which UNISWA progressed with the implementation of the information technology strategy.

Strategic issue	Enabling strategy	Benchmark
1. Information technology	1. Invest in electronic databases, the Internet and other telecommunication infrastructure to give users access to a wide range of information sources	1. Purchase the databases
	2. Provide and upgrade hardware to access electronic databases	2. Appoint systems librarian
	3. Develop proposals for and establish a position for systems librarian	
2. Physical infrastructure	1. Develop and implement a master plan for the development of university library infrastructure in consultation with stakeholders	1. Draft master plan for extension of the Luyengo and Mbabane libraries 2. Seek approval of master plan
3. Policies and procedures	1. Compile a university policy and procedure handbook which should be subject to periodic updating 2. Update the status of the library to clearly reflect its function and relative importance in the university system	1. Consolidate and compile a policy and procedure handbook
4. Collaboration	1. Subscribe to relevant regional and international consortia	1. Establish library link steering committee 2. Identify relevant consortia 3. Establish budget line to support links with library consortia
5. Funding	1. Solicit funds and other library resources before introducing new university programmes in order to ensure sustainable growth	1. Draft proposal for the incorporation of the component into university costing formulae in respect of new programmes
6. Management	1. Establish working committees to provide a participatory style of management 2. Review existing situation 3. Develop an organogram clarifying communication and reporting relationships	1. Identify key library functions and draft terms of reference for establishing representative working committees 2. Develop, implement and monitor annual plans to guide library information service delivery 3. Review the existing organogram 4. Draft revised organogram
7. Human resource development	1. Develop a training programme	1. Carry out a training needs analysis 2. Provide a training programme

8. Preservation	1. Secure funds for the installation of library environmental monitoring systems 2. Establish a position of binder	1. Seek funding for implementation of preservation programme 2. Draft and submit proposal for establishment of position of binder
9. Marketing	1. Develop and implement a library marketing plan	1. Review existing situation 2. Draft and adopt marketing plan proposal 3. Implement plan
10. Information service delivery	1. Develop user education programmes for both students and staff 2. Conduct periodic surveys on user information needs	1. Implement programme (immediate and ongoing) 2. Conduct survey

Table 1. 2000/1–2005/6 UNISWA Strategic Plan.

Subscription-based resources	**Open access and free resources**
EBSCOhost	BioMed Central
Geographic Publications online (bibliographic database)	California Digital Library e-Scholarship Edition (400+ electronic books)
LexisNexis Law Library	Directory of Open Access Journals
SA e-Publications	Find Articles (more than 10 million articles)
SwetsWise	Free Online Journals
The Essential Electronic Agricultural Library (TEAL)	Geography, Environment and Planning Information Gateway
World Bank e-Library	HighWire Press Free Full Text Articles
World Development Indicators and Global Development Finance	A Guide to Africa on the Internet
	International Network for the Availability of Scientific Publications (INASP): Programme for the Enhancement of Research Information (PERI)
	OAIster (Harvester for Open Access Repositories)
	Subject Gateways
	UAICT-Africa [Use and Application of Information and Communication Technology (ICT) in Education and Information Provision in Africa]

Table 2. Access to electronic databases.

Physical Infrastructure

Besides the upgrading and extension of the Luyengo agricultural campus library in 2001, the multimedia service experienced considerable modernization, giving library users access to such facilities as CD/DVD writing, digital photographing/recording, scanning and lamination. The downside is that the acquisition of multimedia technology was not accompanied by corresponding changes to the physical space housing the service at Kwaluseni. Although considerable planning work had been done by 2006 regarding the upgrading of the Mbabane library and the creation of a resource centre to accommodate the multimedia service at Kwaluseni, the two facilities continued to experience capacity problems.

Policies and Procedures

The plans to consolidate and compile a policy and procedure handbook for the library and the university and update the status of the library to reflect more clearly its function and relative importance within the university structures did not materialize. However, the production of an external library membership policy and its inclusion in the UNISWA calendar 2005/2006 (University of Swaziland, 2005), and a policy relating to the use of the library during vacation by students, represented a significant policy initiative and an openness in keeping with current trends towards the widening of access to information.

Collaboration

The strategic plan envisaged the establishment of links with relevant regional and international consortia to facilitate information and skills sharing and in the process enable UNISWA users to access quality information resources beyond the borders of Swaziland. The strategy was superseded by local initiatives. Instead, focus was put on building a national consortium. In July 2006, a workshop to kick-start the formation of a consortium was held with funding from the Open Society Initiative for Southern Africa (OSISA) and the assistance of a facilitator from Lesotho, where similar work had been going on. The outcome was a working committee comprising representatives from the Swaziland National Library Service (SNLS), UNISWA, Director of the Curriculum Center and Principal of Ngwane Teacher Training College. The committee was tasked with the responsibility of producing a constitution, a memorandum of understanding and registering the consortium. Neither the formation of the national consortium nor linkages with regional and international consortia was achieved at the end of 2006.

Funding

During the period, 2000/1–2005/6, new programmes, such as the MSc in Environmental Resource Management, were introduced. In 2006, various diplomas were upgraded to create the following degree programmes: Bachelor of Science in Agricultural Economics and Agribusiness Management, Bachelor of Science in Agronomy, Bachelor of Science in Animal Science, Bachelor of Science in Food Science, Nutrition and Technology, Bachelor of Science in Horticulture, Bachelor of Science in Land and Water Management, and Bachelor of Science in Textile and Apparel Design and Management. The library budget allocations were not commensurate with the information resource demands of the new degree programmes. More importantly, the drafting of a proposal for the incorporation of the library component into university costing formulae in respect of new programmes was not completed. Thus, in the absence of this important enabling instrument, library funding allocations continued to fall short of requirements to make available quality library services to support new programmes introduced to meet Swaziland's changing skills needs. Table 3 shows the funding shortfalls over the strategic plan period.

Management

The reconstitution of the Library Strategic Planning Sub-Committee (LSPSC) as the Libraries Strategic Planning Implementation Sub-Committee (LSPISC) and the envisaged formation of sub-committees to lead the implementation of the various strategies were important decisions taken when the strategic plan was adopted. In essence, only the LSPISC was functional. It met irregularly and its reports were erratic. As a result, annual reports did not sufficiently address the progress towards modernization of services as laid out in the strategic plan. Also, the organizational structure remained unchanged. All the same, the LSPISC served to provide a forum for keeping the pressure on and for reviewing the attainment of strategic plan benchmarks.

Notwithstanding the difficulties, a related and milestone development in the promotion of a

Year	Estimate (SZL)	Annual allocation (SZL)	Shortfall (SZL)
2000/2001	7,303,000	1,518,000	5,785,000
2001/2002	7,321,000	960,000	6,361,000
2002/2003	7,575,000	960,000	6,615,000
2003/2004	8,232,000	3,011,815	5,220,185
2004/2005	8,983,500	4,001,439	4,982,061
2005/2006	9,290,568	5,625,140	3,665,428
2000/01–2005/06	48,705,068	16,076,394	32,628,674

Table 3. Library Funding 2000/2001–2005/2006.
Note: SZL = Swaziland Lilangeni: USD 1.00 = SZL 7.2.

participatory style of management was the re-constitution of the Senate Library Committee to include all Library academic staff in its meetings since October 2005. Previously, only the University Librarian, the Deputy University Librarian and two Senior Assistant Librarians were members of the Senate Library Committee.

Human Resources Development

Neither a formal training needs analysis nor a training programme was carried out or developed. At the same time, there remained a persistent recognition that staff needed re-skilling in order adequately to perform their duties in the rapidly changing information service delivery environment. In light of this, three trainee librarians were appointed in 2003, two of whom were seconded for professional LIS training. Also, in-house vendor-provided staff training was done on such resources as Urica, EBSCO, Sabinet, and LexisNexis Law Library. Equally important, members of staff were afforded opportunities to attend workshops, seminars and conferences. UNISWA benefited from a number of programmes, notable examples of which are shown in Table 4.

Preservation

A notable achievement was the establishment of the position of binder. The position was subsequently filled in 2006. Meanwhile, the compilation, publication and distribution of the Swaziland National Bibliography (SNB) enjoyed an uninterrupted budget allocation at least up to the production of the 2004 issue. On the other hand, the installation of environmental monitoring systems to help control the fluctuations characterizing the library humidity and temperature did not materialize. This left the invaluable Swaziana materials exposed to physical and environmental degradation. The ongoing project to microfilm newspapers and seminal works did not proceed beyond 2003. Initial experiments at harnessing and digitizing public domain Swaziana materials using the Greenstone software did not last long. While the SNB experienced a period of sustained continuity from 1994 to 2004 and similar efforts at documenting the national heritage were realized through the compilation of the Swazi culture bibliography (Muswazi and Magagula, 2003), the SNB became dormant after the 2004 issue.

Marketing

A marketing plan adopted in 1996 was not sufficiently followed through. The strategic plan was an opportunity to update and consolidate the plan, but this did not take place. Following the adoption of the strategic plan, a marketing committee was constituted but could barely convene. Thus, in the absence of a focused marketing committee structure and a master plan, efforts at marketing information resources and services were splintered and included some user education programmes offered to both students and staff, especially: (i) first year orientation sessions, (ii) information literacy sessions for the Geography Research Methods class (GEP 323), and (iii) academic and administrative staff orientation sessions held at the beginning of the academic year around August and September.

Information Services Delivery

Similar to the marketing strategy, user information needs surveys were not system wide and consisted

Venue	Dates	Coverage	Skills/knowledge sharing
University of Namibia, Lund University and University of Botswana	2001–2003	Continuing education: libraries and the Internet (Lund University, 2001a; 2001b) project (2001) – provided training in structured Internet searching, selection and evaluation of Internet information and development of library web pages and subject based information gateways	Library academic staff meeting report back sessions; collaborative development and provision of access to the Geography, Environment and Planning Information Gateway (GEPIG) (Muswazi, 2002b) and the subject portal, Use and Application of ICT in Education and Information Provision in Africa (UAICT-Africa) (2003); revisions to the web pages; sharing of HTML skills; and library academic staff refresher workshop on searching the web, September, 2003, Kwaluseni Campus
University of Cape Town	September 2003	Using Internet to research foreign and international law. Covered South African, UK, Australian and New Zealand, Canadian, European Union, United Nations documents and the United States Law	Library academic staff meeting report back session. Enhanced use of SA e-Publications and LexisNexis when these databases became available
Malawi, Lilongwe	May 2004	Programme for Agricultural Information Services, Southern Africa: identifying stakeholders for question and answer (QA) services in participating countries and develop regional QA collaboration. Objective: improve availability and access to agricultural information	Library academic staff meeting report back session. Service established and offered by Faculty of Agriculture and is channelled through Orange Free State in South Africa
Dakar, Senegal	September 2004	Electronic publishing and dissemination: access and visibility of African scholarship, electronic thesis, digital libraries, and digitizing for academic outreach	Library academic staff meeting report back session. Digitizing UNISWA past examination papers
Nairobi, Kenya	February 2006	Digital commons: free and open source software and content	Library academic staff meeting report back session
Addis Ababa, Ethiopia	March 2006	World Summit on the Information Society (WSIS) follow-up Conference on Access of Information and Knowledge for Development	Library academic staff meeting report back session

Harare, Zimbabwe	April 2006	Open Access and Creating a Knowledge Society: Local content on the Internet, institutional repositories, and international developments in intellectual property rights	Library academic staff meeting report back session
Pretoria, South Africa	July 2006	Integrated Approach to e-Content – structure and standards: electronic resource management, linking, federated searching and library statistics; included vendor exhibitions	Library academic staff meeting report back session
Leiden, Netherlands	September 2006	Electronic Publishing and Dissemination (follow up to 2004 Dakar workshop): effects of ICT on scholarly communication, bibliometric citations, publishing models for Africa and academic knowledge for development in Africa	Library academic staff meeting report back session.
Maseru, Lesotho	October 2006	AGORA/HINARI Training of Trainers. Effective use of AGORA, HINARI and TEAL (search strategies) databases, the Internet and electronic library resources	Library academic staff meeting report-back session. Library sourcing funds to acquire AGORA database
Kampala, Uganda	November 2006	eIFL-IP Advocacy for access to knowledge – copyright and related issues: Copyright laws, international agreements vis à vis copyright and access to information in developing countries; need to develop national copyright strategic plan African Copyright Form Conference: focused on issues of copyright in Africa and their effects on access to information	Library academic staff meeting report back session

Table 4. Participation in human resource development programmes.

of isolated efforts, namely: (i) the Luyengo campus library developed and administered user information needs survey instruments to guide services at the campus (Phiri, 2004), and (ii) Kwaluseni based surveys relating to the needs of distance education users (Muswazi, 2003), electronic resources and services needs survey (Muswazi, 2005) and the GEPIG survey conducted with the 2001/2002 GEP 323 class. LIS statistics are collected annually but they are not subjected to a formalized and systematic interpretation to establish the strategic implications. The few user education and Internet use sessions carried out for students and members of academic staff every now and again are not conducted within the framework of a sufficiently structured programme.

Factors Influencing the Implementation of the Plan: Observations

Opportunities

Although limited, favourable conditions for the successful implementation of some elements of the strategic plan existed, particularly the information technology, collaboration and human resources development strategies.

Information technology

The basic infrastructure for the modernization of services was in place by 2000. UNISWA had a relatively reasonable supply of personal computers (PCs), CD-ROM and EBSCOHost databases, Internet access and information technology skills. Suber (2006) defines open access (OA) literature as "digital, online, free of charge, and free of most copyright and licensing restrictions". In many respects, the ever-increasing abundance of OA literature is undoubtedly a boon to under-funded libraries like UNISWA, enabling them to facilitate user access to quality scholarly resources without the financial hardships that come with accessing subscription-based databases. Coupled with the harnessing of quality resources from the rich deep web, participation in the World Bank depository programme and initiatives such as the INASP Programme for the Enhancement of Research Information (International Availability of Scientific Publications, 2007), which support capacity building in the research sector in developing and transitional countries by strengthening the production, access and dissemination of information and knowledge, UNISWA users are able to tap into a wider base of electronic information resources relatively comparable to what other modern library services provide.

Collaboration

Among other things, the overarching goal of the Open Society Initiative for Southern Africa (OSISA) (2007) is to promote access to information in Southern Africa. To this end, it has supported libraries in building consortia to realize economies of scale. OSISA availed UNISWA and Swaziland of the opportunity to implement a scaled-down collaboration strategy and enable users at least to optimize access to, and utilization of, national information resources and services.

Human resources development

LIS international partners recognize the importance of up-to-date skills and knowledge. They sponsor numerous workshops, seminars and conferences to enable librarians in both developed and developing countries to share skills and knowledge. Some of the active partners are the Commonwealth, the Council for the Development of Social Science Research in Africa (CODESRIA), the International Federation of Library Associations and Institutions (IFLA), the Swedish International Development Agency (SIDA), International Availability of Scientific Publications (INASP), the Free and Open Source Software Foundation for Africa, Fulbright, the Open Society Initiative for Southern Africa (OSISA), Electronic Information for Libraries (eIFL.net), Information Training and Outreach Centre for Africa (ITOCA), the South African Site Licensing Initiative (SASLI), the Starr Foundation, the Technical Centre for Agricultural and Rural Cooperation (CTA) and the United Nations Economic Commission for Africa. UNISWA has benefited from the generosity of these international partners and made considerable progress towards meeting the objectives of the human resources development strategy.

UNISWA capitalized on all opportunities available. On balance, however, the modernization of library services was slowed down by numerous challenges that cut across virtually all the ten identified strategies.

Challenges

The key challenges faced in executing the 2000/1–2005/6 strategic plan are:

Information technology

The general challenges in implementing the information technology strategy are comprehensively documented in a study carried out by Muswazi (2005). Additionally, the recurring threats to adequate funding to sustain subscriptions to resources and services such as EBSCO, LexisNexis, Sabinet and TEAL are a persistent problem. Similarly, limited web documentation frustrates efforts at building local content portals, hence very little progress in deploying a Swaziana portal. Overall, the limited number of PCs available at library computer laboratories of Kwaluseni (10) and Luyengo (8) frustrates user access to the Internet/e-resources.

Physical infrastructure

The upgrading of the Mbabane library cannot proceed in isolation. It is part of a wider master plan to upgrade the health sciences campus. The library has to fit in with the broader time frames.

Policies and procedures

The development of a university policy and procedure handbook is a collaborative effort between the library, faculties and administration. This requires central coordination without which the library has little leeway. This applies equally to other instruments such as a training policy and others necessary to streamline operations. Yet, the university central administration works with competing priorities and the development of policies and procedures is only one, among many.

Collaboration

There are marked discrepancies in the distribution of resources, information and communication technology infrastructure, skills and knowledge among the potential members of the proposed Swaziland library services consortium, with UNISWA being relatively well off compared to others. Negotiating the nature and form the consortium would assume, taking into consideration the differences, is a long drawn out process that frustrates UNISWA's strategic direction in this regard. Because of the geographically small size of Swaziland and the proportionally constrained membership base, the opportunities of making savings through joint purchases may be hard to come by. On the other hand, it is these same factors that justify the pooling of resources to ensure that Swaziland users enjoy access to modern LIS. The predicament requires careful consideration to establish a model that would best suit Swaziland's unique circumstances.

Funding

Funding is a crosscutting issue. While most benchmarks had a budget allocation, limited funding renders this virtually impracticable in terms of day-to-day strategic operations. Coupled with other challenges, most strategies were negatively affected by lack of adequate funding. The estimated total budget over the strategic plan period 2000/1–2005/6 was SZL48 705 068,00. The actual total allocation was SZL16,076,394.00 (i.e. only 33 percent of the estimated total implementation cost), giving a total shortfall of SZL32,628,674.00.

Management

Information on the performance of the library with regard to the strategies was neither systematically disseminated nor readily accessible to all members of staff. Generally, the strategic plan reports did not circulate to all library academic staff outside the LSPISC membership. In addition, potential working committees to provide a participatory style of management were identified. At the end of 2006, the LSPISC had not yet finalized the composition of the committees. In the circumstances, the information and knowledge vacuum poses a challenge to the motivation of all staff members to stay focused on the attainment of the strategic objectives.

Human resources development

A potential pool of trainees is available within the library system. However, lack of clearly articulated training policies and procedures detracts from developing this cadre to fill in the skills and knowledge needs required to provide modern library services. Swaziland does not have a library school and UNISWA relies on outside library schools. Yet, funding and scholarships awards for complete professional LIS training programmes are scarce.

Preservation

One of the most significant challenges to the preservation strategy is professional staff turnover at UNISWA and scarcity of appropriate skills on the market. The microfilming of seminal works

necessitates lengthy lead times to comply with cumbersome copyright clearance procedures. The newspaper collection is small and it makes economic sense to microfilm every two years. The frustrating lead times taken together with staffing challenges constitute a major hurdle to the accomplishment of the preservation objectives.

Marketing

For a long time, a large number of academic staff did not use the library, even in the wake of appreciable developments in terms of information and communication technology infrastructure and the availability of e-resources. This is because of the not-so-positive perceptions they developed towards the library over the years. Changing these perceptions is a challenge which will require aggressive marketing strategies.

Information service delivery

The effectiveness of information service delivery is dependent to a greater extent upon the quality of personnel operating the system and providing the service. The availability of specialized staff is of crucial importance. Critical strategic areas of operation, such as preservation, were affected by inadequacies in re-skilling initiatives.

Conclusion

The UNISWA strategic plan 2000/1–2005/6 was a multi-pronged approach to modernize library and information services. The strategy focused on information technology, policies and procedures, collaboration, funding, management, human resources development, preservation, marketing and information service delivery. UNISWA seized the opportunities available and made considerable progress in implementing the information technology and human resource re-skilling strategies. In particular staff harnessed, and users enjoyed, widened access to quality electronic resources – one of the hallmarks of knowledge age library services. However, this fell short of the overall systemic changes envisaged in the strategic plan. Inadequate funding, limited local content on the web, inadequate information and communication technology infrastructure, scarce professional skills, and restrictive policies and procedures were recurring challenges.

To the extent that available professional members of staff possess the required basic skills and knowledge and that library users have a comparatively wider access to scholarly resources, the strategic plan transformed UNISWA library services and laid the groundwork for ongoing development. Further work revolving around continued harnessing of information technology, policies and procedures, collaboration, funding, management, preservation, marketing and information service delivery is essential to the process of deepening the modernization of services. The centrality of the user should pervade all interventions, especially the development of information literacy and life long learning programmes that empower users to function independently and effectively in the modern information and knowledge society.

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About the Authors

Paiki Muswazi is presently Deputy Client Services Librarian, University of the Witwatersrand Library (Wits), Johannesburg, South Africa. Among some of his previous positions, he was Senior Librarian (Education & Training) at Wits, Special Collections Librarian, University of Swaziland Library, Kwaluseni, Swaziland, Chief Executive's Assistant, Zimbabwe Electricity Supply Authority, Harare, Zimbabwe, and Librarian/Archivist, National Archives of Zimbabwe, Harare, Zimbabwe. He holds an MLIS from Simmons College, Graduate School of Library and Information Science, Boston, Massachusetts, USA, a BA Hons from University of Zimbabwe, Harare, Zimbabwe, Diplomas in Personnel and Training Management, Institute of Personnel Management (IPM), Harare, Zimbabwe, and the International Computer Driving Licence (ICDL), from the ICDL Foundation, Cape Town, South Africa. He may be contacted at University of the Witwatersrand Library, Private Bag 3, Wits 2050, South Africa or E-mail Paikim@library.wits.ac.za or Pmuswazi@yahoo.com

Dickson Yumba is in charge of the Law Collection at the University of Swaziland Library. Previously he worked at the University of Zambia in various departments of the Library. He received a BA degree in Library Studies and African Development Studies from the University of Zambia and an MSc in information Science from Addis Ababa University. His areas of interest include user education, marketing and digitization. He can be reached at: University of Swaziland, Private Bag 4, Kwaluseni, Swaziland. E-mail: dyumba@uniswacc.uniswa.sz or dymba@gmail.com

Designing and Implementing Business Information Services in the SMME Sector in a Developing Country: the case for Namibia

Elisha Rufaro T. Chiware

Elisha R. T. Chiware is a lecturer in the Department of Information and Communication Studies at the University of Namibia in Windhoek. He holds a Master of Library Science degree from Indiana University (Bloomington, USA) and BA from University of Zimbabwe. He is due to complete his doctoral degree (DPhil) in Information Science at the University of Pretoria in 2007. He teaches Information Storage and Retrieval Systems, Systems Analysis, Design and Evaluation, Indexing and Databases Management Systems and Entrepreneurship. He has worked in libraries in Zimbabwe and Botswana. Elisha can be contacted at email: echiware@unam.na

Abstract

This article outlines the development and implementation strategies that can be applied in the deployment of business information services in the small, medium and micro enterprises (SMMEs) sector in Namibia. The paper is based on a doctoral project that was carried out at the University of Pretoria from 2005 to 2007 and looks at the stages of user needs assessment, the design of services and the implementation stage as well as the impact assessment of the services.

Keywords: business information services; small, medium and micro enterprises; SMMEs; developing countries; Namibia

Introduction

Small, medium and micro enterprises (SMMEs) need to have access to adequate information to increase and sustain their competitiveness. In most developing countries, SMMEs suffer from inadequacies in the provision of business information, which is only available from stand-alone institutions, often slow and cumbersome to access, limited in scope and not provided in an integrated manner (Stork and Esselaar, 2006).

The provision of integrated and sustainable business information services to the SMME sector in developing countries is one of the important services that governments and business support organizations should consider in building the sector's capacity in economic development, poverty reduction and employment creation. Emphasis on addressing SMMEs' business constraints is usually placed on issues like access to finance, markets, transport, training and technology with limited attention to business information. Access to business information is equally important in that it provides the enterprises with a competitive edge in running their businesses.

Previous studies on information development projects (Montealegre, 1999; Heeks, 2001; UNIDO, 2003a) show that a major constraint to developing a dynamic SMME sector is the accessibility of validated, relevant information services. This affects growth and SMMEs' ability to provide jobs and income opportunities in both urban and remote rural areas. According to Kinnell et al. (1994) the major problems impeding the development of information services in developing countries are: backward computer and communication industries; inadequate information resources and their low utilization; lack of coordination among government agencies and private and NGO service providers; poor information awareness among the public; immature information markets; and national information policies that need to be adjusted and intensified.

 IFLA Journal 33(2): 136–144.
ISSN: 0340-0352. DOI: 10.1177/0340035207080308

These trends affect all development areas including health, agriculture and rural development. In the absence of donor driven projects, the public sector is generally short of resources to carry out user needs assessments before implementing information projects, resulting in unsustainable services. The foremost concern for designers of information delivery systems is to find a match between the services, the information delivered and the requirements of users. Wilson (1995: online) points out that "service delivery is a design problem and that services ought not to happen by chance, or be put together in a haphazard fashion, they must be planned and designed around the needs of the information user and his/her information seeking behaviour". More importantly, if we fail to understand users' needs and the process of satisfying those needs, information services are bound to fail and be ignored by the users.

The SMME Sector in Namibia

In Namibia, before independence in 1990, the growth of the SMME sector was slow due to unfavourable and even hostile government policies. The post-independence government formulated an SMME policy framework (Ministry of Trade and Industry, 1997) showing the importance it attached to the sector and its recognition of the role this sector could play in economic development, employment creation and poverty alleviation. This policy document, among others, stipulates government programmes to ensure that conditions are favourable for SMME in Namibia to flourish. The sector is seen as an important force in generating employment, creating more equitable income distribution, activating competition, exploiting niche markets (both internally and internationally), and enhancing productivity and technological change, thus stimulating economic development. Namibia's Vision 2030[1] and the NDP[2] (National Development Plan) clearly spell out the role the state is to play in the promotion and effective development and operation of small, medium and micro enterprises in the Namibian economy (Office of the President, 2004).

According to an assessment of the Joint Consultative Council[3] (JCC) and the Namibian Economic Policy and Research Unit (NEPRU), the SMME sector in Namibia is estimated to comprise about 30,000 enterprises employing an estimated 160,000 people, about 19.79 percent of the total formal labour force of 500,000 employees. About 75 percent of the small businesses operate in the service and trade sectors, while 25 percent operate in the manufacturing sector. The contribution of the SMME sector to Gross Domestic Product (GDP) has been increasing and is estimated to be about 8.7 percent of GDP (Arnold et al., 2005). SMME are seen as contributing to the overall improvement of peoples' lives.

SMMEs in Namibia are highly diverse and often operate under diverse market conditions and employ varied means of production. Some SMMEs are expanding and making profits whilst others are poorly managed, lacking the financial and managerial resources necessary to adapt to a growing economy. Most SMMEs are in low-profit sectors. The main types of businesses in the SMME sector in Namibia are in manufacturing, construction, retailing, catering, and personal and business services. Unlike other African countries, the proportion of manufacturing enterprises is small. The majority of the SMMEs are urban based and are in the northern parts of the country, corresponding with the population distribution. In the manufacturing subsector the greatest numbers of entrepreneurs are engaged in dress-making, tourist articles, carpentry, motor repairs, panel beating, welding, electronic repairs, food processing and services. The government considers the development of small enterprises as important part of its industrial development policy (Erastus-Sacharia et al, 1999).

The SMME sector in Namibia faces a variety of constraints. The most commonly cited problems to date include the lack of a suitable policy environment, market problems, financial constraints and input difficulties and the effects of globalization (Commonwealth Secretariat, 1998). Access to business information is not cited as a major constraint to the growth of SMMEs and yet it is one of the major significant constraints to the sector. The ability of SMMEs to survive in an increasingly competitive global environment is largely dependent upon their capacity to access and use business information as an economic resource. However, one of the constraints limiting their capacity is access to timely, current, relevant and adequate business information for informed decision-making (Mutula and Van Brakel, 2005). There is consensus that small businesses are not well served with information, yet they need access to up-to-date information to keep up with technological development locally, regionally and internationally. Small businesses do not have

libraries or information centres of their own and small business service providers are often not well coordinated in their information dissemination activities. There are many imperfections in the flow of information in African countries and effective business development services can assist in reducing business failure by filling in the information gap (Van Oyen and Levitsky, 1999).

Existing Business Information Services in the SMME Sector in Namibia

There are several business support organizations in Namibia providing a range of business information services to SMMEs. The services include: business information services, training, business development services, research and advisory services, financial and marketing services. In the area of business information services, business development services (BDS) provide business information services in these areas: finance, marketing, training, business development, regulations and standards, and policy issues regarding SMMEs development. Business development services are made up of public, private and non-profit organisations. They include chambers of commerce, financial institutions, small business development agencies, government ministries and departments and NGOs. In Namibia, the leading players in the provision of business information services are the Ministry of Trade and Industry, the Namibia Chamber of Commerce and Industry, the Small Business Information Centre and many development-oriented NGOs.

In 1996, the Namibia Chamber of Commerce and Industry (NCCI) launched the Access to Information and Marketing Centre (AIM) to provide market information and support services to the business community on a cost recovery basis (Butterly, 1998). The services provided by AIM include: trade enquiry services, Namibian companies databases, business advisory services, AIM library, publications and the NCCI website (http://www.ncci.org.na). Butterly (1998), however, notes that the AIM library received an average of only two visitors per week and that it is completely underutilized. Other challenges facing the centre include resistance to paying for services, and the small nature of the market, that is overcrowded with free information. Arnold et al. (2005) have identified the lack of awareness of existing business services among SMMEs in Namibia as one of the major problems with usage of business services.

The Small Business Information Centre (SBIC) was established in 2001 as a result of collaborative efforts of the City of Windhoek, the Ministry of Trade and Industry, the Joint Consultative Council, and the Namibia Chamber of Commerce and Industry. As a one-stop-shop, the SBIC was created to inform the public on matters concerning SMME developments and enhance the economic environment for SMME growth through the provision of information and other advisory services. In January 2007, the SBIC closed down due to resource constraints within the Joint Consultative Council and also because donor funding from HIVOS, the International Humanist Institute for Cooperation with Developing Countries, a Dutch development agency, had dried up.

The Ministry of Trade and Industry also provides a trade information service within its trade promotion unit. A trade information centre with a functional library was set up to international standards to serve both exporters and importers. Today however, the trade information centre is not functional, partly due to lack of manpower and lack of interest within the trade promotion unit to see the service revived.

The current service providers face many challenges in the provision of business information services. There are resource constraints in organizations, awareness campaigns are not effective, SMMEs demand for information in generally low and there is a very low level of ICTs utilization among enterprises, making it difficult for service providers to provide more efficient services. The information management practices in many organizations regarding business information sources are very weak, leading to poor services. The present scenario in the provision of business information services in the SMME sector in Namibia calls for a more coordinated approach. There are several players in a small market and their resources could be pooled together for the benefit of small enterprises and thereby contribute to their growth and development.

The Nature of SMME Business Information Services

Business information services (BIS) can be described as organized services that provide/assist SMMEs with business information on various issues like; finance, markets, statistics, training, business opportunities, linkages, trade

promotion, production, and technology and business development. BIS also provide a range of other services like access to computers and the Internet, and other computing needs. Business information services can be provided as a one stop shop or they can be integrated with other business development services like training and marketing. A business information service is, therefore a one-stop-shop for SMMEs to access business information, services, tools and facilities. The importance of BIS in the SMME sector is:

- they provide SMMEs with means to access various types of business information
- they assist SMMEs to explore new and expand their old markets
- they assist SMMEs to keep abreast with technology and production techniques.

Business information services are not only a key business service in their own right, but are also a tool to increase the transparency of the overall business development services market. Although information is ever more readily available, SMMEs in Namibia generally lack comprehensive and reliable information about business services in general and about developments in the business environment. Access to information in Namibian languages represents another constraint, and unreliability of information services is also frequently pointed out as a major constraint. Business information is recognized as an important economic resource in the SMME sector.

Approaches to the Development of Business Information Services

The failure of some of the information projects in developing countries (Montealegre 1999, Heeks 2002, UNIDO 2003a) is attributed to the lack of formal approaches in the planning design, and implementation of the projects. Services are often implemented as an afterthought or because they will attract government or donor funding. There is a need to approach the development of services in a more coordinated and sustainable manner.

Integrated Business Information Services Approach

Miehlbradt (1999) proposes an integrated business information service model in which information services are part of other business services that an organization is already providing to SMMEs. The service provider in this case requires skilled personnel familiar with business and with SMMEs in particular. A business-focused organization such as a chamber of commerce and industry or a business-focused NGO might suit this kind of approach (Miehlbradt, 1999). This organization could either source information directly from the Internet or could work through other, more specialized, information providers such as those focused on finance, marketing, agribusiness, national product statistics or export opportunities. An initial market survey is necessary in this approach to help determine both the content focus and the service features which SMMEs demand. The approach must also include an outreach effort to increase SMME awareness of the value of information and a feedback mechanism. The various components of this model are:

- information providers
- business support organizations
- SMME / SMME sub-sectors
- large business.

Miehlbradt (1999) argues that information services should be offered together with other business development services because they offer common customer benefits. Furthermore, because of the low information demand from SMMEs and the need to maintain financial viability, BDS have to focus on both SMMEs and large businesses.

Networked Business Information Service

UNIDO (2003b) provides another approach in the establishment of business information solutions networks (BISnet) for SMMEs that link all relevant national and international information sources into a one-stop-shop. This operates on a demand-driven and commercial basis, ensuring SMMEs' trust and support through strong local ownership by public and private sector business partners. Commercial operations also ensure sustainability of the activity.

The one-stop-shop is a physical location (with regional or rural offices), where entrepreneurs can walk in for business advice and support. It would host ICT training facilities for individual and group training. It will not store industrial and marketing information; instead, it will have databases on the location of information sources with a facility to access them. The institutions /initiatives that are linked will become network partners or nodes. The one-stop-shop is conceived as a decentralized

and demand-driven network. The building entities of the network are as follows:

- Focal point: offices of the one-stop-shop linked with nodes of BisNet, depending on the ICT infrastructure.
- Code partners: institutions that are involved in collecting, processing and disseminating industrial technology and/or market information.
- External nodes: national and international information sources–which contribute as a window to the external world and provide the link to the institutions and international agencies in various countries dealing with industrial, technology and market information.
- Support services: to support the business information services, related services have to be offered, such as business and ICT training and Enterprise Internet Solutions (EIS).
- Rural extensions: as the services of the one stop shop mainly serve the business information requirements of SMMEs in cities and their immediate environs, the expansion of the services to rural entrepreneurs becomes the second stage of the development of the BisNet by setting up Rural Business Resource Centres (RBRCs). To make the RBRCs sustainable, they should offer some of the following services: business information and advisory services, business and ICT training, e-learning, www services including e-commerce, consultancy services, cyber café operations, teleworking (cooperation among enterprises based on digital provision of services).

The choice of the final approach in the development of business information depends to a large extent on the specific conditions prevailing in a particular country. The overall business support environment must be evaluated as the starting point. In Namibia today, there is one Small Business Information Centre that was established as a result of private and public sector partnership in the capital city, Windhoek. However, there are many shortcomings with the Small Business Information Centre in the provision of business information to SMMEs. The current services need to be reviewed with the aim of establishing the information needs of the SMME sector as well as their information seeking patterns. There is a need to expand the services beyond the capital city to other towns and to rural communities in the northern regions of the country.

Development Process for Business Information Services

The development of business information services in the SMME sector in developing countries should be based on the following considerations:

- That information is an essential factor for industrial development and growth. The SMME sector plays a key role in industrial development and should have access to this resource.
- The private sector in developing countries does not readily see the profit potential of commercial information services due to the low demand and awareness of the potential users of the value of information.
- Capacity-building activities for business information services, ICT and e-business support should be synergized with other technical cooperation activities of donors in order to achieve maximum impact at the national level.
- There is a large potential to synergize with other national and international information network activities (UNIDO, 2003b).

Several trends in developing countries are now supporting the feasibility of establishing business information and according to UNIDO (2003b) they include:

- growing interest of business users for information and information services
- growing awareness about the role of information in facilitating decision-making
- growing acceptance that information is an essential input in the business process
- growing willingness of SMMEs to pay for tailor-made information
- growing understanding that the main feature of information is its quality
- growing availability and quality of the telecommunication infrastructure.

While there are several approaches that service providers can take in the design, planning and implementation of business information for the SMME sector, in Namibia it is recommended that stakeholders in the SMME sector follow these phases:

- Phase 1: User needs assessment
- Phase 2: Design stage

- Phase 3: Implementation of business information services
- Phase 4: Impact assessment of information services.

User Needs Assessment

The first phase in the provision of business information services to the SMME sector is to carry out a detailed information needs assessment in the enterprises. The assessment must identify the information needs of SMME, bottlenecks in information supply, and the type of services that are required to support the sector. The assessment would normally include the following stakeholders: end users (SMMEs), national public and private information sources, international information sources, infrastructure providers, R&D institutions, financial institutions, training institutions, consultancy organizations and any other institution (commercial or otherwise) providing market and business development or technological services to SMMEs. The user needs assessment of the business information needs of SMMEs should consider the following issues:

- Questions on end-users' preference, in particular regarding access modes and favourite sources of information must be included in the user needs assessment.
- A discussion of the major obstacles encountered when searching for business information is also a good way to encourage the user to express his needs and preferences.

Also to be included in the user needs assessment is the level of utilization of ICTs by SMMEs. Studies on the use of ICTs in the SMME sector have shown that the level of ICT utilization is very low, but that there is room to encourage SMMEs to use more ICTs in their business operations. According to Heeks (1999; 2001) the assessment of ICTs should look at the following:

- What approaches should be taken in implementing ICTs in business information services in the SMME sector?
- What ICTs can SMMEs use?
- What ICTs are currently being used in the SMME sector?
- What ICT support should be provided to enterprises?
- What are the challenges for ICT provision in the SMME sector?

Design Stage

The design stage is the transformation of identified user needs into desirable outcomes or action plans. The assessment provides the service providers with a clear idea of what types of information SMMEs require. It also shows the gaps in the information delivery services and the level of ICT use. The types of information required should inform the design strategy as to what future information sources the services providers should use.

The design stage focuses on the users of the service and takes the following into consideration:

- Operational issues–development of a planned approach to service development.
- Marketing programme–to reach out to the intended users.
- Human resources requirements–ensure adequate human resources to provide the service.
- Technology requirements–specify technology requirements for the delivery and management of the service.

In many cases it has been suggested that the delivery of business information cannot be done in isolation from other business development services. Because of the low demand for information from SMMEs it is financially more viable to have integrated services than standalone business information services. A potential business information services provider has various options of working with other services providers and through the Internet to gather and disseminate relevant business information. It has also been argued that information is too small a component of the requirements of SMMEs to set up specialized business information services; instead, business information provision should be set alongside other services. Equally important is that ICT-based initiatives must acknowledge the significance of informal systems of communication for the transfer of information throughout the SMME sector. But more important for the design of services that will incorporate ICTs is the recognition that they are a means of delivering information rather than development tools.

The design of the business information services should be clear as to what channels are to be used in the delivery and dissemination of services. Calls have been made to encourage SMMEs to move towards the use of formal information sources,

as they are generally more reliant on informal information sources (Zhao, 1990; Heeks, 1999; Duncombe and Heeks, 2001; Moyi, 2003). Business information services providers should establish proper information delivery channels to the SMME sector. And they should consider the use of print media, radio and television, training workshops/seminars and the use of organized meetings and visits to other enterprises.

The final design of business information services should consist of the components outlined below. These are derived from UNIDO's (2003b) model of a networked business information service and from Miehlbradt's (1999) model of an integrated business information service:

- Service providers–mainly made up of business development organizations like chambers of commerce, government departments, NGOs, training organizations, and commercial banks; their role is to provide business information services to the enterprises.
- End users–the target users of the business information services are the enterprises' operators and in some cases they are organized into industry associations.
- Information providers–both national and international information sources who feed or provide business information in various forms to service providers for repackaging and dissemination to SMMEs.
- Business information sources–print and electronic sources form part of the collection that should be part of a business information services and they include: business directories, directories of information sources, trade journals and magazines, statistical information, marketing bulletins and export potential surveys.
- ICT support infrastructure–to facilitate the collection, analysis and dissemination of business information by service providers and information providers.

All the various components that make up the business information service are important in the delivery of sustainable services. The information chain from information providers to services providers and to the end users in the SMMEs must be maintained and supported by the right infrastructure of ICTs and other related services and equipment.

Implementation of Business Information Services

The implementation stage involves the translation of action plans as mapped out in the design stage into outcomes. The stage follows the agreed intended timetable and the implementation of activities that make up the change or innovation visible in the business information sector.

The following stages therefore do not restrict or limit organizations to one development approach, but rather provide a description of the various activities that should be taken into account when implementing business information services in the SMME sector.

Setting up a project team

The setting up of a business information services project within a business development services organization like a chamber of commerce, ministry or NGO requires that a project team be set up. The main reason for bringing together various stakeholders to the project team is to ensure that the end users benefit from the project. The various stakeholders on the project team also bring expertise and experience in information management and the SMME sector. The project team should be made up of the following:

- Project leader–to provide overall leadership to the project.
- Information management specialists–with skills in information and ICTs.
- Marketing and development specialist–to provide expertise on marketing the services not only to end users, but also to potential information sources.
- Information technology specialists–to provide the necessary technical backup in setting up business information services systems, like Internet, e-mail, compilation of business databases.
- Information providers–should be involved in planning the deployment of business information services.
- Information users–the end users must be involved in the design of services so that they will receive the right services.

Defining goals and objectives

It is important that the overall goals and objectives of the business information service are part of the activities of the host institutions. A host institution

like a chamber of commerce or a government department has many other functions and responsibilities and hence the business information services component must be clearly defined in terms of its stated goals and objectives. If the host institution is a standalone organization like a small business information centre, again its goals and objectives must be cleared stated. The proper definition of the business information services goals and objectives will provide guidance in the proper operation and deployment of services to the SMME sector. The above stated objectives are also used to measure the success of the business information services when the impact assessment of services is being carried out.

Setting up the information services support infrastructure

The implementation of a business information service requires various types of resources and facilities. For each of the resource and facilities requirements, the planning exercise should consist of:

- Taking stock of existing resources–what is available.
- Evaluating which additional resources are required.
- Checking how and where additional inputs could be obtained.

The support should include the provision of business information services support staff, information resources, office space, equipment, ICT facilities and financial resources.

Impact assessment of business information services

The last phase that business development services should engage in during the project lifecycle is that of monitoring and evaluation. Monitoring and evaluation of development activities provides government officials, BDS development managers, and civil society with better means of learning from past experience, improving service delivery, planning and allocating resources, and demonstrating results as part of accountability to key stakeholders (World Bank, 2004).

The three main areas that impact assessment should focus on are:

1. Client impact–in terms of changes in SMME performance (e.g. sales, value added, profitability), or broader social and economic impact (employment, poverty alleviation, etc.)
2. Institutional performance–according to indicators of outreach, cost effectiveness and sustainability.
3. Market development–measured, for example, by the price and quality of services available, SMME awareness, trial and repeat usage, the level of satisfaction of SMMEs, and the extent to which BDS providers are reaching previously underserved populations (Committee of Donor Agencies, 2001).

The World Bank (2004) proposes a number of tools and methodologies that BDS can follow in impact assessment of development projects and these can be applied to business information services projects. They include: performance indicators, the logical framework, formal surveys, rapid appraisal methods, participatory methods, public expenditure tracking systems, cost-benefit and cost effectiveness analysis and impact evaluation. The final choice of a methodology depends on the nature of the project that has been implemented.

Conclusion

The greatest challenge that governments and business support organizations still face in developing economies is to promote SMMEs for creating employment and alleviating poverty. Timely and accurate business information services have been identified as a major component in development efforts. The delivery of such services should not be done on an ad hoc basis, but rather be part of systematic planning that involves the study of information needs, information seeking patterns, review of existing services and assessing the role of ICTs in the whole process of information delivery and use.

Notes

1. Namibia Vision 2030 – Policy framework for long-term national development. The goal of the Vision is to improve the quality of life of the people of Namibia to the level of their counterparts in the developed world by 2030.
2. NDP – National Development – the vehicles for implementing Vision 2030's objectives, often run over a five year period
3. The Joint Consultative Council – an umbrella body that coordinates the activities of SMME service providers in Namibia and is membership based.

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The Impact of Electronic Communications on the Science Communication Process – investigating crystallographers in South Africa

J. Gretchen Smith

Gretchen Smith originally graduated with a science degree in mathematics and chemistry. She then switched direction and obtained postgraduate qualifications in information and library science. As a LIS professional she worked as a science and engineering librarian for a number of years before joining the Department of Information and Library Science at the University of Cape Town. She currently teaches Information Retrieval, Knowledge Management and Research Methodology in LIS. Her research and professional interests relate mainly to the communication of information in science and information and knowledge organization within the broader field of Knowledge Management. E-mail: gretchen.smith@telkomsa.net

Abstract

The author adopts the premise that effective communication of scientific and technological information is pivotal to the success of technological innovation and sustained economic growth and that this applies particularly to South Africa. Many factors are, however, currently impacting on the information communication process, not least of which are the burgeoning information industry, globalization, and rapid technological advances. This factor motivated the author to investigate the impact of electronic modes of communication and this article is based on the research project. The community of scientists engaged in crystallographic research in South Africa was selected as the study population. It clearly emerged from the study that the significant increase in the use of electronic modes and systems, while not affecting the inherent structure of the communication process, did create a far wider range of modes of communication and did have a positive influence on the ease of communication and collaboration. This was particularly manifested as far as cooperation with the international research community was concerned. It was also clear that this impact varied according to the scientists' work environment.

Keywords: electronic communication; scientific communication; crystallographers; South Africa

Introduction

Science and technology affect the lives of all humans in many important ways. Our collective economic wellbeing, social structure and technological advancement are all affected by the amount of understanding of what is known in science and in technology. Technological innovation is thus a critical factor in the long-term economic growth of all countries and it in turn is dependent on a social environment that provides incentives and relevant information inputs into the innovative process. It is specifically suggested that scientific and technological advance is largely dependent on the efficient communication of ideas and information as well as the amount and quality of interaction among scientists and technologists.

The rapid growth of scientific and technological endeavour over the last few decades has, however, resulted in an incremental growth and increased complexity of the communication process. Other factors that are impacting on the process are the escalating information industry, globalization, and rapid technological advances. Questions thus arise relating to the efficacy of the process. A specific concern of the author is whether the burgeoning growth of information communication technologies is affecting communication among scientists in South Africa. To answer these questions the author conducted research to investigate the

 IFLA Journal 33(2): 145–159.
ISSN: 0340-0352. DOI: 10.1177/0340035207080518

information communication process among a defined group of basic and applied scientists in South Africa. This article is based on the outcome of the research project.

The Communication of Information in Science

Scientific research is essentially a corporate activity and a distinctive feature and accepted social norm of scientific communities is the concept of sharing information and the communality of ideas. It has further been suggested that the most important function of the communication process is to provide a cumulative record of knowledge in science. Such a record of knowledge serves a normative function, and it constitutes a reference point from which new theory is promulgated and to which new evidence may be added (Gläser, 2003: 39).

The important role of informal communication of information in science has been highlighted by a number of researchers following the early work of Price (1963) on *invisible colleges*. The popularity of interpersonal communication lies in the interactive nature of the exchange process and the stimulation that collegiate interaction provides. Various studies have further indicated that there is a positive correlation between high levels of communication with colleagues and high performance levels and that performance increases if informal communication links are encouraged.

A fundamental prerequisite to understanding the communication of information among scientists would be to examine the variables that affect the communication process. A wide diversity of factors has been listed in the literature, of which Paisley's (1968: 2) seminal model of such factors has probably laid the foundation for all current thinking on the topic. The factors or variables that have generally received the most attention are the scientist's personal attributes; his/her discipline and alignment on the basic to applied continuum; type of work environment; and finally the years of professional experience and status within the organization. Paisley (1980: 122–123) has further suggested that the ways and medium in which information is communicated have a profound effect on the communication process. This would include the perceived quality, availability, accessibility and ease of use of channels of communication as well as the users' interaction with the information systems that provide access to them.

It is clear that the system of scientific communication that has evolved over several centuries is now undergoing a transformation, catalysed by a number of environmental, economic, and structural factors. Of the most pervasive are those caused by the effect of increased collaborative practices, the pressures that new publication formats create, ever changing and often decreasing funding models, and structural changes in employing organizations (see for example: Correia and Teixeira, 2005; Crawford and Stucki, 1990; De Gooijer, 1993; Hurd, 2000). The effect of all these factors is further compounded by the electronic environment that we live in. The ubiquitous adoption of information technology has affected the communication system in a number of ways, ranging from new modes of one-to-one communication to electronic modes of publication, to the impact of the Internet and the World Wide Web.

The question thus arises as to what extent this has affected information communication behaviour. Has it created fundamental qualitative and quantitative changes to the communication of information in science and affected behavioural patterns, or has it been absorbed into the process as many other innovations have in the past? The real effect of all these factors on the communication behaviour of scientists is a point of debate and provides a fertile area for investigation.

Electronic Modes of Communication

Vannevar Bush, as far back as 1945, stated that

> professionally our methods of transmitting and reviewing the results of research are generations old and by now are totally inadequate for their purpose . . . But there are signs of a change as new powerful instrumentalities come into use . . . The world has arrived at an age of cheap complex devices of great reliability: something is bound to come of it. (Bush, 1945: 101)

The vision of computers that would be used to send, receive, and store all kinds of communications has now come to fruition and the kinds of electronic media that were anticipated are currently widely used. The interaction with a vast and still

growing number of electronic communication media and networks has become part of the modern way of life and the question thus arises to what extent this has affected scientists' information communication behaviour. Has it made an indelible impact or has it been absorbed into the scientific communication process as merely another mode in which information is communicated? Humans have always been adept at adapting to new media formats and one can thus query whether the use of electronic media would structurally or substantively affect existing practices and kinds of interactions.

It is beyond dispute that the utilization of electronic modes of communication within science communities is myriad. In many instances electronic media have assumed both a complementary and substitutional role in competition to other media and forms of communication. Eisend (2002: 308–310), for example, provides a useful categorization of the various ways in which electronic media and systems are used in scientific communication:

- **For research purposes** they are used for interpersonal communication and discussion with colleagues; scientists create their own electronic databases to record and manipulate experimental data; this data can then be communicated to colleagues all over the world by means of electronic networks; it is also used to collect data from remote instruments, or conduct online surveys, or observe behaviour in newsgroups; scientists participate in electronic conferencing; they access centrally maintained bulletin boards, remote databases, and the Internet to search for of information, etc.
- **For publication purposes** they are used to post advance research output such as preprints to newsgroups, mailing lists, personal homepages or to specialized preprint servers; reprints are sent out for discussion; articles are published in online journals where the normal peer review verification process is applied, or if the institutionalized scientific publication process is bypassed, documents are personally authored on the Internet.

Eisend suggests, however, that different forms of communication have relevance for different purposes at different times. He refers to "theories of rational media choice" to distinguish between *rich and poor media* depending on the media's ability to enhance understanding of the message and increase social interaction (Eisend, 2002: 309). For example, interpersonal communication is best served by face-to-face dialogue as it is the *richest* medium followed by telephone, letters, faxes and finally e-mail. It is particularly relevant when there is a high degree of ambiguity in the content being discussed. Electronic communication is, however, the most appropriate when scientists need to rapidly search and exchange information and when they engage in factual discourse and simple forms of collaboration.

There is a growing debate as to whether electronic communication media are affecting the informal communication process. Hurd (2000: 1283) and Davis (2004: 330), for example, suggest that that there are indications that electronic media have extended the concept of the *invisible college* and that the current *invisible college* phenomena could evolve into *virtual invisible colleges.* This could possibly broaden and democratize the membership base, a decided benefit for younger scientists and those from developing and often marginalized nations who find it difficult to become integrated in *closed* interpersonal networks. Talja et al. (2004), however, are of the opinion that metaphors such as *virtual communities*, *cyberspace colleges*, and *voluntary networks* incorrectly imply that electronic communication forums are new kinds of *invisible colleges*. It is their view that communication behaviour is not in fact affected by these enabling technologies, but rather by the inherent and fundamental "social and cultural contexts into which they are embedded". It is suggested that although there is little dispute that developments in communications technology will to some extent affect the informal communication of information, it seems unlikely that electronic networks will entirely replace traditional modes of informal networking, as according to Cronin (1982: 232) they "have a functional (and psychological) reality which transcends the mode or mechanism by which they coalesce".

Gläser (2003: 47), in his discussion of whether electronic media – and specifically the Internet – have had an effect on the social structure and knowledge generation of scientists, also comes to the overall conclusion that they have not had any substantive effect as "science communities are, and always have been knowledge producing and sharing communities". He further contends that scientists have always used a variety of channels to communicate and share knowledge, of which informal face-to-face communication

is (and remains) one of the most important for their collaborative activities. O'Dell et al. have further suggested that only when scientists move away from cloning paper-based communication patterns in the electronic environment and go "beyond the limitations of a paper-publishing paradigm and exploit the possibilities offered by the digital age to the full . . . the real scientific communication revolution will begin" (2004: 91). It would thus appear that there are contrasting views as to whether the communication process in science has fundamentally been changed by electronic media and systems.

A number of instances have, however, been identified where the use of electronic media and systems have made a positive impact on the communication process. Gläser (2003: 47) has suggested that the use of electronic media is resulting in increased collaboration across national boundaries and a greater internationalization of scientific research. It has helped integrate new and more partners into collaboration networks, made communication and access to information easier and faster, and facilitated workflow. The most obvious benefit, according to Eisend (2002: 307–317), is the elimination of the distance factor, and many organizations with geographically scattered offices thus use electronic networks to maintain contact among their divisions. He further states that it provides an instantaneous and international channel to effect information flow and in this way it is overlapping and often replacing personal letters and the telephone as modes of communication. Electronic mail, in turn, provides easier and speedier preprint exchange than traditional channels have done in the past.

Scientists' opinions relating to electronic media and systems have evolved considerably from the early scepticism during the 1990s to recent enthusiasm. Initially high costs, usability problems, and questions around quality control of electronic journals were the main factors that prevented extensive use (Hallmark, 2003). Other factors related to problems with regard to accessing, downloading, and formatting, as well as not knowing about the availability of such services and how to use them. It is thus not surprising that a number of studies conducted in the 1990s indicated that scientists preferred manual systems and journal articles in print to those in electronic format (Bichteler and Ward, 1989; Brown, 1999; Hallmark, 2004).

Attitudes change remarkably quickly, however, and by the turn of the century studies of scientists' information communication behaviour were indicating that they had adapted to electronic systems and media, integrating them into their information-seeking routine. The convenience of having immediate access to a wealth of information, rapid retrieval and seamless communication possibilities was particularly appreciated. Hallmark (2004), when comparing the results of her 2004 study with similar unpublished data obtained in 1998, comes to the conclusion that there had been a rapid evolution and acceptance of electronic media and systems.

The various problems created by the more traditional publication processes, such as high publication costs, problems caused by the full transfer of intellectual property rights from author to publisher, and the slow turnaround of traditional publishing have resulted in new electronic publishing models, often based on author self-archiving. Correia and Teixeira (2005: 349) are of the opinion that such initiatives could revolutionize scholarly communication by making it more efficient and effective.

Tenopir and her co-workers (2003) have identified three stages in the migration of scholarly literature from print to electronic formats and the effects this has had on the science communication process:

- The first or early phase (1990–1993) followed the introduction of electronic journals, both in online and CD-ROM format. At this stage, scientists as authors and readers were concerned about quality and sustainability of the new media and many publishers were also hesitant to commit to electronic journals.
- During the second or evolving phase (1994–2002) the majority of scientific journals became available in electronic format, new features were added to some journals, and some individual articles were made available through preprint archives, author websites, etc. Most of the electronic journals were, however, merely replicas of traditional print journals (some only in electronic format, but most published in both formats). Electronic preprint services were also generally emerging, together with author self-publishing initiatives, the development of institutional repositories, and the Open Archives Initiative (OAI).

- The advanced phase has now been reached with the evolution of sophisticated systems that provide advanced capabilities, such as deep links to raw data, individual articles, as well as full text core journals collections integrated into one complete system.

Although the benefits of electronic communication are obvious, there are also inherent problems that attend on this mode of communication. Allen, as far back as 1991, expressed the caveat that the "immediate benefits of new media often halo the opinion of the users of information, causing the potential hazards of the new technology to be overlooked or ignored" (Allen, 1991: 34). Hallmark (2004) suggests that discovery of useful articles through serendipity has decreased considerably and the chemists and geologists she surveyed expressed concern over the quality of journals and the possibility that the ease of electronic publication may result in the field being flooded with too many publications, which further exacerbates the information overload. Mahé (2004) again refers to the fact that many specialized journals are not as yet, and may never be, available in electronic format; referencing and citation practices are often irregular and confusing; and searching and retrieval can be impeded by the inflexibility of hypertext links and predefined files. Hallmark (2003) found in her study of atmospheric scientists that many of the respondents were dissatisfied with the Internet because of cost factors, slow access to certain data, incompatible data formats and media, and the lack of metadata.

An area of particular concern that has frequently been mentioned is whether outdated electronic media would be readable in future if information technology sustains its rapid expansion and development. Mahé (2004) voices particular concern about the general availability of journal back-files in the electronic environment, the slow access to some back-files, and whether publishers will maintain such back-files in perpetuity. According to Bonthron et al. (2003) technical problems can cause serious barriers to the use of electronic media and they found, for example, that the users they had investigated disliked reading from a screen.

There is the further real danger that the expansion in use of electronic communication media will erode the fundamental principles on which scientific communication is based. As electronic media continue to overlap and replace traditional forms of communication, there may be a marked reduction in permanent forms of documentation and the potential created for destroying important archival records required by future researchers. The structure of science depends to a large extent on the production of permanent records that reflect scientific endeavour which in turn underpin its cumulative base, its peer review system and its reward system. It is thus imperative that for electronic media to effectively replace print-based media and maintain their role in the scientific communication process, they adhere to the same scholarly control measures such as peer review for quality assurance and academic recognition; international availability; preservation for archival collections; inclusion in bibliographic services; and consistent convenient access.

A further area of concern is that scientific communication will become less visible to the general public as more use is made of electronic communication networks. These networks often represent a closed environment with access granted only to privileged members and this in fact negates the argument that they have the potential to broaden the participative base of interpersonal communication. When electronic discussion lists first emerged it was anticipated that they would facilitate new links among scientists, discussion and knowledge sharing, and extend the participatory base of interpersonal communication. Talja et al. (2004) are, however, of the opinion that very few of these expectations have come to fruition. In a similar way it was originally thought that electronic conferences would have many benefits and pave the way to increased worldwide participation. It was soon seen, however, that although electronic conferences have, on the one hand, made conference participation more accessible, they have, on the other hand, removed personal interaction, one of the most important benefits of conference attendance. A further drawback is that as the proceedings of such conferences are generally not published, non-participants cannot access the published record of the proceedings and no permanent archival record is preserved for future use (Allen, 1991: 37).

It is thus clear from the above discussion that while there is growing evidence that information technology is impacting on the communication process in science, this is occurring at varying levels of intensity and with varying benefits that

accrue. While it is beyond dispute that scientific communication is undergoing a transformation, with changes ranging from the effect on interpersonal communication between scientists to new publishing models, not all technological innovations have necessarily produced positive results and assisted the communication process. Factors such as access and other technical problems have impacted on the real potential of the new medium. Other, and probably even more important, inhibitors are the human and organizational behavioural factors that relate to acceptance of technological innovations. The value systems, reward structures and day-to-day work habits of scientists all have an influence on their willingness to accept and integrate new developments as part of their information communication behaviour. Such value systems and reward structures are also deeply embedded in the organizational cultures of individual disciplines, professional associations, work environments, etc. and it is generally accepted that change at the organizational level is far slower than at the individual level.

The Empirical Study

The empirical study that investigated the factors that impact on the information communication process was based on a triangulated research design. Both qualitative and quantitative approaches were integrated into a small-scale but detailed survey of scientists in the field of crystallography in South Africa. The decision to select this research community was based on the fact that this bounded group of scientists manifested the requisite variety of attributes required for such a study. These ranged from the various ways that they applied crystallography (from the basic study of the field, to its utilization as an analytical tool in a number of areas of science, to its application in applied science and technology) to their variation in work environments, i.e. universities, research institutes, and R&D facilities in industry.

The explosive growth in electronic media, communication technologies and other environmental factors prompted the researcher to adopt a longitudinal research design. Data was thus collected in 1990/1 and again in 2001/2 to establish trends and changes in communication patterns over the designated time span. The International Union of Crystallography's *World Directory of Crystallographers* (1986; 1997) was selected as the appropriate sampling frame from which to select the study sample. The 80 crystallographers that were found under the South African entry (1986) at the start of the longitudinal study were considered to provide a sufficiently small population to study the entire group in depth, but also large enough to allow significant investigation of the various factors that could influence information communication behaviour. The entire population of crystallographers (78) was again re-examined during 2001/2.

A multi-method data-collecting approach was adopted and a series of focus group interviews, personal interviews, telephone interviews and e-mail questionnaires were used to collect data in both studies. As both qualitative and quantitative data had been collected, it was decided that the data analysis should be based on an integration of inductive and deductive logical principles. All responses, both qualitative and quantitative, were initially captured using dBASE™ database management software and Microsoft's Excel spreadsheet software. The quantitative data was then manipulated by means of the STATISTICA software programme. The constant comparative method was used to analyse the qualitative data.

Findings of the Study

Impact of Electronic Modes of Communication in General

When the respondents were asked in 1990/1 to discuss the role and impact of electronic media and communication networks on the information communication process it was found that the respondents at that time had minimal interaction with such media and networks. The limited interaction that did take place was restricted to searching electronic bibliographic databases by means of vendor services and an intermediary; being the recipients of electronic SDI output; referring to the CD-ROM version of the Cambridge Crystallographic database for structural data; and the hitherto infrequent usage of communication networks such as BIDNET that were available in South Africa at the time.

The respondents were again queried in 2001/02 on their interaction with the electronic environment. From the responses received and comments made during the interviews it is clear that a marked shift

in the use of electronic modes of communication had occurred in the intervening period between the two studies and that the electronic environment has had a considerable effect on the communication process. The following comments recorded during the interviews clearly express the respondents' views on this topic:

> E-mail and Internet have had a fundamentally positive impact on our possibilities to communicate and co-operate with colleagues all over the world very rapidly. Research projects can be organized without any personal contact and results/questions may be discussed almost instantly and at very low cost. Listservs and newsgroups are available for virtually all topics. At the same time, most necessary information, can be obtained through the Internet. The research world has become a much more close-knit world.

> Most of our communication at work, especially to other local and international universities is done via e-mail. Apart from interpersonal communication, research information is communicated and shared by e-mail and the WWW. It has most definitely facilitated group associations, collaborative research, and the establishment of 'communities of practice'. In our research group alone we've established several overseas contacts by using the electronic communication media, probably as a result of the ease and speed of communication.

> Our department is spread out over 3 buildings making face-to-face communication difficult. E-mail is a far more effective method of getting information to a large number of people than a memo, and much quicker than making 20 phone calls. I find e-mail easier than making a phone call as one can clearly express exactly what one wants to know or say since one has time to go over the message. I do all my overseas communication by e-mail and it has assisted with the development of collaborations.

> Electronic media have impacted positively on the communication at work and it is the only way of communicating with scientists in Africa and is most probably going to save scientific research in Africa in the long run.

The respondents were further requested to specifically comment on, and rate the use and impact made of electronic modes on the communication of information in their immediate work environment, elsewhere in South Africa and finally worldwide. They were also asked to indicate what the effect has been on interpersonal interaction with colleagues and other experts, e.g. had it facilitated or possibly inhibited group associations, collaborative research, etc. A rating scale of 10 [used very frequently/very highly rated] to 0 [not used/of no value] was applied and the aggregate ratings obtained from the study population (2001/2 data) are outlined in Figure 1.

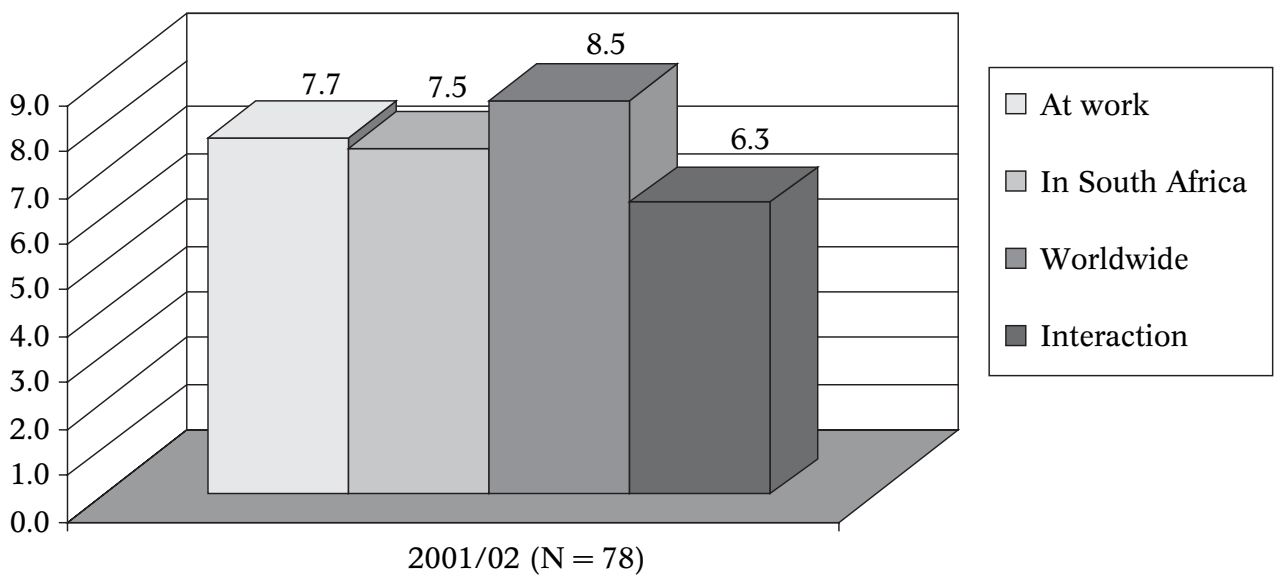

Figure 1. Impact of electronic media on information communication.

It is clear that the respondents in all instances were of the opinion that electronic media had made a positive impact, albeit in varying intensity. The highest rated impact was for worldwide information communication (8.5), while the use of electronic media for interpersonal communication attracted the lowest ratings (6.3). The reason for the former rating relates to the ease and relative low cost of using electronic media and systems to access information from anywhere in the world, while the latter lower rating is in line with the general preference for face-to-face interpersonal communication that was expressed during the interviews. The following are extracts from the comments made in this regard:

> I still prefer face-to-face communication as it is still the most effective method to communicate ideas and it is important for motivational purposes.
>
> The ideal is face-to-face communication, followed by telephone and e-mail, which are on a par to me although e-mail is better for information exchange.
>
> Face-to-face communication is always preferable, but e-mail communication is fast and has virtually become the norm, particularly if I need to reach a large group of people.
>
> It is not always possible to interact face-to-face and virtual contact is a vital form of staying in touch.

The data was further analysed by cross-tabulating the impact values of electronic media with the population sub-categories as independent variables and applying analysis of variance (ANOVA) methods to test for significant differences. The significant differences that were obtained for categorization according to work environment are outlined in Table 1.

The university and research institute respondents indicated a far greater impact within their immediate work situation than did the industry respondents, while the university respondents again returned higher ratings for the impact on worldwide information communication and interpersonal interaction than both the industry and research institute respondents. It would thus appear that the greatest positive impact of electronic media was observed by the university respondents and that the industry respondents were the least influenced.

Information Searching and the Use and Value of Various Electronic Information Communication Channels

The 2001/02 respondents were further probed on the electronic information channels they most frequently used when searching for work-related information and then asked to rate the value of each channel on a rating scale of 10 (used very frequently/very highly rated) to 0 (not used/of no value). The electronic channels that were mentioned fell into one of the following categories:

- the Internet and the World Wide Web (WWW)
- external databases (e.g. CD-ROMs) that their organizations subscribed to
- internally produced databases that were available on their Intranets
- other sources which included *subject gateways, portals*, etc.

The aggregated use frequencies and value ratings for each of the above categories are depicted in Figure 2. The most frequently used electronic channels for information-seeking purposes were the Internet/WWW followed by external databases subscribed to, internally produced databases and other channels. It is interesting that the value ratings did not mirror the usage ratings and

Means	**Impact on information communication**			**Effect on inter-personal communication**	***N***
Work Environment	**At work**	**In South Africa**	**Worldwide**		
Industry	6.0	7.2	7.6	5.0	11
Research Inst.	7.8	7.1	7.6	5.6	17
University	8.0	7.7	9.0	6.8	50

Table 1. Impact of electronic media on information communication by work environment.
Note: 2001/201 Work EN; LS Means Wilks Iambda = 0.77755, F(8, 144) = 2.4131, p = 0.01786.

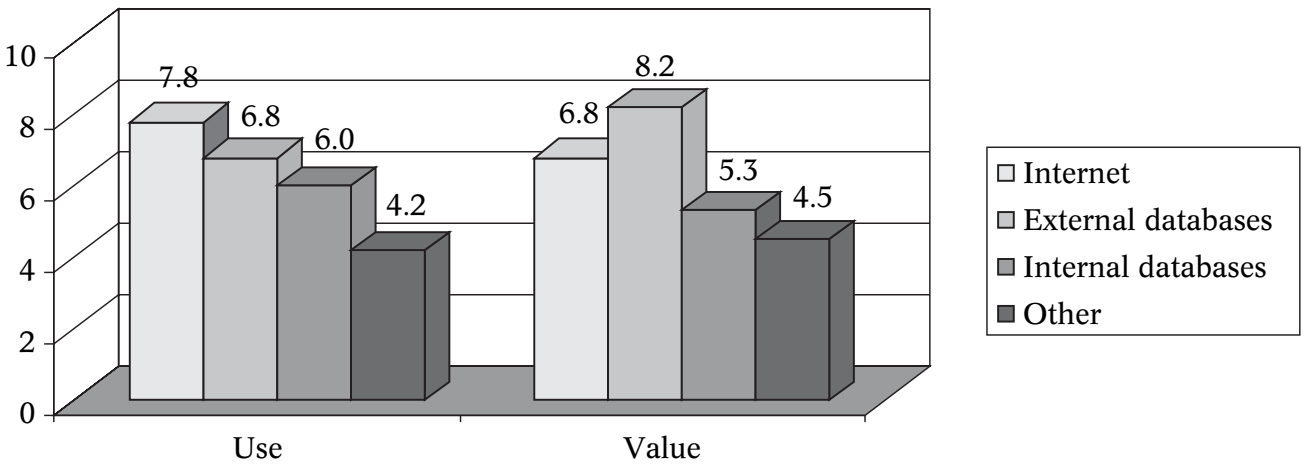

Figure 2. Rated use and value of electronic information channels.

externally produced databases such as CD-ROMs subscribed to, far outranked the Internet, the channel used most frequently. This substantiates the view frequently expressed that the Internet, although easy to use, does not always yield high quality information. A further surprising outcome was the fairly low usage and value ratings awarded to the databases that their own organizations produced.

The following pertinent comments were recorded relating to the varying views the respondents had on the value of electronic media when searching for information:

> The Internet is often useful when starting a new research project to get oriented while subject gateways, portals are more useful to get more detailed information afterwards. CD-ROM data-bases are good to conduct a literature search or to obtain lateral information concerning a specific subject or publications of an author of interest. This I follow up by contacting other workers in the field and as a last resort going through the journals manually.

> One is often swamped by useless information on the INTERNET and using it may be quite time-consuming. Subject gateways/portals are very useful and CD-ROM databases are absolutely essential.

> CD-ROMs are important when embarking on an initial search for information, following this I find further information by tracing citations/references in articles that I have read and found pertinent. The Internet and e-journals are particularly useful to keep-up-to-date in my field. I usually start with an Internet search, followed by a journal search and then I use links obtained from these to search further. This may include other media such as CD ROMS, establishing personal contact etc.

> Electronic databases are often incomplete or fail due to inadequate search engines and search strategies. I find the most useful literature by searching for recent review articles in a specific field, finding out who does the most relevant work in that area, searching for their papers in library databases and then using these, and references cited in them to expand the information database. I also use a current electronic database, updated every 6 months, that we subscribe to as an important starting point when looking for something specific.

Significant differences were found for categorization according to the work environment when the data was cross-tabulated with the population sub-categories as independent variables. These results are outlined in Table 2.

The industry respondents clearly not only used the Internet infrequently, but also assigned low value ratings to this channel. This is not a surprising outcome given the comments made by the industry respondents with regard to the security restrictions that many of them operate under and which prevent them from freely using the Internet. They gave the highest value and use ratings to internally produced databases and, although they used external databases only moderately, they assigned very high value ratings to this channel.

Work environment	Internet		External databases		Internal databases		Other		*N*
	Use	Value	Use	Value	Use	Value	Use	Value	
Industry	3.6	3.7	5.5	9.1	9.1	7.3	1.8	1.8	11
Research	7.1	4.9	2.4	5.6	7.9	6.8	2.9	4.1	17
Iniversity	8.9	8.1	8.6	8.9	4.7	4.3	5.1	5.2	50

Table 2. Electronic information channel use and value by work environment (significant results).
Note: 2001/2 Work Environment; LS Means Wilks' Iambda = 0.29373, F(16, 136) = 7.1835, p = 0.00000.

The research institute respondents also showed fairly marked differences between the use and value ratings they awarded to electronic information channels. Although they used the Internet frequently, they also awarded low value ratings to this channel, and while indicating a very low use of external electronic databases they awarded fairly good value ratings to them. The use and value ratings they awarded to internally produced databases were high, a clear indication of the quality of such internally produced databases (this of course applies equally to industry).

The university respondents were the only work environment category that assigned almost equal use and value ratings to the electronic information channels they used. The Internet and external databases were very heavily used by them and rated highly. It is not clear why this result was obtained, given the predominantly negative comments on the value of information found on the Internet. The low use and value ratings awarded to internally produced databases were not surprising as this work environment generally had less proactive library services than the other two. They were also the only work environment category to award moderate use and value ratings to 'other' channels such as subject gateways and portals.

The Use and Value of Electronic Journals

A number of studies have indicated that journals are considered to be the most valued information communication channel by scientists in general and the researcher thus wished to establish to what extent electronic journals were being used; what value was attributed to them as an information source and as a publication medium; and how they rated in comparison to print journals. The aggregate rated responses to these questions are outlined in Figures 3(a) and (b).

From the charts it is clear that although electronic journals were only used moderately, their information content was highly valued. They were further also not really used as a vehicle to publish research in. When compared to print journals only 3 percent of the respondents rated them higher than print journals while 67 percent rated print journals higher. From the comments made it would appear that the respondents were not that concerned about the mode of the communication channel, but were more concerned about availability and access. The slow speed of electronic access due to bandwidth problems is notorious in South Africa and the range of electronic journals in the respondents' fields of interest was fairly

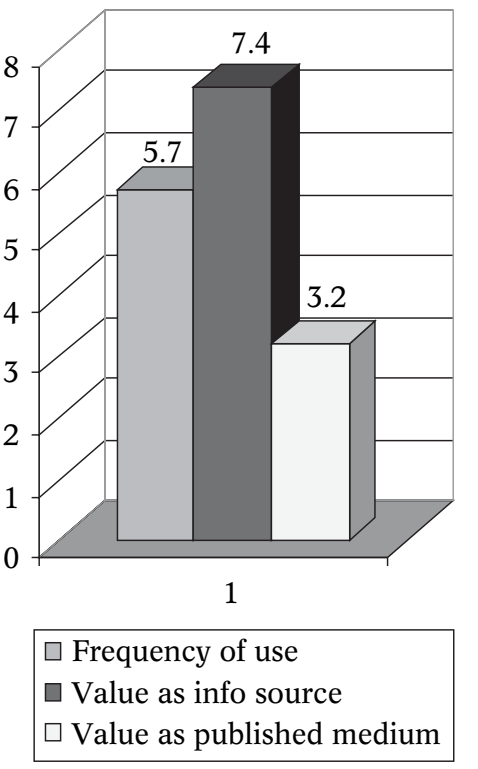

Figure 3(a). Electronic journals: use and value.

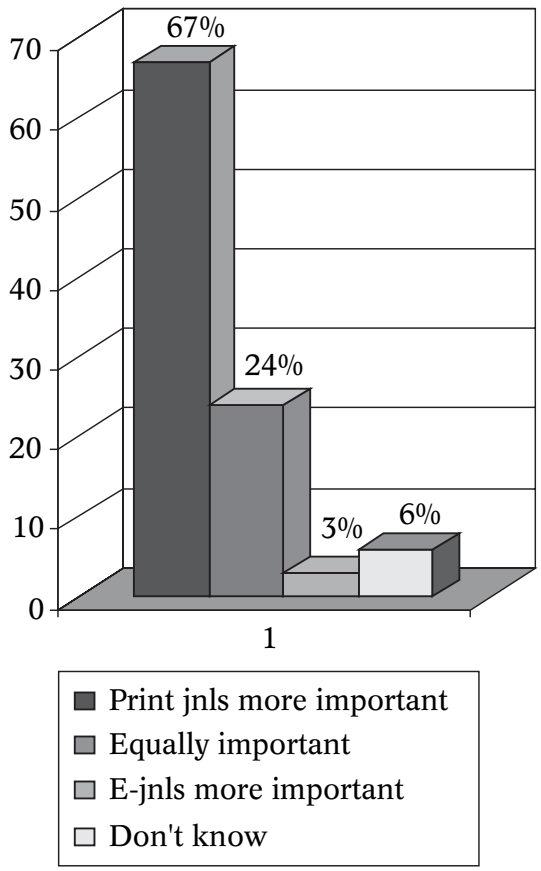

Figure 3(b). Electronic journals with print journals.

limited. A further concern that was expressed and which related particularly to publication aspects was that of the archiving problems that pertain to electronic formats. Respondents were also concerned that they might only reach a limited audience if they were to publish in the electronic mode.

The following extracts express a typical view of the respondents' opinions on this matter:

> In South Africa the use of e-journals is extremely difficult because of the slow network and limited number of subscriptions. I am also personally suspicious of electronic only journals because not convinced that their archiving policy is sufficiently firm to guarantee the reading of a paper in say 20 years time.
>
> I would be very happy if electronic journals were to replace printed journals. Journal issues contain only a few articles of interest and with e-journals only those articles of interest could be printed, avoiding a lot of wastage. Also, electronic journals are available to everyone immediately. It is a pity that electronic journals are not more generally available in South Africa – this would give researchers in this country a real competitive edge.
>
> Printed media are indispensable at present for archival information and overview reading.
>
> Most of the journals that I prefer to publish in are still only available in print format. It is not the electronic format that is the worry, it is whether the journal is rated and reaches a wide audience and I am not yet convinced that electronic journals do that.

These responses of course reflect the position at the time of the study (2001/2) and it can be argued that opinions might have changed in the interim period as was observed by Tenopir and co-workers (2003) when they differentiated between the evolving and advanced stages of electronic media adoption (cf. also Hallmark, 2003, 2004)

The significant results that were obtained when the data were cross-tabulated according to work environment are shown in Table 3(a) and (b).

The respondents in industry clearly made the least use of electronic journals, rated their value the lowest, hardly rated them as a publication vehicle

Means / **Work Environment**	**Frequency of use**	**Information value**	**Publication value**	***N***
Industry	4.1	3.6	0.9	11
Research Institutes	5.4	10.0	1.8	17
Universities	6.2	7.3	4.2	50

Table 3(a). E-journals: use and value by work environment (significant results).
Note: LS Means Wilks Iambda = 0.43465, F(6, 146) = 12.576, p = 0.00000.

Work environment	Print more important	Equal importance	E-journals more important	Don't know	Total	*N*
Industry	36	18	0	45	100	11
Research Institutes	100	0	0	0	100	17
Universities	62	34	4	0	100	50
Totals	67	24	3	6	100	78

Table 3(b). E-journals compared with print journals: by work environment.
Note: Pearson Chi-square: 42.30761; df = 6; p = 0.00000; phi = 0.7364817.

and were ambivalent as to whether they preferred print or electronic journals. The research institute respondents, although awarding the highest possible value rating to the information content of electronic journals, did not use this journal mode more than moderately, awarded very low publication value ratings to it, and held the view that print journals are more important than electronic journals. The university respondents made the most frequent use of electronic journals, awarded the highest rating to information content, and although rating their value as a publication vehicle fairly low, still gave the highest rating for this aspect of all three work environments.

Conference Mode Preference

In 1990/1 electronic modes were not generally utilized for conference presentations, but in the intervening period the situation changed considerably and the crystallographers were thus queried in 2001/2 on whether they engaged in this mode of conference participation. The overwhelming negative response (only 17 percent engaged with electronic conferences) was fairly surprising and on being explicitly asked to indicate their preference between traditional and electronic modes, the overwhelming majority indicated a preference for traditional conferences (94 percent).

The reason given for this very clear disinclination to engage in electronic conferences was that although the electronic format does overcome all travel-related problems and costs it does not provide the opportunity for face-to-face interpersonal interaction, and this in their view is the most important aspect of conference attendance. The comments below clearly encapsulate these views:

> Conferences serve a totally different function than other communication media such as e-mail, they are about networking, chance meetings and general impressions.

> I have an overwhelming preference for the personal attendance of conferences; it is very suited to research development and the testing of new ideas.

> Electronic communication might eventually replace the need for large conferences, as costs are high and travelling is time consuming, but I find the main use of a conference is to meet on a one-to-one level.

> Electronic conferences are not used by us, mostly due to bandwidth problems. I think though that I would always prefer personal attendance which enables personal contact.

Conclusion

With the rapid expansion of the use of electronic communication modes the question arose to what extent this has affected information communication behaviour. It was seen that conflicting views were expressed in the literature and while some authors claim its impact is considerable, yet others are of the opinion that science communities view electronic media as merely another mode in which information is communicated. What is certainly undisputed is that electronic modes and networks have been absorbed into the science communication

process; they are used extensively; and scientists apply then in a myriad of ways.

In 1990/1 there was no evidence that electronic media had had any significant impact on the community of crystallographers. The limited interaction that did take place was restricted to delegated online searching and SDI subscriptions (which were very costly); using the electronic versions of the CCU and JCPD databases; and the hitherto infrequent usage of communication networks. There was, however, a complete reversal of the situation in 2001/2 and it was seen that the use and application of electronic media, networks and systems had increased exponentially and become common practice. These findings are very much in line with those of Tenopir et al. (2003) and Hallmark (2003, 2004).

The general consensus that surfaced from the second study was that electronic media have had a very positive impact and that e-mail, in particular, is a vital tool in communication. It has helped to overcome South Africa's geographical isolation and extended the scope of interpersonal communication and collaboration outside the immediate work environment. It was specifically noted that scientific data and a vast variety of media (text, graphics, audio/video, etc.) can easily be exchanged between researchers, research results can more readily be compared and different viewpoints easily discussed. A further benefit is that a wide array of information in electronic format can easily be retrieved.

It was, however, also evident that face-to-face communication was still by far the preferred means of communication. It is clearly seen as the *richest* form of communication that produces the most rewarding environment in which to communicate ideas and motivate others. The usefulness and value of electronic modes of communication, however, increased the greater the distance factor and the more explicit and structured was the information exchange.

The most frequently used electronic channels for information-seeking purposes were the Internet followed by CD-ROM databases subscribed to, internally produced databases and then, at a far lower rating, other channels such as subject gateways and portals. It is interesting that the value ratings did not mirror the usage ratings and CD-ROM databases were valued far more highly than the Internet, the channel used most frequently. Internal databases produced by their own organizations, surprisingly, attracted fairly low usage and value ratings. Comments made during the interviews indicated that while the Internet is useful when starting a new research project, subject gateways and portals are more useful to get more detailed information, and CD-ROM databases are invaluable when conducting a detailed literature search or to obtain specific information to solve a problem. According to many of the respondents, the greatest drawback of the Internet is that many searches produce totally irrelevant or low value information.

The crystallographers, although they used electronic journals only moderately, both as a carrier of information and as a publication vehicle, were generally very satisfied with the quality of the information content. From the comments made it would appear that the respondents were not that concerned about the mode of the journal, but were resolute about availability, access, quality considerations, rating levels and whether the journal reaches a wide audience. They were not yet convinced that electronic journals achieve all of the above and were particularly concerned about archiving problems in the electronic environment and the effect this has on maintaining a permanent record of scientific research (cf. comments made above). A specific problem that pertained to South Africa was lack of bandwidth and the impact this has on speed of access. Printed journals were thus still preferred and considered to be indispensable at the time of the 2001/2 study (again a result similar to that of Tenopir, et al. and Hallmark).

As far as electronic conferences were concerned, it was very clearly stated (and also so rated) that they did not favour this mode of participation. The most important value of conference attendance was the forum that it provides to interact with other scientists, to conduct informal corridor discussions and serendipitous information gathering. Although the electronic format does overcome all travel-related problems, the advantages of the medium, in the respondents' view, do not compensate for lack of human interaction.

When categorized according to work environment, the data showed interesting variations. With regard to the overall impact of electronic modes of communication it was seen that the greatest positive impact was recorded by the university respondents, while the industry respondents were the least influenced. The research institute

respondents took a stance somewhat between the other two categories. This applied to communication in the immediate work environment, the external environment (both in South Africa and abroad) as well as interpersonal communication. This pattern of differentiation also pertained to the use and value attributed to electronic media as sources of information and as publication vehicles. The university respondents generally used this medium the most frequently and gave it the highest ratings, the industry respondents awarded the lowest ratings, while the research institutes fell somewhere between the other two categories (this specifically applied to the ratings given to the Internet, electronic journals, and external databases). The only exceptions were for internally produced databases, where the industry and research institute respondents awarded far higher ratings than their university counterparts.

It would thus appear that the crystallographers' immediate work setting was an important factor that influenced their acceptance and use of electronic formats and systems in the information communication process. Each of the three work environments clearly imposed varying inhibitors and stimulants to these interactions, primary of which are the confidentiality restrictions imposed by industry and the university respondents' need to transfer their research outputs into the public domain.

From the above it is clear that the most obvious benefits of electronic communication media and systems are that they eliminate the distance factor and that they provide a channel that can be accessed instantly all over the world (if the infrastructure is available). They thus facilitate international collaboration and the exchange of information. While the benefits of electronic modes of communication are indubitable, there are, however, some inherent problems that attend to this mode. A major area of concern is that electronic formats dehumanize interpersonal communication and that the *richness* of face-to-face interaction is diluted. Concern was further expressed that electronic modes and networks are not sufficiently inclusive and that scientific communication may become less visible and only accessible to privileged members of closed communities. A further factor is that the rapid evolution of information technologies could render current and past electronic media inaccessible and this could affect the permanent archiving of scientific information. The structure of science depends on its permanent body of knowledge that records all scientific endeavour and which underpins its cumulative base, its peer review system and its reward system.

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Intellectual Property, Libraries and Access to Information in Zimbabwe

Kathy Matsika

Kathy Matsika is University Librarian at the National University of Science and Technology,(NUST) Bulawayo, Zimbabwe. Her current interests include electronic information resources, Intellectual Property, Open Access and improving access to information for disadvantaged communities. She has been with NUST since 1995. She formerly worked at the University of Zimbabwe and the University of Cape Town Libraries in South Africa. From 2001 to 2003, she was the Chairperson of the Zimbabwe University Libraries Consortium (ZULC). She is the current Country Coordinator- Electronic Information for Libraries (eIFL) and eIFL –Intellectual Property (eIFL-IP). E-mail: kmatsika@nust.ac.zw

Abstract

This paper will address some of the issues affecting access to information and knowledge in Zimbabwe. It will look at the major challenges posed by finances, technology, infrastructure, the Intellectual Property Laws and the Copyright Act, in particular. It will discuss the role of ZIMCOPY, the Reproduction Rights Organization of Zimbabwe, in the information chain in Zimbabwe. It will pay particular attention to what Zimbabwe has done in trying to harness the potential of information and communication technologies (ICTs) in accessing information; the availability of the Internet and constraints of bandwidth. Zimbabwe has more than 70 percent of its population living in the rural areas. The paper will show the attempts that have been made to provide access to information through libraries and similar information centers, in both urban and rural communities of Zimbabwe. It will also refer to the current economic challenges facing Zimbabweans, how this has made information a luxury when set against the daily problems of food provision and survival. Can improved access to information provide answers to some of the immediate problems facing the Zimbabwean society?

Keywords: copyright; intellectual property; libraries; open access; access to information; information and communication technology; Zimbabwe

Introduction

Zimbabwe was in 2006 ranked number 151 in the United Nations Human Development Index (HDI) Rankings (United Nations Development Programme, 2006, p. 285). Like other developing countries in the African region, Zimbabwe is struggling with everyday challenges of poverty, hunger, droughts, floods, scourges of disease and basic survival in a hostile economic environment. A critical analysis of the economy clearly shows the vast extent of economic woes, how they permeate through every facet of the economy and all levels of society. The problems have been compounded by the hyperinflationary conditions prevailing in the country. With inflation ranked highest in the world at 1,600 percent in February 2007, even the wealthiest library in Zimbabwe cannot afford to pay for all the resources necessary to satisfy user requirements. Historically, libraries have never been adequately funded in Zimbabwe. Most libraries in the public sector do not have any reasonable allocations for purchasing books and paying for journal subscriptions, let alone pay for licenses to give them access to electronic resources. Fay Chung, the Minister of Education and Culture, in a keynote address to the Zimbabwe Library Association, observed that lack of resources was the biggest challenge facing Zimbabwe's information sector:

> . . . one of the major problems being that of the acquisition of library materials for your institutions. The foreign currency allocated for the purchase of educational materials is not enough to cover your needs (Chung, 1991, p. 3).

 IFLA Journal 33(2): 160–167.
ISSN: 0340-0352. DOI: 10.1177/0340035207080556

Below is a simple example to demonstrate some of the major challenges facing libraries. A quick survey of prices of books in February 2007 revealed that the cost of books had risen sharply in the past six months. Prices ranged from ZWD 500,000 for books in commerce to well over ZWD 1,500,000 for medical and science textbooks for university students. (USD 1.00 = ZWD 250.00).

This paper seeks to provide an analysis of the state of information services in Zimbabwe, the challenges that libraries are facing, the environment in which they are operating, and the crucial role they are playing in providing access to information in a hostile economic environment. The paper will assess the intellectual property and copyright legal framework in Zimbabwe, focusing on the impact that the Copyright Act of 1967 and its successor, the Copyright and Neighbouring Rights Act of 2000, have had on the availability of and access to information. Libraries are key access points for information and Zimbabwean information professionals are doing their best to improve and increase access to freely available electronic information and improve their role in advocacy for open access and freer access for all levels of society.

Background

At independence in 1980, the Government of Zimbabwe inherited a lot of social problems. There were high expectations that the new government would correct all the problems left behind by the colonial power. As expected, the government embarked on several development projects such as, the Growth and Equity Strategy of 1981 and the Economic Structural Adjustment Program (ESAP) 1986–1990. Recently Zimbabwe adopted the United Nations' Millennium Development Goals (MDGs), emphasizing development of universal primary education, eradication of poverty, fighting HIV/AIDS and developing a global partnership for development, among other goals. The common feature of all these programs was the importance placed on developing the education system.

Government realized that education was the cornerstone of social and economic development and that access to learning materials was essential for the survival and success of all their initiatives introduced after independence. Before independence, library services existed mainly for the white population, while services for the blacks, where they existed, left much to be desired. In the school system, mainly the former whites-only schools had advanced library facilities, some with state of the art information and communication (ICT) facilities. (IFLA, 1988).

To rectify these imbalances, in 1981, government appointed William Alison, a library consultant, to examine the state of libraries in Zimbabwe. In his findings, he noted that 90 percent of the population lived in rural areas and recommended that priority be given to developing library services in the rural areas and disadvantaged communities (Alison, 1981).

In 1982, the national government commissioned the Swedish Library Commission, headed by Laloo, to do another feasibility study. Their brief was

> To consider the present state of library services and their prospective development and financing with a regard to cultural, social, economic and technical development needs of Zimbabwe (Laloo, Jonsson and Bergstrom, 1982).

The move to seek the advice of Swedish librarians had some significance. Scandinavian countries are well known for their well developed public library services, particularly their cultural centers, which incorporate libraries. The report recommended the establishment of a Documentation Center to be included in a National Headquarters and the establishment of a Culture House in each of the 55 rural districts of Zimbabwe. This recommendation was received with enthusiasm in the 1980s. Culture Houses were expected to serve as focal points for community, social and cultural activities, with a community hall, a museum, arts and crafts workshop and a library. This led to the National Libraries and Documentation Services Act (NLDS) of 1985, setting the scene for the establishment of a national network that would service both urban and rural communities.

According to the NLDS Act (Chapter 311), the main functions of the Service were to be

1. To promote the widespread enjoyment in Zimbabwe of publications of an educational, scientific, cultural, recreational or sporting value;
2. To ensure, maintain and develop a high standard of library facilities;

3. To operate a documentation facility and an inter-library loan facility; and
4. To train librarians and to ensure, maintain, coordinate and develop a high standard of librarianship.

Unfortunately, the 'grand plan' of the 1980s for library services failed to go beyond the one Culture House at Murehwa Centre, which was opened with loud fanfares by the Head of State in 1984. At present, the NLDS has been reduced to a facility mainly for the urban areas, except in Matebeleland where it has assisted in the establishment of rural and community libraries. It supervises and coordinates Ministry libraries, Special Research Station Libraries and State College Libraries.

The Zimbabwe University Libraries Consortium (ZULC) has tried to resuscitate the NLDS. An organization formed in 2001 by both private and state university libraries to enable resource sharing and collaboration among universities, ZULC wanted to establish a partnership with NLDS. It was established that NLDS had been sidelined by its parent body, the Ministry of Education, Sports and Culture, and had no resources to run a national service. Funds made available were barely enough to keep the Office of the Director running (Zimbabwe University Libraries Consortium, 2005).

Importance of Information for National Development

UNESCO has categorized information as a basic right after food, clothes and shelter. Its Information for All Programme seeks to narrow the gap between the information rich and information poor (UNESCO, 2007). It has provided some guidelines on how communities can use information and communication technologies (ICTs) to make information accessible to all levels of the community. Libraries in Zimbabwe are key partners in this program. In national development programs, their central role has been to act as access centers to global information resources in both print and electronic formats. With the advent of modern information and communication technologies, libraries have managed to provide access points like computers, Internet and ICT-based facilities, perhaps not as widely as the librarians would want, but they made a difference and they have brought innovative methods that have enabled effective access to a variety of information sources.

The World Summit on the Information Society (WSIS) highlighted the underlying assumption that access to information leads to sustainable development (World Summit on the Information Society, 2003). Willard and Halder (2003), in a report to the International Institute for Sustainable Development, identified analytical frameworks that support the notion that there are definitive links between information and sustainable development. This has been amply demonstrated in one of the remote areas of Zimbabwe. In rural Nkayi in the Matebeleland North region of Zimbabwe, a Rural Libraries and Resources Development Programme (RLRDP) has been credited with raising literacy levels to 86 percent through their network of rural and community libraries (Mamvoto and Mutasa, 2004).

Current economic challenges in Zimbabwe have worsened the plight of those affected by poverty and disease. New challenges for the information sector include providing relevant information to needy communities such as newly resettled rural farmers. The Land Reform Program since 2000 resettled peasant farmers in areas where there was no infrastructure like road networks, schools, clinics or telephones services. Appropriate information to this group would enable them to settle into productive farming which in turn would get them out of the cycle of poverty. They also urgently require critical information on the weather, climate changes, crop production, animal husbandry, for adult literacy programmes, for formal education and health education. The fight against HIV/AIDS in these rural and disadvantaged communities can only be won if relevant, up-to-date information is disseminated systematically.

Rural and Community Libraries as Access Points

After the collapse of the Culture Houses Project in the 1980s, non-governmental organizations, School Development Committees, Parent-Teacher Associations, Rural Councils, Local Government Councils and other organizations have driven the development of library and information facilities in disadvantaged communities of the country. Interested organizations include the Zimbabwe International Book Fair (ZIBF), which

annually sponsors book purchasing schemes for rural libraries, the Zimbabwe Book Development Council (ZBDC) which promotes the reading culture, and the Rural Libraries and Resources Development Program (RLRDP), a community based not-for-profit, non-governmental organization with aims to reach remote rural communities, to provide free of charge relevant and appropriate print and non-print material.

According to the Secretary General of RLRDP, Obadiah T. Moyo, the organization, which was established in 1990, has assisted in the establishment of

> 300 rural school community libraries, ten Donkey Drawn Mobile Libraries and 130 book delivery bicycles. They provide an extension outreach service in areas where proper roads are not available. About 105 rural libraries have access to computers (Moyo, 1995).

RLRDP works through partnership with rural communities when setting up Resource Centres. Almost all RLRDP member libraries operate from either a primary or secondary school and they also serve as community libraries, catering for out of school youths and communities at large.

With the assistance of Book Aid International, a British charitable organization that supplies books to developing countries, and the Food and Agriculture Organization of the United Nations (FAO), RLRDP has managed to expand its collections and services on gender and youth, as well as HIV/AIDS Resource Centers. The link with FAO enables RLRDP to receive all FAO publications free of charge.

Through the use of donkey-drawn mobile libraries, two of them with Internet facilities powered by solar panels, RLRDP has managed to penetrate nearly every corner of this vast district and provided information for formal education, literacy programs, computer literacy skills, support information for projects such as the National AIDS Projects, gender and youth projects. The solar powered carts, with television and radio receiver sets which facilitate the playing of educational videotapes, audiotapes and compact discs, have received worldwide acknowledgement as an innovative way to facilitate access to information in otherwise underdeveloped areas.

In this regard, RLRDP developed a model that could be replicated in most rural areas if enough resources were made available. It is very clear that communities in the covered areas have benefited immensely. They have been given opportunities and channels to express their various information needs. They have been assisted in setting up youth and gender fora as well as provided with facilities to train and develop expertise within their communities.

Protection of Intellectual Property (IP)

According to the World Intellectual Property Organization (WIPO), intellectual property is divided into two categories, namely industrial property and copyright. Industrial property includes patents of inventions, trademarks, industrial designs and geographical indications, whilst copyright includes literary and artistic works such as novels, poems, plays and computer programs, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs. The international community developed treaties that ensured protection for IP such as the Paris Convention for the protection of Industrial Property 1883, the Berne Convention for the protection of literary works (1886) and the Trade Related Aspects of Intellectual Property (TRIPS) introduced in 1994.

Intellectual Property in Zimbabwe

Protection of intellectual property in Zimbabwe is mainly contained in the following Acts of Parliament: the Patents Act (Chapter 26: 03); the Trade Mark Act (Chapter 26: 04); the Industrial Designs Act (Chapter 26: 02); the Copyright and Neighboring Rights Act (Chapter 26: 08); Geographical Indications (Chapter 26: 06); and Integrated Circuit Layout Design (Chapter 26: 07). The day-to-day administration of these Acts is carried out by the Office of the Chief Registrar of Deeds and Companies and Controller of Patents, Trade Marks and Industrial Designs, answerable to the Ministry of Justice, Legal and Parliamentary Affairs.

Zimbabwe is a signatory to various international treaties. It is a member of the World Intellectual Property Organization and the African Regional Intellectual Property Organization, which is headquartered in Harare, Zimbabwe.

Copyright and Development in Zimbabwe

The Copyright Act (Zimbabwe, 1967) first came into operation in 1967. It was overtaken by technological developments of the 1970s when photocopiers, scanners, computers, audio and video recorders became the order of the day. It was repealed and replaced by the Copyright and Neighbouring Rights Act of 2000 (Zimbabwe, 2000), which was further amended in 2004 (Zimbabwe, 2004). The law protects various products of the mind and provides for the setting up of a collecting society. The law gives moral and economic rights to works authored by a citizen or a resident of Zimbabwe, work first published in Zimbabwe and work made under the direction of the State or an international organization based in Zimbabwe. The protection extends to authors, writers, musical works, audiovisual works, sound recordings, broadcasts, programme-carrying signals, published editions, collections of literary works, artistic works (drawings, photos, sculptures, buildings and structures), architectural works and literary works, including computer programs. According to the Act, the duration of these rights is for the life of the author plus 50 years after the death of the author.

Libraries and Challenges of Copyright in Zimbabwe

Copyright protection, as advocated in the international treaties, is strict and biased towards rights holders. The Copyright and Neighbouring Rights Amendment Act (Zimbabwe, 2004) focused exclusively on the interests of rights holders. It provided for the creation of a Collecting Society to facilitate the collection of royalties as detailed in Section 97 – 'Establishment, Constitution, Functions, Powers and Funds of the Copyright and Neighbouring Rights Collecting Society of Zimbabwe'. The listed functions of the Society include

a) To represent and defend the interests of its members in Zimbabwe and abroad;
b) To maintain a register of works, production and associations of authors and performers;
c) To grant any authorisation which is permitted to be given under this Act;
d) To collect any royalties from users of a work on behalf of any members entitled thereto;
e) To represent authors and performers in the negotiation and administration of licence schemes;
f) To negotiate the grant of licences as agent for the members.

Zimbabwe, as a developing country, requires more liberal laws appropriate to its developmental needs and laws that reflect the country's economic status. Strict copyright enforcement is, unfortunately, viewed as a barrier to access and exchange of information and information users tend to consider the restrictions on photocopying as depriving them of access to essential information. Ideally, Zimbabwe copyright law should try to reflect a balance between the rights of copyright owners and those of users of copyrighted material.

The biggest challenge facing libraries since the enactment of this Copyright and Neighbouring Rights Amendment Act (2004) has been the absence of the Collecting Society. The Act needed to be operationalized through a government instrument that would set up the Collecting Society. The government instrument was only published in December 2006 (Zimbabwe, 2006). The delay created a lot of confusion and mistrust between authors, librarians and users of information as nobody collected any dues for authors during that period. This Collecting Society was expected to facilitate clearance of copyright permission with rights holders.

According to Greenfield Chilongo, Chairman of the Reproduction Rights Organization of Zimbabwe (ZIMCOPY), the motive for the amendment stemmed from a belief that privately-controlled collecting societies like ZIMCOPY, in existence since the 1990s, may not be fair to some rights holders in their distribution of royalties. He further commented that

> On the other hand it is known that Parastatals are not the best medium to manage private rights. These private collecting societies are actually owned by rights holders so how can rights holders be unfair to themselves. Where there are disputes there is always room for arbitration. The Parastatal idea was encouraged by some musicians who themselves are not rights holders *per se* but just performers of other peoples' creations. The main creators being the composers. But as you know the line between composers and performers of music is very blurred.

> So in short, the 2004 amendment did not add value to the existing Act neither did it diminish the rights of non rights owners. It is more about who should manage the rights. It creates confusion as to who is the final supervising authority. While private collecting societies fall under the Copyright Office, the Parastatal Collecting Society is a law unto itself under direct control of the Minister. Even then it is not clear which Minister? The Minister responsible for administering the Copyright Act being the Minister of Justice or the Minister of Information or Education who is responsible for Artistic organizations (Chilongo, 2007).

ZIMCOPY and Access to Information

The Reproduction Rights Organization of Zimbabwe (ZIMCOPY) has been in existence since the 1990s. It has so far been inactive. According to their website, there is no record of them having collected any royalties before December 2006, and neither have they issued any licenses.

Based on this inaction, librarians in Zimbabwe have, over the years, queried the role of ZIMCOPY. Librarians viewed the organization with a lot of suspicion, especially over its claim for royalties on behalf of foreign authors whose books were widely used in academic libraries in Zimbabwe. There was no transparency and hence libraries were reluctant to work with the organization. As a result, it was viewed as an additional barrier which libraries had to deal with rather than a partner in the accessing and provision of information. It emphasized protection of rights without offering benefits that similar organizations worldwide offered to libraries in their locality, such as allowing libraries and their users to copy more than is permitted by statutory exceptions for a fee; easing the burden of rights clearance for libraries and addressing the increased complexity of rights clearance and providing libraries with indemnity from unintentional infringement in relation to the licensed works.

Dialogue on Access and Availability of Information

In an effort to clear the confusion on what was permitted and prohibited by the Copyright and Neighboring Rights Act (Zimbabwe, 2000) in Zimbabwe, academic libraries organized an international conference under the theme of 'Open Access to Information and Creating a Knowledge Society', in April 2006, in Harare. Sub-themes of the conference included open access, institutional repositories and online publishing as well as intellectual property. Presentations covered open access in Zimbabwe and internationally; the future of access to information; open and distance learning and access to information in Zimbabwe; intellectual property and copyright issues considered from both local and international perspectives.

The conference was an attempt to engage all stakeholders from policy-makers to academics and university administrators, educationists in the open and distance learning sector, researchers, librarians and civil society, in exploring the potential that open access offers to solve problems of access to information in Zimbabwe. It was meant to facilitate a dialogue on issues of national concern, such as intellectual property and copyright.

It was agreed that the Copyright and Neighboring Rights Act of 2000 directly affected library services and access to information; that librarians were important stakeholders in copyright and related rights issues and needed to be consulted on national copyright issues. The current Act needed to be updated to provide fair copyright provisions for educational purposes and cover library requirements; address issues of the digital environment and add provisions for the disabled. Furthermore, the Act needed to reflect and take full advantage of the legal 'limitations and exceptions' allowed in international intellectual property agreements such as the Berne Convention.

Access to Digital Resources and Institutional Repositories

ZULC has worked through various library and information associations and networks, such as the Zimbabwe Library Association (ZLA) and the Records, Archives and Information Management Association of Zimbabwe (RAIMAZ), to ensure that Zimbabwe embraces open access. According to Electronic Information for Libraries (eIFL):

> Open Access not only enables academics and scientists in developing and transitional countries to access the material which they

need to conduct their research but also provides a means by which they can more efficiently contribute their work to the global research community (Electronic Information for Libraries, 2007a).

Open access encourages the primary publication of peer-reviewed scientific and scholarly literature on the Internet. Because of the opportunities offered by open access and ICTs, international pressure on established publishing houses has led to some provision of free access to online journals. Zimbabwe has tried to take full advantage of this. Open access tends to be very appealing to developing countries like Zimbabwe where demand outstrips supply and poverty has wreaked havoc and made information a commodity priced beyond the reach of most of the community.

Since 2003, libraries in Zimbabwe have had access to digital resources provided with assistance from ZULC international partners, EIFL and the International Network for the Availability of Scientific Publications (INASP). Both EIFL and INASP have negotiated licences with publishers on behalf of developing countries and those countries in transition; they have also provided licensing and negotiations skills training and worked on strengthening capacities to manage and use electronic information. At present, most academic libraries in Zimbabwe are enjoying free access to journal articles made available through these arrangements.

Institutional Repositories

ZULC has been encouraging libraries in Zimbabwe, especially universities and national libraries with strategic collections, to digitize their valuable collections as a way of preserving them for posterity. Developing local collections encourages research and scholarship and Zimbabwe desperately needs to build a vast resource to cater for the growing academic and research community. In 2005, the University of Zimbabwe Library was the first in the setting up an institutional repository in Zimbabwe. It digitized dissertations and theses, examination papers, research papers from academics and other special collections. Institutional repositories offer an opportunity to increase the Zimbabwean content in e-form and increase visibility of Zimbabwean institutions by publishing their research outputs online. Academic institutions will then be able to enter the global scene in a much more visible way than before and their counterparts in other parts of the world will be able to contact them more rapidly.

With the rapid spread of the Internet in the country, there is promise of overcoming some factors hindering researchers in Zimbabwe and ZULC is optimistic that the institutional repositories and increased digitization of collections in Zimbabwe will improve availability of local research material and outputs.

Conclusion

Librarians have welcomed, and are ready to move into, the next phase of developing digital collections. They have been the biggest promoters of the open access agenda in Zimbabwe. The reasons are obvious. Librarians have been faced with hardships of all kinds, limited budgets and spiraling cost of resources topping the list. Open access offers an affordable model for accessing and supplying information. A lot of advocacy is still required to raise awareness in institutions and at government and national level. A shift in thinking is essential before academics and researchers can readily accept the idea of first publishing their articles and research output in institutional repositories. They would need to be convinced that they are partners in the publishing process. Librarians will require a lot of goodwill and partners within academic and research institutions for open access and institutional repositories to take off in Zimbabwe.

Local library professionals still require training, at various levels, in the use of digital resources. They will need to focus more closely on IP issues as institutions move toward local online publishing of research output. There is a need to follow the discussions on the WIPO Development Agenda in Geneva that look set to bring many changes to the international intellectual property regime. The Development Agenda seeks to reorient WIPO to its original goal to promote intellectual creativity, rather than intellectual property.(Electronic Information for Libraries 2007b).

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Libraries and Women's Participation in Nigerian Politics

Ghaji Badawi

Ghaji Badawi obtained her Masters in Library Science (MLS) from Bayero University Library School in 1993 and her PhD in Library and Information Science in 2003. She is a lecturer in the Department of Library and Information Science, Faculty of Education, Bayero University, Kano, Nigeria. Her subject areas include: technical services, with a specific interest in cataloging; women's issues in librarianship; preservation and conservation; and information and communication technologies. She is a member of the Nigerian Library Association (NLA), the Library and Information Association of South Africa (LIASA), the International Federation of Library Associations and Institutions (IFLA) and the American Library Association (ALA). E-mail: ghajibad@yahoo.com

Abstract

In the history of Nigeria, cultural factors have been a serious source of problems for the development of women politically and have continued to affect the development and prominence of Nigerian women in their roles in politics. The country has governments run by men at all levels, not because there are no women fit to fill the positions but because most women think of political participation as hopeless for them. Among the factors inhibiting women to vote or contest in elections is lack of information about politics and politicians. Because most women in Nigeria dwell in rural areas and their votes are needed to ensure their full participation in politics, there is a need for libraries to find ways in which women can be informed about and encouraged to participate fully in the 2007 election. This paper discusses how libraries in Nigeria are gearing up, and what more they could do, to fully take part in mobilizing women to participate and contest for political offices now and in future.

Keywords: women; politics; participation; libraries; Nigeria

Women and Political Leadership in Nigeria

> Many years ago, the female human being was regarded as weak, and decisions had being taken for her by her husband, father, brother or any other male relations that came in handy, all her life. Things have not changed very much to date. Most women especially those from rural areas of Nigeria . . . still find it difficult to confront their male counterparts even when they are certain they would be right if they did so. (Musa, 1999)

Women are considered by many religions and cultures as being so feeble in mind and body that they cannot be entrusted with the leadership and governance of their people: ". . . in India, subjection was a cardinal principle. Day and night women were held by their protectors in a state of dependence. . . . The rule of inheritance was agnatic, that is, descent traced through males to the exclusion of females . . . women are never allowed to participate in any political role let alone for an office . . ." (Badawi, Jamal: 2005). This tradition did not help women to empower themselves socially, economically, and most definitely politically, but for many have succeeded in keeping women in the background of events, especially where leadership and political participation are concerned.

In the history of Nigeria, cultural factors constituted a serious source of problems for the development of women politically, and our cultures have continued to affect the development and prominence of Nigerian women in their roles in politics. Our traditions and cultures regard women as appendages or subordinates to men, even where women have excelled in education, ability or performance.

Women in Nigeria have for a long time been discouraged from aspiring to greater heights; their domain is considered to be only

 IFLA Journal 33(2): 168–175.
ISSN: 0340-0352. DOI: 10.1177/0340035207080310

within the home and anything outside that sphere of influence should be left to their husbands or fathers. The extent to which females are dominated in some parts of the country, and to which the dignity of the Nigerian female is trampled upon, especially in the rural areas, is beyond imagination (Bola, 2003).

In terms of power sharing in political parties, women rarely occupy decision-making positions, even though they may sometimes be heavily involved in mobilizing and campaigning for the party. "Nigerian women are still a long way from the fair summit as far as leadership is concerned and way down below men in their level of political participation . . . The political history of Nigeria shows that the society has been quite unfair to women. . . " (Bola, 2003). Since independence, the trend has been for women to be used only as means to get men accepted and voted into politics; they also help men prosper in the political offices they hold. After that, women are forgotten until the next election campaign.

Men can abandon jobs that are not convenient or are less rewarding, and can leave the home and family anytime they get a better job elsewhere, to seek for comfort and greener pastures beyond the reach of their wives. Most Nigerian women do not enjoy such freedom because of family and marital bonds. For example, a man can decide to take up a lucrative appointment without complaint from the wife, yet most men will not allow their wives to do likewise without complaining and sometimes even the risk of the marriage getting into deep trouble. Rather, women are often told to choose between the job and the family. It is regrettable that Nigerian women are treated as less significant beings in society and held in low esteem, despite their growing reputations on all fronts.

Female Literacy in Nigeria

Like other developing countries, Nigeria has adopted education as the instrument par excellence for development. It has also recognized that implanting the desire for the development of women in all spheres of life, and especially in the area of education, must take deep roots in society. Growth will be achieved only through the quality of the human factor and the capacity of different social systems to elaborate educational policies and strategies to ensure that knowledge and learning enable both males and females to liberate all their talents, energies and capacities. In other words, the desire for women's education, knowledge and development must become part of the culture of Nigerian society.

The National Policy on Education Section 6, item 50 stressed the commitment of the Federal Ministry of Education to the achievement of at least 60 percent female literacy in the country by the year 2012, as compared with the 1985 level of 21.4 percent (Federal Ministry of Education, 1985) . The National Policy was concerned with improving the situation of women, giving education a different meaning, and searching for modalities and strategies that would enable women to obtain the basic skills needed to gain access to opportunities and participate, as subjects rather than objects, in development processes in the country.

Enrolment statistics of secondary schools and universities in Nigeria for the period 1984-1994 revealed that the ratio of male to female students in secondary schools in 1994 was more than 2:1 while the ratio of male to female university students in that year was almost 3:1 (Federal Ministry of Education: 1995). By 2002 the ratio of female to male secondary students had changed dramatically to almost 1:1, but the ratio of male to female university was still 3:2 (Federal Ministry of Education Statistics Office, 2004). In rural areas, the level of literacy for both males and females is still extremely low, especially in the North (Federal Ministry of Education, 2004).

A survey carried out by the National Bureau of Statistics with the support of the World Bank in 2006 revealed that the literacy rate of male Nigerians in that year was 74.6 percent, while that of females has risen dramatically to 56.8 percent (National Bureau of Statistics, 2006). In this respect at least, things are getting better for females in Nigeria.

Use of Libraries by Women in Nigeria

Political, economic and cultural development in modern societies is heavily dependent on the development of libraries and other information agencies. The public library is primarily an agency for continuing education. Its role is most manifest in such socialist countries as the former Soviet Union and Tanzania, especially in the improvement of adult and female education in

rural communities. In Nigeria, public library services to women and other disadvantaged groups have improved during the last 10 years. Public libraries are now involving themselves with issues concerning AIDS, acting as centers for the abolition of illiteracy in urban villages, and so on. In 2005, the President of IFLA opened a centre for information on AIDS in Abuja and since then numerous other branches of this centre have been opened under the auspices of the National Library of Nigeria. The involvement of public libraries in such social issues has enhanced their image and increased their utilization by females in both rural and urban regions of Nigeria. The participation of public libraries in the activities of the people has also made them centers of political activity in many states of Nigeria.

The Federal Republic of Nigeria is the most populous state in Africa (Federal Ministry of Information and Culture, 2001) with a population of 140 million – 50.7 percent male and 49.35 percent female (National Census Commission, 2006). There is currently no confirmed statistic of the ratio of public libraries to the population in the 2006 census report, but an estimate based on the 1991 census suggested that there was one public library for every 75,783 people (National Population Commission, 1992). A 1994 study of the utilization of public libraries in Nigeria (Badawi,1994) revealed that the ratio of female public library users to male was 1:5.52, but a similar study carried out in 2004 (Badawi, 2004) discovered that this ratio had changed dramatically to 1:1.06. This dramatic change could have been due to the increased number of branch public libraries in the rural areas and to a positive change in the attitude of librarians.

There is now a main public library in every one of the 36 state capitals and one branch library in each of the 774 local government headquarters. Due to the vastness of the local government areas (there are 1,099 villages in Kano state alone), most main public libraries in Nigeria provide mobile library service to remote villages. Special services and sources of information relevant to the needs and interests of different ethnic groups in communities are provided by mobile libraries using staff who know, identify with and appreciate the values and aspirations of the communities they are serving. Public libraries, especially in the North, have stopped relying on books alone as sources of information for their users. Many of the services provided are in the form of film shows, drama and other facilities for information and advocacy. In most cases libraries seek the help of local self-help groups and NGOs specifically geared to working with the local population. In almost all cases such library services are provided in the people's own local languages.

Every public library in Nigeria is thus different from every other in terms of the level and type of services provided, which depend on their budget, size of population, number of ethnic groups, language, religion, occupations and level of literacy of their clientele. Such is the case, for example, with the Kaduna Public Library Board, where mobile libraries are very active supporters of local yam farmers, providing them with current information on film about the production, storage and marketing of their products.

Some libraries in both northern and southern parts of the country now encourage women to use library premises to hold local political meetings and rallies. The 'Women Roundtable' organized by the British Council in Kano on 2 February 2006 was an example of the involvement of libraries and information centers in mobilizing women to actively take part in the May 2007 elections.

Throughout the last 10 years, library services in Nigeria have improved significantly. Public libraries and their staffs are continually making imaginative efforts to provide services to all sections of their communities based on group and cultural needs. For example, because most of the female populace living in the North are Muslims, most public libraries in the North now have a section or a branch library for the use of women alone, and also provide prayer sections in their buildings for female users. The number of public libraries and the level of library services have also increased and improved in the North, where less than one woman in three can read and write – a figure much lower than in the southern part of the country (Kano Educational Resource Centre, 2006). Prior to these improvements, many female library users in Northern Nigeria would leave their libraries to go home, often not because they had finished with what they were doing in the library, but because there was no place there for them to say their prayers.

Library Influence on Women's Political Awareness

> We, women politicians of Nigeria viewed with concern that the past efforts of our women towards political emancipation and

> the contributions of our past heroes, have not yielded desired fruitful results in spite of the fact that women formed over 60 percent of voters in the 2003 elections." (Adado, 2006)

Forty-six years since Nigeria became free from colonial rule, a review of Nigerian political progress reminds us of how much the country has changed during this long period. The Civil War is over, military rule has gone underground, and half of the public debates in Nigeria are now centered on democracy and equality of economic, social and political chances between the sexes. Political democracy has re-invented itself as a pragmatic, post-military ideology where the priority is operational efficiency of the political machine now running in top gear.

Economically, the new Nigeria is still marked by uneven distribution of wealth between men and women (Ogundupe, 2002). Politically, the country has governments run by men at all levels, not because there are no women fit to fill the positions, but because most women think of political participation as a hopeless case for them. Of the 36 states of Nigeria only 4 have 3 female commissioners, the rest have 2 or less (Adado, 2006).

> It has been observed that (religion) has been used as the main reason for discouraging women from participating in politics, and the few who have participated are sometimes discredited . . . as women of low morals, who cannot but compromise their reputations. The exclusion of women from decision-making is a common practice . . . (in Nigeria) women are hardly involved or represented in community institutions and organs where decisions that affect the community are taken. Reasons for the exclusion are very much linked to the perceived psychological deficiencies of women. Women who attempted to contest for leadership positions were blackmailed and discredited, using religion as justification. (International Institute for Democracy and Electoral Assistance, 2005)

Male politicians in Nigeria have yet to acknowledge that the world in general, and Nigeria in particular, is in a new age which no longer endures women being marginalized or ignored in the world of politics and economics. The whole world is watching and waiting to see what happens in Nigeria in the forthcoming 2007 election. Organizations inside and outside the country are also watching to see to what extent women are ready, willing and able to stand out in the coming election.

What Nigeria requires from the forthcoming 2007 election is the full participation of women at the polls and an increase in the number of women contesting for political office in Federal, state and local government. This would ensure a political leadership that could pride itself on equity and equality to both sexes in the top seats of government at all levels. But the full participation of women in politics depends on their freedom to participate as equal partners with men, and this is often governed by husbands or fathers.

> It is a well known fact that women are the deciding factor in winning or losing political election by any contestant in Nigeria . . . and women should be given adequate opportunities to contest for, seek and accept public responsibilities given their natural endowments, acquired abilities and their potentials to rise even above the levels of men. (International Institute for Democracy and Electoral Assistance: 2005)

The recently concluded 'Women Roundtable' organized by the British Council in Kano on 2 February 2006 and attended by female intellectuals in Northern Nigeria, resolved that women have the right to participate in the politics of the Federal Republic of Nigeria in accordance with the provisions of the Constitution. They went on to state that "women have been under represented in major policy-making bodies set up by the government and therefore requested a minimum 40:60 representation of women in the next governments at all levels" Their report also mentioned that:

> . . . women political leaders as well as women organizations at all levels of society should actively promote and support mainstreaming, calling on all women including international agencies to promote and support leadership and self esteem training for women to prepare them for emerging leadership. Women should be encouraged by all means possible and legal to come out to vote and to contest for political offices in the 2007 election. It also was agreed that libraries, information centers and media houses should be used to help increase political awareness so that the female populace are informed on their right to vote and be voted. (Northern Nigerian Women Roundtable, July–September, 2006)

There is a need for organizations such as libraries to find ways in which women can be informed about and encouraged to participate fully in the upcoming election. Libraries and other information centers could be used to project views and inform women about the election with a view to increasing their political participation, which encompasses the complex relationship between power, poverty and involvement in Nigeria.

Library Influences on Women's Political Participation

One group of stakeholders in ensuring the maximum participation of women in the 2007 election are libraries and information centers (Northern Nigerian Women Roundtable, July–September, 2006). These agents of communication and education could assist in no small way with raising the awareness of females as to their responsibility to participate in the election and other forthcoming political activities.

Public libraries provide access for all persons to a variety of information and ideas, and women could enhance their opportunities for self-improvement and empowerment by using their libraries. Perhaps even more significant of the democratic function of public libraries is that much of what can be found in them today is related to democratic civic activities such as social and community services, referral, information about organizations, exhibit spaces and meeting areas for individuals and groups of all kinds, Internet access and information about the candidates of each political party in the country. The existence of these services, which transcend what are generally thought of as traditional library services, underscores just how crucial the role of libraries is in sustaining a democratic state. All of them allow citizens to fulfill their civic and personal responsibilities and to exercise their liberties.

Libraries are an essential component of the global resurgence of democracy, which has been under way globally since the 1970s. In many countries, libraries have helped citizens to participate more fully and effectively in their democracies. For many years, libraries have enabled people to make informed choices about governments: and by connecting them with appropriate resources, libraries help people to educate themselves for personal and occupational success and fulfillment. At a time when young democracies like Nigeria must stretch their scarce financial resources just to meet their basic needs, a library's cost-benefit ratio is high. But librarians in Nigeria must remember that the purchase of new library materials allows access for many citizens to a wealth of information on a variety of issues like politics and that by doing this, libraries in other democracies have helped to vitalize social equality.

Libraries' Need to Take Action

Decades of military rule in Nigeria have eroded trust in the accuracy and value of information and created a belief that information is available only to elites and the educated – as it was during the early stages of library establishment. For years, only officially sanctioned materials about political office holders or military rulers were available to the general public, and such materials were, of course, largely propaganda (Sani, 1999). Information and libraries were tools of the totalitarian state, so neither could be trusted. Moreover, the military ideology made self-discipline, self-motivation, ambition, and similar attributes unnecessary and undesirable in the eyes of the government, since the practice of such virtues by any individual or group would seriously conflict with the function of the regime. Understandably, such deeply ingrained distrust and the individual and societal effects of long-term repression do not diminish easily; they present considerable barriers in connecting women with libraries today.

Linking libraries with political participation is, of course, not the only test facing libraries in emerging democracies such as Nigeria. Financial and technological woes beleaguer them too. Despite these difficulties, libraries in Nigeria are managing to revamp and refocus. They are gathering accurate sources of information that were unavailable during the military era. They are discarding the military propaganda that crowded their shelves (Sani, 1999) and are luring back formerly dissatisfied women users by providing services that facilitate their functions (Hassan, 2000). In short, libraries are making the most of their situation by doing what they can with what they have. Indeed, such resourcefulness and determination are basic to any successful female awareness and participation in politics.

Libraries and Women's Participation in the 2007 Election

Efforts by Nigerian public libraries to aid in informing the female – and indeed, the whole populace – about the 2007 election would benefit everyone in the country and help make Nigeria a safer, more tranquil place for all. Nigerian public libraries can reinforce their supporting role in their democracy and expand their capabilities to ensure full participation by women in the next election in various ways, as outlined below.

- Most of the female populace in Nigeria live in rural communities, and libraries should endeavor to get to these women and deliver information services to them using information formats they can understand and use to make constructive decisions.
- Libraries should provide the appropriate environment and adequate facilities for women to have access to information on politics and to express themselves and channel their ideas, their creativity, their energy and their enthusiasm for maximum participation in politics.
- Libraries should use evolving telecommunications technologies to share with colleagues librarians in other states their experiences and resources that could help develop quality library service for female politicians.
- Libraries should strive to meet local community activity and information needs by providing meeting spaces for female community organizations and by referring female citizens to such organizations and services.
- Libraries should provide support for formal education, scholarly research, and independent learning for women who seek them.
- Library units should be attached to all local government headquarters with adequate mobile library services to reach rural women in their homes. These services should be geared towards the provision of information, not only in written formats, but also in formats recognizable and understandable by such women.
- Local clan heads should be used by libraries in conjunction with female politicians to educate women on politics and political participation.
- Libraries should encourage library and information science organizations to lobby members of the local state assemblies and the national senate for aid programs for library development in all the states of Nigeria.
- Libraries should furnish reference works on citizenship, current events, constitutional law, government, politics and public policy issues.

Conclusion

The fundamental objective of the library is to gather, classify and disseminate materials and services to assist in meeting the information needs of the population. A major task ahead of libraries in Nigeria is to be part of the political activities in the 2007 election by making information about it available and thus increasing the level of awareness of those less privileged to understand what it is all about or what is in store for them, which could help them make well-informed decisions. Public libraries and information centers can encourage more participation and understanding from the general public concerning the activities of their political representatives who finally represent the population's feelings. That is why the library should have active interaction with citizens through technological and multi-interest events. These activities also lead to a greater strengthening of democracy, since open communications permit women to exercise a better degree of choice and control. Library and the media are areas of significant priority for women all over the world. In Nigeria, freedom of expression is enshrined in the constitution, thus providing strong support for women to be assertive. The policy firmly states that it is fundamental to work together to meet the information needs of women. The policy recognizes the importance of information and communication in the empowerment of women. Information and communication cut across other issues and help to involve young women in national development. The establishment of well-organized information and research networks in the areas of 'women's concerns' is essential in order to facilitate the formulation of women's development schemes. The library is seen as playing a crucial role in providing information and information materials and in allowing women to know other people's views on issues of national concern. Effective use of the library in the increasingly knowledge-based Nigeria will enable women to engage actively in decision-making.

The striking feature of Nigeria's economic development lies in the fact that the country has relied almost exclusively on its human resources to achieve its desired economic goals. Improved

information services from libraries and information centers will be a driving force for women to participate and contest for political offices in the 2007 elections and in other future political elections too. The provision of value-added information through efficient communication tools is a decisive element in the quality empowerment of women; however, the ability of women to manage this information and the tools at their disposal will be essential in determining their choices and in their taking decisions.

Certainly, the transition from a totalitarian state to a genuine democracy is an enormous struggle in many ways. Overwhelming economic, social, political, cultural, and some emotional and mental hurdles challenge women of Nigeria. There is never any guarantee that somewhere along the path to realized democracy the nation will not backslide to a totalitarian form of government. There are citizens and members of government in every emerging democracy such as Nigeria who would like to see a return to military rule. Such deep potential for instability only intensifies other challenges to secure the full participation of women in the coming 2007 election. Nigerian libraries, given the chance and the wherewithal, could help the nation move a little closer towards achieving that goal.

Postscript

An Early Analysis of the Participation of Women in the April 2007 Election

Most often, in Nigeria's political process, the centrality of women's role is overlooked or intentionally denied by the patriarchal society. Despite women's increasing contribution to the wealth of the nation and in the electoral process, the chances for women to compete with their male counterparts are reduced, either as a result of marginalization or due to the social stigma that women are the inferior sex. For example, in the recently concluded April 2007 gubernatorial elections, a total of 467 candidates contested, of which only 14 were women; none of them won a seat. Out of the 109 seats on the Senate, less than 20 were contested by women; fewer than 10 won. The House of Representatives had 390 seats; fewer than 30 women were elected (Federal Radio Corporation of Nigeria, April:2007). None of the Houses of Assembly in the North West of Nigeria has a female representative. In the reputed Kano state, three women contested for Senatorial and House of Representative seats; none of them won. Thus, as always, gender imbalance in the

Figure 1. Women voting in Kano.

decision-making process in Nigeria will continue to make it almost inevitable for politics to continue to be dominated by men , at least for the next 4 years.

Unless women are socially and politically empowered, the society will remain insensitive to the needs and yearnings of this large segment of Nigeria's population. In short, women's role in the decision-making process, particularly in our nascent democracy, is a sine qua non for social justice and development.

On the other hand, libraries in the country have played a significant role in providing their local populace with information and other services necessary for increasing their level of political awareness. Public libraries became centers of political debates and political party meetings and their walls were even used to display political party posters. During the voting exercise, most state branches of the National Library were used as voting centers (see Figure 1).

It is too early to evaluate the full role of libraries in female political participation in this election, but from all indications, Nigerian libraries played a positive role, though there is certainly room for improvement.

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REPORT

New Zealand Public Libraries Summit 2007

Winston Roberts

The first Public Libraries Summit ever held in New Zealand took place in Wellington on 26–27 February 2007, and was hosted by the Minister Responsible for the National Library, by the Minister for Local Government and by the President of Local Government New Zealand (LGNZ – the national body representing local authority elected members). Ninety-four participants attended it from central and local government, business, community organizations, the information technology sector, education, media and libraries.

The Summit arose from *Public Libraries of New Zealand: a strategic framework 2006–2016*, published in May 2006, which called for decision-makers and thought leaders with a stake in public libraries to come together to agree an agenda for action to ensure New Zealanders both at a local and a national level got best value from their public libraries.

Keynote speakers at the conference were David Lammy (UK Minister for Culture – whose attendance, at the last minute, was virtual – by podcast) and Chris Batt (CEO of the Museums Libraries and Archives Council, UK).

Other distinguished speakers and panellists included Hon. Judith Tizard (Minister Responsible for the National Library of New Zealand), Hon. Mark Burton (Minister for Local Government), Basil Morrison and Eugene Bowen (respectively President and CEO of Local Government New Zealand – LGNZ), Penny Carnaby (CEO of the National Library of New Zealand), Paul Reynolds (member of the Library and Information Advisory Commission – LIAC), Allison Dobbie (Group Manager Libraries, Auckland City Council), Mary Bourke (Mayor, South Taranaki District Council), Suzanne Snively (of Pricewaterhouse Coopers), and Simon Reilly (Internet Society of New Zealand).

The national professional sector organization (Library and Information Association of New Zealand Aotearoa – LIANZA) was represented in the person of its president, Moira Fraser.

In four workshops, participants debated the issues and identified areas for action. The workshops covered:

- Value for money – libraries' contribution to economic, cultural, and social transformation
- Responding to the goals of the strategic framework – access to content, lifelong learning, access to the digital world, building community
- Making it happen – capacity and skills, sustainability and funding, collaboration
- Creating an Agenda for Action.

Outcomes

Five themes emerged from the Summit, with some specific suggestions for action related to these themes.

One Voice

The need for all the stakeholders in public libraries to speak with "one voice" was identified as being key to achieving transformational change in understanding and perception. The message/narrative needs to be clear, compelling and based on sound research and data. Local Government New Zealand (LGNZ), for example, indicated they wanted "one voice" to talk to them. There were a number of variations on how this might be achieved, including the formation of a Public Library Association, an Association of Chief Librarians, an extension of the role of the Library and Information Advisory Commission (LIAC), and LGNZ acting as advocate within local government.

 IFLA Journal 33(2): 176–178.
ISSN: 0340-0352. DOI: 10.1177/0340035207080312

Possible actions

- Research to quantify the value of public libraries' contribution to economic, social and cultural outcomes.
- Develop improved performance measures and data around libraries' outputs.

The Digital World

There was strong support for the role that public libraries play in enabling access to the digital world by providing the technology, Internet access, guidance, content, tools and opportunities for participation. Renewed support was expressed for the Government's 'Digital Strategy' which identifies a key role for libraries in all three areas: *Connection*, *Content* and *Confidence*. Speakers called for libraries and schools to be provided with affordable fibre optic broadband. It was reaffirmed that public libraries are the local repository of content for the 'national digital library' (New Zealand's unique online content) by making sure rich, local content is created and available online (part of libraries' unique value proposition).

Possible actions

- Work to make KAREN (the Kiwi Advanced Research and Education Network) the backbone for the publicly-funded network of New Zealand, and/or the linking of MUSH (Municipal, University, Schools and Hospitals) networks and local loops.
- Support and lobby for the commitment to fully fund the Aotearoa New Zealand People's network roll out (beyond phase one, the pilot which is presently under way).

Collaboration

There is strength in numbers. Working with others in various strategic alliances, partnerships, both between and within local government, regionally, nationally, across sectors and globally strengthens the outcomes of public libraries and their partners. Sectors of particular importance are education, museums, archives and galleries, and the community development sector where essential work is being done to overcome the digital divide (from which many of New Zealand's indigenous people suffer). Participants noted the importance of retaining local identity while working regionally and nationally, e.g. the education system with individual schools' Boards of Trustees could be a model.

A significant challenge for the library sector is to determine which aspects of libraries' business are 'non-differentiating' (and can achieve economies of scale) and which are best left for local responsiveness and innovation.

Possible actions

- Develop new business and governance models for easier working.
- Learn from best practice, e.g. the 'eLGAR' (Auckland region libraries) model for library systems sharing.

Equality of Service – Bridging the Urban/ Rural Gap

The dollar spend per capita for populations serving 25,000 or less is half that of libraries serving populations of 50,000 or more. Rural development issues faced by local authorities are of course not limited to library services, however the impact on libraries is significant. Inequality of service provision is not solely a funding issue, lack of affordable broadband is also an issue.

Possible actions

- Investigate a contestable fund for infrastructure services similar to that available to the museum sector.
- Regional cooperation/collaboration/merger for economies of scale.
- National roll out of the Aotearoa New Zealand People's Network.
- Encourage the adoption of the published *New Zealand Public Library Standards*.

New Skills and Capabilities

Public libraries play a strong role in supporting learning for life by providing guidance and expertise to those seeking new skills and knowledge. If public libraries are to fully realize their potential as part of the knowledge infrastructure, the capability of library staff needs addressing. Issues identified included: leadership, an aging white female-dominated workforce (particularly outside of main centres), the need to broaden the range of skills and disciplines working in libraries, the need for staffing to better reflect the ethnic mix

of communities in contemporary New Zealand society, pay equity, attitudes and perceptions (both within and without libraries).

Possible actions

- Participate in the government's Pay and Employment Equity pilot.
- Participate in the government's work to define and remedy the digital skills shortage.

Leaders of the library profession are now working with central and local government policy and decision-makers on ways to take the agenda forward to the implementation stage.

For further information, contact : Sue Sutherland, Director, Policy & Information Democracy, National Library of New Zealand. E-mail: sue.sutherland@natlib.govt.nz

NEWS

From the Divisions and Sections

NEWS CONTENTS

FAIFE Moves To The Hague

A decision was taken by the Governing Board in 2004 to move the FAIFE Office to The Hague as soon as possible. Following a workshop held in The Hague in March 2006, the Governing Board decided that a multifunctional advocacy unit would be established at HQ to cover three broad advocacy themes which are so central to the concerns of IFLA and its members: freedom, equity and inclusion. These themes correspond by and large to the fields of FAIFE, CLM and IFLA's WSIS advocacy respectively but are, of course, interwoven. The implication is that there should not be separate advocacy units or staff dedicated to FAIFE, CLM and WSIS advocacy individually but a concerted effort across the themes.

FAIFE Director Susanne Seidelin left IFLA on the expiry of her contract on 30 April 2007. She leaves behind an impressive record of achievement in advocacy, education, research and publication. She has made many friends throughout the world. IFLA is very grateful to her.

The FAIFE Committee and Executive Board will continue to function as before, but may have to take on some duties previously carried out at the FAIFE Office. From May 2007 advocacy work relating to Free Access to Information and Freedom of Expression will be coordinated at IFLA Headquarters. Grant-funded projects will be outsourced. Once the advocacy unit has been set up, advocacy staff will provide support in respect of networking, coordination, alerting etc. to the professional groups. They will integrate this work with initiatives to support the work on intellectual property and other legal questions and our continued promotion of a fair and just information society for all.

IFLA remains fully committed to free access to information and freedom of expression and will continue its worldwide advocacy work in the spirit of Article 19 of the Universal Declaration of Human Rights. Placing the FAIFE work at Headquarters will ensure that the ideals and energy of FAIFE are brought into the core of IFLA, and that we can continue to build upon the foundation that was laid during its first decade.

Peter Johan Lor, Secretary General

Further information: IFLA Headquarters, PO Box 95312, 2509 CH The Hague, Netherlands. Tel. +31-70-314 0884. Fax: +31-70-383 4827. E-mail: ifla@ifla.org. Web site: www.ifla.org

Access To Information Network – Africa

A new and timely IFLA discussion group, Access to Information Network – Africa (ATINA), will hold its inaugural meeting at the IFLA World Library and Information Congress in August 2007 in Durban, South Africa.

ATINA is co-sponsored by the IFLA Africa Section, by IFLA FAIFE (the Free Access to Information and Freedom of Expression core program), and by IFLA GIOPS (the Government Information and Official Publications Section). For further details of the group's origins and its mandate click to the IFLA website on http://www.ifla.org/VII/dg/atinadg/index.htm.

Further information: Francis T. Kirkwood, ATINA convenor, Library of Parliament, Ottawa, Canada K1A 0A9. Tel. +1-613-947-2266. Fax: +1-613-992-1269. E-mail: kirkwf@parl.gc.ca

ALP Workshop

This four-week course organized on behalf of IFLA ALP is now in its fifth year in New Zealand. The overall theme is information literacy, with special reference to needs and developments of countries in Asia and Oceania. The course will cover the basics of information literacy and information literacy training skills needed by information professionals in a variety of settings, as well as current IT applications in libraries. Classroom participation and hands-on practice will be interspersed with visits to leading libraries and information agencies in Wellington, the capital of New Zealand and home to a wide array of 'cutting-edge' information organizations.

The course will be held at the Victoria University of Wellington Library and taught by leading educators in library and information management, as well as practitioners

 IFLA Journal 33(1): 179–187.
ISSN: 0340-0352. DOI: 10.1177/0340035207080315

with considerable experience in the delivery of information literacy programmes. There are also visits to major libraries and information services in the Greater Wellington region. For information on the 2006 Workshop, go to: http://www.ifla.org/VI/1/conf/Literacy_IT/index.html.

While the course is purposely small, to allow one-on-one training and closely monitored IT lab work, there are limited vacancies for fee-paying students. A fee of USD2600 covers all tuition, course materials and accommodation in comfortable University housing. Airfares, visas and meals are an additional expense.

The final selection of applicants will be made no later than the beginning of August 2007. There is no application form, but potential participants should send an email message outlining (1) professional education, (2) professional work experience, (3) level of English ability, (4) reasons for wishing to attend the course, (5) self-assessed IT capabilities and (6) source of funding.

Please e-mail this information to: Professor GE Gorman or Dr Daniel Dorner, Asia-New Zealand Informatics Associates, Wellington, New Zealand. E-mail: anzia@xtra.co.nz

World Library Statistics

IFLA Statistics Section is working with UNESCO Institute of Statistics and ISO to improve world library statistics. We need your help. Can you tell us which organizations collect library statistics about public and academic libraries in your country? (More than one organization may be involved). If you can help us to compile a list of contact details for your country, please email me, michael.heaney@ouls.ox.ac.uk. The work is not difficult, it is just answering about 40 questions which ask who in your country can provide different kinds of library statistics. UNESCO is relying on IFLA's network of library contacts to provide better information. Please do not disappoint them! We have information from some countries already. We still need volunteers from the countries listed below.

La Section des statistiques et de l'évaluation de l'IFLA collabore avec l'Institut des statistiques de l'UNESCO et l'ISO afin de recueillir des statistiques sur les bibliothèques publiques et universitaires dans le monde. Nous avons besoin de votre aide. Pouvez-vous nous identifier les organismes qui recueillent des statistiques sur les bibliothèques publiques et universitaires dans votre pays ? (il pourrait y avoir plus d'un organisme impliqué). Si vous pouvez nous aider à compiler une liste d'organismes pour votre pays, veuillez nous en informer à l'adresse suivante : email je, michael.heaney@ouls.ox.ac.uk. Concernant le questionnaire, le travail ne sera pas difficile, il consistera à répondre à une quarantaine de questions. L'UNESCO compte sur le réseau de l' IFLA afin d'identifier les personnes ressources les plus susceptibles de pouvoir nous aider à recueillir les statistiques sur les bibliothèques dans les pays et régions visées par le présent projet. Aidez-nous à ne pas les décevoir ! Nous avons obtenu le nom de personnes ressources pour certains pays. Cependant, nous avons toujours besoin de volontaires pour ces pays.

La Sección de Estadísticas de la IFLA está trabajando con el Instituto de Estadísticas de la UNESCO para mejorar las estadísticas de bibliotecas publicas y academicas en el mundo. Necesitamos su ayuda. ¿Podría usted decirnos qué organizaciones en su país recogen las estadística de las bibliotecas? (Puede que haya más de una organización implicada). Si usted puede ayudarnos a compilar una lista conteniendo informaciones para contactarse con estas organizaciones en su país, por favor mándeme un correo electrónico a la dirección siguiente michael.heaney@ouls.ox.ac.uk. El trabajo no es difícil, consiste en sólo contestar a más o menos 40 preguntas que preguntan quién, en su país, puede facilitar diferente tipo de estadísticas sobre las bibliotecas. La UNESCO está confiando en la red de contactos de las bibliotecas de la IFLA para proporcionar una mejor información . ¡No les decepcione por favor! Ya tenemos informaciones de algunos otros países. Todavía necesitamos a voluntarios de estos países.

Countries/Pays/Países

Anguilla
Antigua and Barbuda
Argentina
Aruba
Bahamas
Barbados
Belize
Bermuda
Bolivia
British Virgin Islands
Cayman Islands
Chile
Colombia
Costa Rica
Cuba
Dominica
Dominican Republic
Ecuador
El Salvador
Falkland Islands
French Guiana
Grenada
Guadeloupe
Guatemala
Guyana
Haiti
Honduras
Jamaica
Martinique
Mexico
Montserrat
Netherlands Antilles
Nicaragua
Panama
Paraguay
Peru
Puerto Rico
Saint Kitts and Nevis
Saint Lucia
Saint Pierre and Miquelon
Saint Vincent and the Grenadines
Surinam
Trinidad and Tobago
Turks and Caicos Islands

Uruguay
Venezuela

Thank you/Merci bien/Gracias

Further information: Michael Heaney, Executive Secretary, Oxford University Library Services, Clarendon Building, Bodleian Library, Oxford OX1 3BG, UK. Tel. +44 (0) 1865 277 236. Fax: +44 (0) 1865 277 182. E-mail: michael.heaney@ouls.ox.ac.uk

New Members

We bid a warm welcome to the following 27 members who have joined the Federation between 1 January and 5 April 2007. We are happy to announce that the Beijing Security Electronics Engineering Co., Ltd has joined the Federation as our first Corporate Partner in China.

Corporate Partners

Beijing Security Electronics Engineering Co., Ltd., China
BRILL, Netherlands

Institutions

Statistics Canada, Canada
University of Zadar, LIS Department, Croatia
Turku University of Applied Sciences, Finland
Universitäts- und Landesbilbiothek Sachsen-Anhalt, Germany
Max Planck Institute for Comparative Public Law and International Law/ Library, Germany Sächsische Landesbibliothek-Staats-und Universitätsbibliothek Dresden, Germany
Library of Athens University of Economics and Business, Greece
Consiglio regionale del Veneto, Biblioteca, Italy
UNESCO-IHE Library Services, Netherlands
Bibliothèque Nationale de Tunis, Tunisia
Hennepin County Library, United States
Carnegie Library of Pittsburgh, United States
University of Kansas Libraries, United States
Creighton University, Reinert-Alumni Library, United States

Institutional Sub-unit

Georgetown University Law Library, United States

Personal Affiliates

Ms Rosa Maria Fernández de Zamora, Mexico
Ms Elsa Margarita Ramirez Leyva, Mexico
Ms Cheryl Cumberbatch, Saint Kitts and Nevis
Ms Julia Martin, United States

Student Affiliates

Ms Ulla Visscher, Canada
Ms Sandra Al-Abdulmunem, Saudi Arabia
Ms Sherri Liberman, United States
Ms Natalia Ralko, United States
Ms Melissa Rentchler, United States
Ms Edith Daniel, United States

Future IFLA Conferences and Meetings

WLIC Durban, South Africa, 2007

World Library and Information Congress 2007, 73rd IFLA General Conference and Council, Durban, South Africa, 19–23 August, 2007. *Theme:* Libraries for the future: progress, development and partnerships.

Exhibition

An international library trade exhibition will be held at the conference venue in conjunction with the conference. For further information and to reserve exhibition space contact: CONGREX HOLLAND BV PO Box 302, 1000 AH Amsterdam, The Netherlands Tel: +31 20 50 40 201 Fax: +31 20 50 40 225 E-mail: wlic2007@congrex.nl

Updates of the programme will be published on the website www.ifla.org on a regular basis.

Sessions and Satellite Meetings

Sessions and Satellite Meetings known so far:

Academic and Research Libraries Section. Theme to be announced.
Access to Information Network – Africa (ATINA). Inaugural meeting.
Acquisition and Collection Development Section. Collection description models – next generation initiatives.
Africa Section. Looking into the future: models of African libraries in the 21st century and beyond.
Agricultural Libraries Discussion Group. Impact of globalization on small farmers worldwide: implications on information transfer.
Asia & Oceania Open Session. Information providers coping with disaster in Asia-Oceania.
Cataloguing Section. Cataloging partnerships.
Classification and Indexing Section. Partners for subject access to bring libraries and users together.
Continuing Professional Development and Workplace Learning Section. Pathways to library leadership.
Continuing Professional Development and Workplace Learning Section. 7th World Conference on Continuing Professional Development & Workplace Learning for the Library and Information Professions. *Theme:* Continuing professional development: pathways to leadership in the library & information world. 14–16

August 2007, Johannesburg – South Africa.

Continuing Professional Development and Workplace Learning Section and Management of Library Associations Section. Library association management – the GLAD Programme.

Division III. Libraries Serving the General Public. Social Inclusion: how can public libraries embrace the challenge of reaching out to serve all people in their community?

Document Delivery and Resource Sharing Section. Using technology to improve interlending and resource sharing services.

Education and Training Section, Continuing Professional Development and Workplace Learning Section and Information Literacy Section. Interactive discussion on E-learning: Theme: in search of quality and collaboration.

Genealogy and Local History Section. Stories without writing: local and family history beyond the written word.

Government Information and Official Publications Section. Government and science: progress, development and partnerships for libraries of the future.

Health and Biosciences Libraries Section. Library frontiers: disasters, emergency preparedness and emerging diseases.

IFLA/FAIFE in partnership with the LIASA FAIFE Committee and the Goethe Institute, Johannesburg. Satellite meeting, 16–17 August 2007. Libraries in the struggle against corruption. Venue: Goethe Institute, Johannesburg, South Africa.

Information Literacy Section. Developing the library into a learning centre.

Information Literacy Section and Academic and Research Libraries Section. Conduits for transformation: incorporating multimodal instruction and learning into information literacy.

Information Technology Section. Second life for libraries.

Knowledge Management Section. Best practices or lessons learned.

Library and Research Services for Parliaments Section. Parliamentary libraries and research services of the future: partnerships for change.

Library Buildings and Equipment Section. The changing role of libraries as meeting and learning spaces: the third place.

Library Services to Multicultural Populations Section. Innovative multicultural library services for all: literacy, learning and linguistic diversity.

Library Theory and Research Section. The cultural heritage and LIS-research.

Management and Marketing Section. Managing technologies and library automated systems in developing countries.

Management and Marketing Section and Academic and Research Libraries Section. Libraries in the spotlight: Effective marketing and promotional strategies.

National Library of Angola. 5th International Meeting of Portuguese Speaking Librarians.

Preservation and Conservation Section. Mold, pests, terrorism and dust: preservation policies and management.

Newspapers Section. African newspapers: access and technology.

Public Libraries, Reading and School Libraries' Sections. Libraries in good health: resources and practices designed to support community development and outreach in health-related issues.

Reading Section with the Libraries for Children and Young Adults Section. Publishing, distributing and promoting children's books in local languages: African experience .

Reference and Information Services Section. Getting and keeping ahead: educating for reference and information services for the future.

Science and Technology Libraries Section. Changing trends in higher education and its impact on the delivery of science and technology information.

Serials and other Continuing Resources Section. Serials and other continuing resources; new initiatives in Africa and developing countries.

Serials and other Continuing Resources Section. Satellite conference, August 16–17, 2007. Electronic resource management systems: a solution with its own challenges. Venue: University of the Western Cape, Cape Town, South Africa.

Social Science Libraries Section. Evidence based practice in social science libraries: using research and empirical data to improve service.

Statistics and Evaluation Section. Special libraries need special measures.

Statistics and Evaluation Section. 7th Northumbria International Conference on Performance Measurements in Libraries and Information Services. Quality assurance and outcomes assessment in libraries and information services.

Important Addresses

IFLA/WLIC Conference Secretariat, Congrex Holland BV, PO Box 302, 1000 AH Amsterdam, The Netherlands. Phone: +31 20 50 40 201. Fax: +31 20 50 40 225. E-mail: wlic2007@congrex.nl

IFLA Headquarters, PO Box 95312, 2509 CH The Hague, The Netherlands. Phone: +31 70 314 0884. Fax: +31 70 383 4827. Website: www.ifla.org

National Committee WLIC 2007 Durban, LIASA – Library and Information Association of South Africa, PO Box 3668, Durban 4000, South Africa.

IFLA WLIC 2007 Website

For updated information on the conference please visit the IFLA WLIC 2007 website at http://www.ifla.org/IV/ifla73/index.htm IFLA World Library and Information Congress 2007

ILDS Singapore, 2007

International IFLA Interlending and Document Supply Conference, National Library of Singapore, 29–31 October 2007. *Theme:* Resource sharing for the future, building blocks for success.

Topics to be covered include:

Resource sharing Cooperative support, collaborations in terms of collection sharing or access, interlibrary lending and document delivery are topics that would be covered within resource sharing.

Tools and building block for success Policies, tools and processes that are used to help libraries share knowledge with each other with regards to resources available, to help libraries effectively communicate about their needs and to help libraries deliver and support each other.

Rights & Distribution How issues pertaining to the rights of dissemination, sharing and distribution of contents impact libraries. Changes to the legal landscape and changes that owners of content are implementing and how they impact libraries.

Future Directions Sharing of new ideas and service developments that are being explored to improve services to library customers.

Further information: Poul Erlandsen, Chair, IFLA Document Delivery and Resource Sharing Section. E-mail: poer@dpu.dk

Conference home page at: http://www.nlbconference.com/ilds/index.htm

WLIC Quebec, 2008

World Library and Information Congress: 74th IFLA General Conference and Council, Québec, Canada, 10–15 August 2008. *Theme:* Libraries without borders: navigating towards global understanding.

Contact Details

IFLA Headquarters and WLIC Conference Secretariat – as above.

Quebec City National Committee, WLIC 2008 Québec, Canada, Association pour l'avancement des sciences et des techniques de la documentation (ASTED), 3414, avenue du Parc, bureau 202, Montréal, Québec, Canada, H2X 2H5.Tel: (514) 281–5012 Fax: (514) 281–8219 get. E-mail: info@asted.org Website: www.asted.org

Further information: http://www.ifla.org/IV/ifla74/ann2008en.pdf

74e Congrès mondial des Bibliothèques et de l'Information, Ville de Québec, Québec, Canada, 10–14 août 2008. *Thème:* Bibliothèques sans frontières: naviguer vers une compréhension globale

Secrétariat de l'IFLA: Casier postal 95312, 2509 CH La Haye, Pays-Bas. Tél.: +31 70 314 0884. Fax: + 31 70 383 4827. Courriel: ifla@ifla.org. Site Web: www.ifla.org

Secrétariat du Congrès WLIC, Congrex Holland BV . Tél. : +31 20 5040 201 . Fax : + 31 20 5040 225 . Site Web: www.congrex.com

Comité d'organisation – Québec, WLIC 2008 Québec, Canada, Association pour l'avancement des sciences et des techniques de la documentation (ASTED), 3414, avenue du Parc, bureau 202, Montréal, Québec, Canada, H2X 2H5. Tél. +1 (514) 281–5012. Fax: (514) 281–8219. Courriel: info@asted.org. Site Web: www.asted.org

WLIC 2010

The Governing Board has decided that the 2010 IFLA World Library and Information Congress will take place in the region comprising South-East Asia, Australasia and Oceania.

Since IFLA contracted a Professional Conference Organizer, Concorde Services (a Congrex Group Company) to organize the congresses, the amount of work required from the national library profession of the country hosting a congress has been greatly reduced. This makes it possible to hold congresses in countries with a relatively small or young library profession. However, experience has shown that it is not desirable to hold IFLA Congresses in countries in which IFLA has no or very few members. Accordingly for 2010, only countries with 5 members in good standing, one of which must be a national library association, will be considered. In this region these are: Australia, Malaysia, New Zealand, Philippines, Singapore, Thailand.

In accordance with the procedures implemented in 2006, the conference venue will be selected by IFLA on the basis of a feasibility study undertaken by Concorde Services and following consultation with the National Library Associations of candidate countries. National Association Members in countries wishing to host an IFLA Congress no longer have to prepare bids. Instead, a thorough feasibility study of qualifying convention centres is conducted by the PCO on the basis of information provided by the convention centres. All that is required from the library profession in candidate countries at this stage is a brief (one page) expression of interest. If a convention centre is short-listed in a country, IFLA HQ will contact the national library association member in that country for a more in-depth discussion of how its association and profession can contribute to a successful congress.

The host city will be announced at the IFLA World Library and Information Congress in Durban, South Africa in August 2007.

For further information, please contact: Josche Ouwerkerk, Conference Officer, email: josche.ouwerkerk@ifla.org.

IFLA Publications

UNIMARC & Friends: Charting the New Landscape of Library Standards; Proceedings of the International Conference Held in Lisbon, 20–21 March 2006. Edited by Marie-France Plassard. München: Saur, 2007, 133 p. ISBN-13: 978-3-598-24279-3. ISBN-10: 3-598-24279-4. (IFLA Series on Bibliographic Control; vol. 30). Price: EUR 68.00 (IFLA Members EUR 48.00)

With the expansion of the World Wide Web during the last decade, libraries and their standards face an ever more complex environment, with new types, genres and forms of information resources. Changing information network structures and the emergence of new retrieval methods all play their roles. A three-day conference was held in Lisbon, Portugal in March 2006, in order to review the current state of bibliographic standards and to discuss a number of questions in charting a future for their development.

Librarianship as a Bridge to an Information and Knowledge Society in Africa. Edited by Alli Mcharazo and Sjoerd Koopman. München: K.G. Saur, 2007, 248 p. (IFLA Publications; 124) ISBN-13: 978-3-598-22031-6. ISBN-10: 3-598-22031-6. Price: EUR 78.00 (IFLA Members: EUR 58.00)

Knowledge Management was the theme of the Standing Conference of Eastern, Central and Southern African Library and Information Associations (SCECSAL XVII) in 2006. This selection of conference papers provides a cross-disciplinary approach to knowledge, information and development and how the three together can mould a new and more informed society. The challenge is to make our libraries more people-centered and Afro-centric, not simply serving the interests of the elite and paying little attention to the plight of the less well off. This needs to change, with libraries becoming more inclusive and serving the needs of all. These papers raise provocative questions, and provide an insight into the struggle of information services in this part of Africa to be part of an emerging information and knowledge society.

IFLA Publications are published by:

K.G. Saur Verlag, PO Box 701620, 81316 Munich, Germany. Tel. +49-89-76902-300. Fax: +49-89-76902-150/250. E-mail: info@saur.de. Website: www.saur.de

World Guide to Library, Archive, and Information Science Education

A new edition of the World Guide to Library, Archive, and Information Science Education is scheduled for publication by K.G. Saur in August 2007. This comprehensive directory lists professional education and training programmes worldwide at a tertiary level of education or higher.

Further information from K.G. Saur Verlag at the above address.

Worldwide review of Functional Requirements of Authority Data

The IFLA Working Group on Functional Requirements and Numbering of Authority Records is pleased to announce that a 2nd draft of *Functional Requirements for Authority Data* (previously titled *Functional Requirements for Authority Records*) is now available for worldwide review. This draft, updated in response to comments received during the previous review, is on the IFLA website at http://www.ifla.org/VII/d4/wg-franar.htm. Comments should be sent by July 15, 2007 to: Glenn Patton, OCLC Online Computer Library Center, Inc., 6565 Kilgour Place, Dublin OH 43017-3395, USA. Tel. +1.800.848.5878, ext. 6371 or +1.614.764.6371. Fax: +1.614.718.7187. E-mail: pattong@oclc.org

From Other Organizations

Freedom of Expression in Tunisia

Hosting the United Nations-sponsored World Summit on the Information Society (WSIS) in Tunisia, a country where repression of human rights – in particular freedom of expression – is rampant, remains controversial. Kofi Annan, then Secretary-General of the UN, stated that the holding of the WSIS in Tunisia offered "a good opportunity for the Government of Tunisia to address various human rights concerns, including those related to freedom of opinion and expression." More than one year after the WSIS was held in Tunisia, the Tunisian government has clearly failed to do this, according to members of the International Freedom of Expression Exchange (IFEX) Tunisia Monitoring Group (TMG).

The 16 members of the IFEX-TMG are appealing to incoming UN Secretary-General Ban Ki-moon, to remind the Government of Tunisia of its international obligations. "Tunisia, since being an elected member of the newly-created United Nations Council of Human Rights, has an additional obligation to respect its international commitments in the field of freedom of expression," say the members of the TMG.

"Sadly, the state of freedom of expression in Tunisia is as poor, if not poorer, in early 2007 as it was in

late 2005 when the WSIS was held in Tunis," said Carl Morten Iversen, Secretary General of Norwegian PEN, and Chair of the IFEX-TMG.

Members of the TMG remain deeply concerned by the ongoing harassment of writers, journalists, editors and human rights defenders in Tunisia. Consequently, members of the TMG are once more calling the Tunisian government to bring an immediate end to the persecution of writers, journalists, and human rights defenders, including Sihem Bensedrine, Naziha Rjiba, Moncef Marzouki, Lotfi Hajji and Abdallah Zouari. In addition, they are repeating their plea for the immediate and unconditional release of internet writer and lawyer Mohammed Abbou who is currently serving a three-and-a-half year prison sentence for criticizing Tunisian President Ben Ali in an article posted on the Internet.

"To respect its international commitments, the Tunisian government should also release all banned books and publications, should stop censoring books, and should put an end to the blocking of websites," said Ana Maria Cabanellas, President of the International Publishers Association (IPA).

TMG members also highlighted concerns about the Tunisian government's censorship of deadly clashes between security forces and armed groups in the end of December 2006 and in early January 2007 in the Southern suburbs of Tunis.

The IFEX-TMG therefore calls on the Tunisian authorities to allow writers, journalists, web loggers and publishers to express themselves freely without fear of persecution or imprisonment in accordance with Article 19 of the Universal Declaration of Human Rights and the UN International Covenant on Civil and Political Rights (ICCPR), to which Tunisia is a signatory.

Members of the IFEX-TMG are:

Arabic Human Rights Information Network (HRinfo), Egypt
ARTICLE 19, UK
Canadian Journalists for Free Expression (CJFE), Canada
Egyptian Organization for Human Rights (EOHR), Egypt
Index on Censorship, UK
International Federation of Journalists (IFJ), Belgium(
International Federation of Library Associations and Institutions (IFLA), The Netherlands
International Press Institute (IPI), Austria
International Publishers' Association (IPA), Switzerland
Journaliste en danger (JED), Democratic Republic of Congo
Media Institute of Southern Africa (MISA), Namibia
Norwegian PEN, Norway
World Association of Community Radio Broadcasters (AMARC), Canada
World Association of Newspapers (WAN), France
World Press Freedom Committee (WPFC), USA
Writers in Prison Committee of International PEN (WiPC), UK

For further information, contact Carl Morten Iversen, Norwegian PEN, Tel: + 47 22479220. Cellphone: + 47 926 88 023. E-mail: pen@norskpen.no or Alexis Krikorian, IPA, Tel: +41 22 346 30 18. E-mail: secretariat@ipa-uie.org Website: http://campaigns.ifex.org/tmg/

19 January 2007

NLB and RNIB Merge

For the last year or so the National Library for the Blind (NLB) and the Royal National Institute for the Blind (RNIB) in the United Kingdom have been working together with a view to merging their respective library services into a single unified service. The merger, which was approved on 15 December 2006 by the trustees of both organizations, will create the new RNIB National Library Service.

Further information: Helen Brazier, Chief Executive, National Library for the Blind. Tel. +44 161 355 2004. E-mail: helen.brazier@nlbuk.org

Other Publications

Freedom of Expression in Tunisia: The Siege Holds

In its fourth report on freedom of expression conditions in Tunisia, the International Freedom of Expression Exchange (IFEX) Tunisian Monitoring Group (TMG) concludes that it is still increasingly important that international free expression and human rights groups, as well as the international community at large still keep monitoring development in Tunisia.

Freedom of Expression in Tunisia: The Siege Holds is the fourth TMG report since February 2005 and is based on a recent (28 February–4 March 2007) mission to Tunisia. The report is available in English, French and Arabic.

Tunisian authorities have rejected all previous recommendations from the TMG. The new report states that: "lack of positive change has led us to conclude that the Tunisian government has sought to further stifle dissidents since the previous TMG report of May 2006. As the present report reflects, it is therefore necessary to maintain and strongly reiterate all past recommendations from the TMG to Tunisian authorities."

The TMG is a group of 16 freedom of expression organizations in the IFEX network. The recent mission was chaired by Carl Morten Iversen of Norwegian PEN. Other members of the delegation were Yousef Ahmed of Index on Censorship, Virginie Jouan of the World

Association of Newspapers (WAN) and Alexis Krikorian of the International Publishers Association (IPA). Sherif Azer of the Egyptian Organization of Human Rights (EOHR) was prevented from receiving a visa on time by the Tunisian Embassy in Cairo, which treated him rudely.

The report is available online on the TMG websites at:

English: http://campaigns.ifex.org/tmg/IFEXTMGreport_April2007.doc
French: http://campaigns.ifex.org/tmg/rapportduIFEXTMG_avril2007.doc
Arabic: http://www.hrinfo.net/ifex/wsis/

For further information about the report, contact:

Carl Morten Iversen, Norwegian PEN, at tel: + 47 2247 9220/926 88 023 or e-mail: cmivers@online.no or pen@norskpen.no (English)
Alexis Krikorian, IPA, at tel: + 41 22830 1080/7921 45 530 or e-mail: krikorian@ipa-uie.org (English or French)
Gamal Eid, HRinfo, at tel: +202 524 9544 (Arabic) or e-mail: info@hrinfo.net or gamal4eid@yahoo.com

Copyright and Related Issues for Libraries

The eIFL Handbook on Copyright and Related Issues for Libraries, sponsored by the UNESCO Information for All Programme, is a practical guide to topical legal questions affecting the information work of libraries in the fast moving digital environment. Each topic is described briefly, the main policy aspects for libraries are outlined, and there are links to library policy statements for further reading. Where there are special issues for developing or transition countries, these are covered. The topics are:

- the relationship between copyright and contract law: electronic resources and library consortia
- technological protection measures: the 'triple lock'
- copyright, the duration of protection and the public domain
- orphaned works
- collective rights management
- public lending right
- the database right: Europe's experiment
- creative commons: an 'open content' licence
- open access to scholarly communications
- copyright and trade agreements
- international policy-making: a development agenda for WIPO
- national policy-making: advocating for fair copyright laws.

The complete handbook, as well as the individual topics, are available for download on the eIFL website: http://www.eifl.net/services/handbook.htm

Automated Cataloguing of Journal Articles

Through an innovative JISC Funded project, Emerald Group Publishing Limited (Emerald), Talis, and the University of Derby have transformed the cataloguing of journal articles. The Table of Contents by Really Simple Syndication (TOCRoSS) project was established to address an important requirement. Within the UK's academic institution libraries, cataloguing of journals and journal articles has, until this day, been unachievable.

Working in partnership, Emerald, Talis, and the University of Derby have successfully engaged with students and academics throughout the project. With TOCRoSS in place, e-journal table of content data can now be fed automatically into library catalogues without the need for cataloguing, classification or data entry. This improves the accuracy of records, saves time for library staff and delivers a more integrated OPAC experience to users.

For students and academics, TOCRoSS makes it simple to discover valuable and expensive online e-journal resources that have previously remained undiscovered and under-utilized. E-journal articles can now be discovered alongside key reference text, all with a single search.

The RSS 2.0 standard is a simple, yet powerful technology that has many potential applications in machine-to-machine communications. RSS has been used to deliver news feeds or alerts of blog postings to individuals' desktops. TOCRoSS demonstrates how the innovative application of simple technologies enables the delivery of services that previously would not have been viable.

The TOCRoSS project team worked closely with the NISO/EDItEUR working party responsible for ONIX serials messages. This co-operation resulted in the proposed TOCRoSS standard for delivering journal article information, using ONIX record structures, via RSS.

Talis, the technology partner for the project, delivered the open source software component that is used by an educational establishment to manage TOCRoSS feeds from publishers, transforming the article descriptions into a format suitable for import into their library catalogue and other systems. Emerald has also published the open source software environment that can be used to produce TOCRoSS feeds. These toolkits are freely available to further and higher education establishments, publishers and library management system developers from sourceforge: http://sourceforge.net/projects/tocross

TOCRoSS software is available with a suitable open source licence, such as GNU General Public Licence. This will make it possible for publishers and library management system suppliers to use it freely with their products and services.

For further information about TOCRoSS, contact:

Paul Evans, Head of Web Services, Emerald Group Publishing.

Tel. +44 1274 777700. E-mail: pevans@ emeraldinsight.com

Melanie Keady, E-Resources Development Manager, University of Derby. Tel. +44 1332 591220. E-mail: m.e.keady@derby.ac.uk

Richard Wallis, Technology Evangelist, Talis. Tel. +44 870 400 3622. E-mail: richard.wallis@talis.com

Personal News

Carol Priestley Honoured

Carol Priestley's great contribution to international development was acknowledged in the British Queen's New Year Honours List for 2007 with an MBE (Member of the British Empire). She was honoured as former Director of the International Network for the Availability of Scientific Publications (INASP) for services to science in developing countries and emerging economies. Carol's career began in 1972 when she worked with the Ministry of Education, Afghanistan, on a United National Development Programme (UNDP) programme to upgrade mathematics and science education. Carol went on to take up a position in library and book development with the British Council with overseas assignments in Iran, Afghanistan, Bangladesh and Egypt. In 1988 she took up the post of Assistant Director of the International African Institute. It was in this position that she became even more acutely aware of the marginalization of colleagues in developing countries due to the increasing inability of libraries to support their teaching and research. In 1992 the International Council for Science (ICSU) invited her to establish a network that would lead to greater collaboration towards more sustainable and affordable information provision. Carol agreed to take on the task, and INASP was launched. INASP has become an active and lively organization with a committed and highly professional team of staff. Under Carol's leadership it consolidated its position at the heart of the debate on information and knowledge in development and became almost unique in striving to support and strengthen South-South initiatives both in publication and information dissemination.

Librarians Admitted to Mexican Academy of Sciences

Estela Morales Campos, Correspondent Member of the LAC Section Standing Committee, and Jose Adolfo Rodriguez Gallardo, Member of the IFLA Governing Board, were admitted as Members of the prestigious Mexican Academy of Sciences, in the branch of Humanities and Social Sciences.

The Mexican Academy of Sciences its an independent and non profit civilian organization. After 45 years the Academy has now 1907 members of relevant academic careers who work in many national and foreign institutions. So, this organization congregates many scientist of various branches of knowledge under the understanding that science, technology and education are basic tools to build a culture that allow the nations development and also the independent and critical reasoning .

Admittance to the Academy is made after a very rigorous and detailed review of the candidates' academic careers as teachers and researchers. In this case, it is also a recognition of the library profession as a scientific one.

Elizabet de Carvalho, IFLA/LAC RO Manager

INTERNATIONAL CALENDAR

2007

July 11–13, 2007. Vancouver, British Columbia, Canada.
First International Public Knowledge Project Scholarly Publishing Conference.
Contact: Lynn Copeland. E-mail: copeland@sfu.ca. Tel. +1 (604)291–3265. Fax: +1 (604)291–3023. blog: http://blogs.lib.sfu.ca/index.php/copeland.

August 19–23, 2007. Durban, South Africa.
World Library and Information Congress: 73rd IFLA Council and General Conference. *Theme:* Libraries for the future: progress, development and partnerships.
Further information from the IFLA WLIC 2007 website: http://www.ifla.org/IV/ifla73/index.htm

August 20–24, 2007. Roskilde University, Denmark.
CONTEXT'07: Sixth International and Interdisciplinary Conference on Modeling and Using Context.
Further information: http://context-07.ruc.dk/

27–29 de agosto de 2007. Centro Universitario de Investigaciones Bibliotecologicas de la UNAM, Ciudad de Mexico.
1er Simposio Internacional Sobre Organizacion del Conocimiento: Bibliotecologia y Terminologia
Further information: simposio2007@cuib.unam.mx

September 3–7, 2007. Plzeò (Pilsen), Czech Republic.
TSD 2007: International Conference on Text, Speech and Dialogue.
Further information: http://www.tsdconference.org/tsd2007

September 19–21, 2007. Lisbon, Portugal.
Librarian@2010 – Educating for the future: Joint EUCLID and EBLIDA conference.
Further information: EBLIDA http://www.eblida.org; EUCLID http://euclid.hio.no/

October 24–26, 2007. Toronto, Ontario, Canada.
International Cultural Heritage Informatics Meetings.
Further information: http://www.archimuse.com/conferences/ichim.html

24–26 de octubre de 2007. Centro Universitario de Investigaciones Bibliotecologicas de la UNAM, Ciudad de Mexico.
II Encuentro Nacional de Catalogación. *Tema:* En los umbrales de un nuevo codigo de catalogación.
Further information: cat2007@cuib.unam.mx

October 29–31, 2007. Singapore.
International IFLA Interlending and Document Supply Conference.
Further information: Poul Erlandsen (Chair, IFLA Document Delivery and Resource Sharing Section. E-mail: poer@dpu.dk

November 7–10, 2007. Chicago, Illinois, USA.
Museum Computer Network (MCN) Annual Conference.
Theme: Building Content, Building Community: 40 Years of Museum Information and Technology
Further information: *http://www.mcn.edu/conferences/index.asp?subkey=1240*

November 11–17, 2007. Quebec, Canada.
XLth International Conference of the Round Table on Archives.
Theme: Cooperation to preserve diversity.
Further information: Conseil international des Archives, 60 rue des Francs-Bourgeois, 75003 PARIS, France. Tel: +33 1 40 27 63 06. Fax: +33 1 42 72 20 65. E-mail: ica@ica.org

December 10–13, 2007, Hanoi, Vietnam.
10th International Conference on Asian Digital Libraries (ICADL 2007).
Further information: Conference web site: http://www.vista.gov.vn/icadl2007/

2008

August 10–15, 2008, Québec, Canada.
World Library and Information Congress: 74th IFLA General Conference and Council. *Theme:* Libraries without borders: navigating towards global understanding.
Further information from: http://www.ifla.org/IV/ifla74/ann2008en.pdf

2009

July 27–31, 2009. Florianópolis, SC, Brazil.
WCCE 2009: 9th IFIP World Conference on Computers in Education.
Further information: E-mail: coordenacao@wcce2009.org

ISSN: 0340-0352. DOI: 10.1177/0340035207080314

SOMMAIRES

Christine Stilwell. **Library and Information Services in South Africa: an overview. [Vue d'ensemble des services bibliothécaires et services d'information en Afrique du Sud.]**
IFLA Journal 33 (2007) No. 2, pp. 87–108

Ouvrant sur un compte rendu de la politique en matière d'information, l'article décrit les sources, systèmes et services d'information en Afrique du Sud, les incluant dans le cadre plus large du système national d'information. Suit une description du secteur de l'éducation et de la formation aux sciences bibliothécaires et sciences de l'information ainsi que de l'organisation de la profession. Cette vue d'ensemble est basée sur la littérature prélevée dans les bases de données disponibles, généralement électroniques.

Karin de Jager. **Towards establishing an Integrated System of Quality Assurance in South African Higher Education Libraries. [Vers la mise en place d'un système intégré d'assurance de la qualité dans les bibliothèques sud-africaines de l'enseignement supérieur.]**
IFLA Journal 33 (2007) No. 2, pp. 109–116

De nouvelles exigences en matière de qualité et d'impact des services bibliothécaires sur l'enseignement et la recherche exigent des bibliothèques qu'elles démontrent leur responsabilité et leur capacité à réagir aux besoins très divers des usagers. En 2004, le Comité des bibliothécaires sud-africains de l'éducation supérieure (Committee for Higher Education Librarians in South Africa ou CHELSA) a reconnu le besoin d'un ensemble bien défini de critères, normes et modèles destinés à assurer la qualité et les facteurs critiques de succès pour l'autoévaluation au sein des bibliothèques universitaires. Par conséquent, CHELSA a mis en place son propre sous-comité chargé de l'assurance de la qualité afin de fournir aux bibliothèques des consignes claires et pratiques pour se préparer aux contrôles de qualité nationaux obligatoires dans l'éducation supérieure et pour rendre opérationnel le processus d'évaluation en cours des performances des bibliothèques conformément aux mesures convenues. L'auteur, membre de ce souscomité, indique les progrès faits en vue d'un consensus et pour mettre en place dans les bibliothèques universitaires sud-africaines un système intégré et un processus d'assurance de la qualité basés sur des critères internationaux.

Jabulani Sithole. **The Challenges Faced by African Libraries and Information Centres in Documenting and Preserving Indigenous Knowledge. [Les défis auxquels sont confrontés les bibliothèques et centres d'information africains pour documenter et conserver les connaissances indigènes.]**
IFLA Journal 33 (2007) No. 2, pp. 117–123

Les bibliothèques et centres d'information africains sont confrontés à une pléthore de défis pour documenter et communiquer les connaissances indigènes. Ils comprennent le manque en ressources financières et en capacité humaine, des carences technologiques absolues et l'absence de cadres légaux au niveau national et international afin de soutenir les efforts des bibliothèques pour documenter et communiquer les connaissances indigènes. Les technologies de l'information et de la communication, qui évoluent rapidement, continuent à poser le problème de la documentation et de la répartition par les bibliothèques de ces connaissances basées sur la tradition orale et communautaire dans une base de connaissances reconnue globalement. Cet article aborde les défis, considérant certaines des leçons apprises et les pratiques d'excellence qui ont pu en être retirées.

Paiki Muswazi and Dickson Yumba. **Modernization of Library and Information Services in Higher Education in Swaziland: Strategic interventions, 2000/1–2005/6 [Modernisation des services bibliothécaires et services de l'information dans l'éducation supérieure au Swaziland : interventions stratégiques, 2000/2–2005/6.]**
IFLA Journal 33 (2007) No. 2, pp. 124–135

Il s'agit d'une discussion sur l'exécution du plan stratégique 2000/2001 – 2005/2006 de l'Université de Swaziland (UNISWA). Cet article a pour but de déterminer l'impact des technologies, politiques et procédures de l'information ainsi que de la collaboration, du financement, de la gestion, du développement des ressources humaines, de la conservation, du marketing et des stratégies de fourniture de services d'information, sur la modernisation de ses services bibliothécaires et services de l'information. Il y est dit que l'UNISWA a procédé à une considérable formation complémentaire du personnel et fait des progrès en vue d'élargir l'accès par abonnement à des ressources électroniques de qualité et d'optimiser l'utilisation de matériel à accès libre. La réalisation a eu à souffrir du faible financement, du contenu limité sur le web local, de l'infrastructure inadéquate en matière de technologie de l'information et de la communication, du manque de compétences professionnelles, et des politiques et procédures restrictives. En conclusion, il estime qu'il faut poursuivre le travail sur les facteurs précédents en tenant compte des besoins des usagers en matière d'éducation indépendante sur la durée, afin d'approfondir la modernisation des services bibliothécaires et d'information à l'UNISWA.

Elisha Rufaro T. Chiware. **Designing and Implementing Business Information Services in the SMME**

ISSN: 0340-0352. DOI: 10.1177/0340035208080872

Sector in a Developing Country: the case for Namibia. [Conception et réalisation de services professionnels d'information au sein du secteur des petites, moyennes et micro entreprises dans un pays en voie de développement: le cas de la Namibie.]
IFLA Journal 33 (2007) No. 2, pp. 136–144

Cet article évoque les stratégies de développement et de réalisation pouvant être utilisées pour déployer des services professionnels d'information au sein du secteur des petites, moyennes et micro entreprises en Namibie. Cet exposé se base sur un projet de doctorat mené à l'Université de Pretoria de 2005 à 2007 et considère les stades d'évaluation des besoins des usagers, la conception de services, la mise en oeuvre ainsi que l'évaluation de l'impact des services.

J. Gretchen Smith. **The Impact of Electronic Communications on the Science Communication Process – investigating crystallographers in South Africa. [L'impact des communications électroniques sur le processus de communication scientifique: étude des cristallographes en Afrique du Sud.]**
IFLA Journal 33 (2007) No. 2, pp. 145–159

L'auteur part du principe que la communication efficace d'informations scientifiques et technologiques est primordiale pour le succès de l'innovation technologique et pour une croissance économique soutenue, et que cela s'applique en particulier à l'Afrique du Sud. Cependant, de nombreux facteurs ont actuellement un impact sur le processus de communication d'informations, l'industrie émergeante de l'information, la globalisation et les rapides progrès technologiques n'en étant pas les moindres. Ces facteurs incitent l'auteur à examiner l'impact des modes de communication électroniques et cet article se base sur le projet de recherche. La communauté de scientifiques engagée dans la recherche cristallographique en Afrique du Sud a été choisie comme population d'étude. L'étude a fait clairement apparaître que l'augmentation significative de l'utilisation de modes et systèmes électroniques, bien qu'elle ne concerne pas la structure inhérente au processus de communication, a créé une bien plus vaste série de modes de communication et a une influence positive sur la facilité de communiquer et de collaborer. Ceci était particulièrement manifeste en ce qui concerne la coopération avec la communauté internationale de chercheurs. Il est également apparu que cet impact variait en fonction du cadre de travail des scientifiques.

Kathy Matsika. **Intellectual Property, Libraries and Access to Information in Zimbabwe. [Propriété intellectuelle, bibliothèques et accès à l'information au Zimbabwe.]**
IFLA Journal 33 (2007) No. 2, pp. 160–167

Cet article aborde certaines questions concernant l'accès à l'information et à la connaissance au Zimbabwe. Il considère notamment les défis majeurs posés par les finances, la technologie, l'infrastructure, la législation sur la propriété intellectuelle et la loi sur le Copyright. Il débat du rôle de ZIMCOPY, organisation chargée de veiller sur les droits de reproduction au Zimbabwe, dans la filière de l'information au Zimbabwe. Il accorde une attention particulière à ce que le Zimbabwe a fait pour tenter d'exploiter le potentiel des technologies de l'information et de la communication dans l'accès à l'information ainsi qu'à la disponibilité d'Internet et aux contraintes des largeurs de bandes. Plus de 70% de la population du Zimbabwe vit dans des régions rurales. Cet article montre ce qui a été tenté pour fournir l'accès à l'information par l'intermédiaire des bibliothèques et des centres d'information similaires dans les communautés aussi bien rurales qu'urbaines du Zimbabwe. Il fait aussi référence aux défis économiques auxquels doivent actuellement faire face les Zimbabwéens, et dans quelle mesure ces défis font de l'information un produit de luxe face aux problèmes quotidiens d'approvisionnement en nourriture et de survie. Un meilleur accès à l'information peut-il fournir des réponses à certains des problèmes immédiats auxquels est confrontée la société Zimbabwéenne?

Ghaji Badawi. **Libraries and Women's Participation in Nigerian Politics. [Les bibliothèques et la participation des femmes dans les affaires politiques nigérianes.]**
IFLA Journal 33 (2007) No. 2, pp. 168–175

Dans l'histoire du Nigeria, les facteurs culturels ont constitués une sérieuse source de problèmes pour le développement politique des femmes et ont continué à affecter le développement et l'importance du rôle des femmes nigérianes dans les affaires politiques. Le pays est dirigé à tous les niveaux par des hommes, non pas parce qu'iln'y a pas de femmes en mesure de remplir les fonctions, mais parce que la plupart des femmes estiment que la participation politique ne leur réserve aucune perspective. Le manque d'informations à propos de la politique et des politiciens est l'un des facteurs empêchant les femmes de voter ou de se présenter aux élections. Dans la mesure où la plupart des femmes au Nigeria résident dans des zones rurales et que leurs votes sont nécessaires pour assurer leur pleine participation aux affaires politiques, les bibliothèques doivent trouver une façon d'informer et d'encourager les femmes à participer pleinement aux élections en 2007. Cet article discute de la façon dont les bibliothèques au Nigeria s'y préparent, et ce qu'elles pourraient faire de plus pour aider pleinement à mobiliser les femmes afin qu'elles participent à la vie politique et posent leurs candidatures à des fonctions politiques aujourd'hui et demain.

ZUSAMMENFASSUNGEN

Christine Stilwell. **Library and Information Services in South Africa: an overview. [Bibliotheks- und Informationsdienste in Südafrika: ein Überblick.]**
IFLA Journal 33 (2007) No. 2, pp. 87–108

Der Beitrag beginnt mit einer Betrachtung der Informationspolitik, beschreibt dann die in Südafrika verfügbaren Informationsquellen, Systeme und Dienste und bettet diese schließlich in das breitere landesweite Informationssystem ein. Es folgt eine Beschreibung des Aus- und Weiterbildungssektors im Zusammenhang mit den Bibliotheks- und Informationswissenschaften sowie dem organisierten Berufsstand. Dieser Übersichtsartikel stützt sich auf Literatur aus den verfügbaren – meist elektronischen – Datenbanken.

Karin de Jager. **Towards establishing an Integrated System of Quality Assurance in South African Higher Education Libraries. [Bemühungen um die Etablierung eines integrierten Systems zur Qualitätssicherung in Bibliotheken an höheren Bildungsanstalten in Südafrika.]**
IFLA Journal 33 (2007) No. 2, pp. 109–116

Die in jüngster Zeit aufkommende Forderung nach Qualitätsnachweisen und Bestätigungen für den Wert der Bibliotheksdienste im Zusammenhang mit der Lehre und Forschung zwingt die Bibliotheken, Rechenschaft für ihre Verantwortlichkeit und Reaktionsbereitschaft im Hinblick auf eine Vielzahl benutzerseitiger Bedürfnisse abzulegen. Im Jahr 2004 hat das "Committee for Higher Education Librarians" [der Ausschuss für Bibliothekare an höheren Bildungsanstalten] in Südafrika (CHELSA) den Bedarf für allgemein anerkannte Kriterien, Normen und Modelle zur Qualitätssicherung und die kritischen Erfolgsfaktoren für die Selbsteinschätzung bei den Unibibliotheken erkannt. Daher hat CHELSA einen eigenen Unterausschuss für die Qualitätssicherung ins Leben gerufen, der den Bibliotheken deutliche praktische Anweisungen zur Vorbereitung auf die vorgeschriebenen landesweiten Qualitätsaudits an höheren Lehranstalten erteilen und die laufende Bewertung der Bibliotheksleistungen nach vereinbarten Maßstäben in die Praxis umsetzen soll. Der Autor, Mitglied dieses Unterausschusses, kartiert den Fortschritt im Hinblick auf die Erzielung eines Konsens, die Implementierung eines integrierten Systems und die praktische Qualitätssicherung an den Unibibliotheken in Südafrika nach international gültigen Normen.

Jabulani Sithole. **The Challenges Faced by African Libraries und Information Centres in Documenting und Preserving Indigenous Knowledge. [Die Herausforderungen für afrikanische Bibliotheken und Informationszentren bei der Dokumentierung und Erhaltung indigener Kenntnisse.]**
IFLA Journal 33 (2007) No. 2, pp. 117–123

Bei der Dokumentation und Kommunikation der autochtonen Kenntnisse sehen sich die afrikanischen Bibliotheken und Informationszentren mit einer Fülle von Herausforderungen konfrontiert. Schwierigkeiten ergeben sich aus den begrenzten finanziellen Ressourcen, den Bildungskapazitäten, technologischen Engpässen sowie deren Absolutheit und auch den fehlenden gesetzlichen Rahmenbedingungen auf nationalem wie auch internationalem Niveau zur Unterstützung der Bemühungen der Bibliotheken um die Dokumentation und Kommunikation indigener Kenntnisse. Die schnelle Entwicklung bei den Informations- und Kommunikationstechnologien stellt auch weiterhin eine Herausforderung für die Bibliotheken dar, die diese Tradition der mündlichen Überlieferung gesellschaftsspezifischer Kenntnisse in der bestmöglichen Form dokumentieren und an eine weltweit akzeptierte Informationsbank weiterleiten möchten. Der Beitrag bespricht diese Herausforderungen, analysiert dabei auch einige der in der Zwischenzeit gemachten Erfahrungen und stellt optimale Verfahren vor, die sich in der Praxis am besten bewährt haben.

Paiki Muswasi und Dickson Yumba. **Modernization of Library und Information Services in Higher Education in Swaziland: Strategic interventions, 2000/1–2005/6. [Modernisierung der Bibliotheks- und Informationsdienste an höheren Bildungsstätten in Swasiland: Strategische Interventionen, 2000/1–2005/6.]**
IFLA Journal 33 (2007) No. 2, pp. 124–135

Dieser Artikel diskutiert die Implementierung eines strategischen Plans der University of Swasiland (UNISWA) für 2000/1–2005/6. Ziel dieses Artikels ist es, die Auswirkungen der Informationstechnologie, der politischen Richtlinien und der entsprechenden Verfahrensweisen, der Zusammenarbeit, der Finanzierung, des Management, der Personalentwicklung, der Konservierung, des Marketing und der Informatio nsdienstangebotsstrategien auf die Modernisierung der Bibliotheks- und Informationsservices (Library and Information Services, LIS) zu ermitteln. Die Autoren argumentieren, dass die UNISWA eine sehr effektive Umschulung der Mitarbeiter erwirkt hat und auch durchaus Fortschritte bei der Erweiterung des Zugriffs auf qualitativ hochwertige, per Abonnement zugängliche elektronische Ressourcen verzeichnen konnte; zudem konnte die Nutzung von Freihandmaterialien optimiert werden. Die Implementierung litt jedoch unter Geldmangel, begrenzten lokalen Webinhalten, einer unzureichenden Infrastruktur für die Informations- und Komm unikationstechnologie, fehlenden

Berufsqualifikationen sowie restriktiven Regelwerken und Verfahren. Die Autoren gelangen zu der Schlussfolgerung, dass weitere Bemühungen in Richtung der genannten Faktoren als Schlüssel zur Vertiefung der Modernisierung der LIS an der UNISWA zu betrachten sind; wobei dem benutzerseitigen Bedürfnis nach lebenslangem Lernen Rechnung getragen werden sollte.

Elisha Rufaro T. Chiware. **Designing and Implementing Business Information Services in the SMME Sector in a Developing Country: the case for Namibia. [Konzipierung und Implementierung von Business Information Services im SMME-Sektor in einem Entwicklungsland: für den Fall Namibia.]**
IFLA Journal 33 (2007) No. 2, pp. 136–144

Dieser Artikel erläutert die Entwicklungs- und Implementierungsstrategien, die bei der Bereitstellung von Business Information Services bei Klein, Mittel- und Mikrobetrieben (SMMEs) in Namibia zum Einsatz gelangen können. Der Beitrag stützt sich auf eine Doktorarbeit, die zwischen 2005 und 2007 an der Universität Pretoria geschrieben wurde, und enthält auch eine genauere Betrachtung der einzelnen Stufen bei der Einschätzung der benutzerseitigen Bedürfnisse, dem Konzept für diese Services, der Implementierungsphase sowie der Folgenabschätzung (Impact Assesssment) im Hinblick auf die Services.

J. Gretchen Smith. **The Impact of Electronic Communications on the Science Communication Process – investigating crystallographers in South Africa [Die Bedeutung der elektronischen Kommunikation für die Kommunikation in den Wissenschaften – eine Kristallographenstudie in Südafrika].**
IFLA Journal 33 (2007) No. 2, pp. 145–159

Der Autor stützt sich auf die Annahme, dass die effektive Kommunikation wissenschaftlicher oder technologischer Informationen ein Schlüsselmoment für den Erfolg der technologischen Innovationen sowie für das nachhaltige wirtschaftliche Wachstum ist und dass dies insbesondere für Südafrika gilt. Jedoch gibt es heute viele Einflussfaktoren für die Informat ionskommunikation, wozu nicht zuletzt die aufkeimende Informationsindustrie, die Globalisierung sowie der schnelle technologische Fortschritt zählen. Dieser Faktor hat den Autor dazu motiviert, die Bedeutung der elektronischen Kommunikationswege zu untersuchen; dieser Artikel stützt sich demnach auf das fragliche Forschungsprojekt. Was die Population betrifft, stützt sich diese Studie auf die wissenschaftliche Gemeinschaft, die sich in Südafrika mit der kristallographischen Forschung befasst. Sie hat deutlich gezeigt, dass die signifikant zunehmende Beliebtheit elektronischer Betriebsarten und Systeme die inhärente Struktur der Kommunikationsprozesse in keiner Weise beeinträchtigt, sondern vielmehr eine viel breitere Palette an Kommunikationswegen geschaffen und die Leichtigkeit der Kommunikation und des Zusammenwirkens durchaus positiv beeinflusst hat. Das zeigt sich ganz besonders deutlich bei der Kooperation mit der internationalen Forschungsgemeinschaft. Zudem wurde aufgezeigt, dass dieser Einfluss in Abhängigkeit von der Arbeitsumgebung der einzelnen Wissenschaftler durchaus unterschiedlich stark sein kann.

Kathy Matsika. **Intellectual Property, Libraries and Access to Information in Zimbabwe. [Geistige Eigentumsrechte, Bibliotheken und Informationszugriff in Zimbabwe.]**
IFLA Journal 33 (2007) No. 2, pp. 160–167

Dieser Beitrag befasst sich mit einigen der Faktoren, die den Zugriff auf Informationen und Kenntnisse in Zimbabwe beeinträchtigen. Die Autorin betrachtet die primären Herausforderungen im Zusammenhang mit den Finanzen, der Technologie, der Infrastruktur, der Gesetze zum Schutz der geistigen Eigentumsrechte und insbesondere auch dem Urhebergesetz. Zur Sprache kommt dabei auch die Rolle, die ZIMCOPY, die Reproduction Rights Organization (Organisation zur Verteidigung der Reproduktionsrechte) von Zimbabwe, innerhalb der Informationskette in Zimbabwe spielt. Dabei liegt der Schwerpunkt insbesondere auf der Frage, was Zimbabwe unternommen hat, um das Potenzial der Informations- und Kommunikationstechnologien (Information and Communication Technologies, ICTs) beim Informationszugriff nutzbar zu machen; von Interesse sind zudem die Verfügbarkeit des Internets sowie die bestehenden Engpässe im Hinblick auf die Bandbreite. In Zimbabwe leben über 70 Prozent der Bevölkerung in ländlichen Gebieten. Dieser Beitrag beschreibt die Bemühungen, die unternommen worden sind, um den Informationszugriff über Bibliotheken und ähnliche Informationszentren in städtischen und ländlichen Gemeinschaften in Zimbabwe zu gewährleisten. Zudem kommen die aktuellen wirtschaftlichen Herausforderungen zur Sprache, mit denen die Menschen in Zimbabwe zu tun haben, und es wird besprochen, wie diese Entwicklung das Informationsangebot angesichts der täglichen Probleme der Nahrungsmittelversorgung und des Überlebenskampfs zu einem Luxus gemacht hat. Kann ein verbesserter Informationszugriff Antworten auf einige der dringendsten Probleme bieten, mit denen sich die Gesellschaft in Zimbabwe heute konfrontiert sieht?

Ghaji Badawi. **Libraries and Women's Participation in Nigerian Politics. [Bibliotheken und Teilnahme der Frauen an der Politik in Nigeria.]**
IFLA Journal 33 (2007) No. 2, pp. 168–175

In der nigerianischen Geschichte haben kulturelle Faktoren traditionsgemäß der politischen

Entwicklung des weiblichen Teils der Bevölkerung stark im Weg gestanden; sie haben auch weiterhin die politische Rollenentwicklung und den Einfluss nigerianischer Frauen auf die Politik gehemmt und beeinträchtigt. Die Regierungen des Landes werden auf allen Ebenen von Männern geführt. Das liegt nicht daran, dass es keine Frauen gibt, die für diese Positionen geeignet wären, sondern vielmehr daran, dass die meisten Frauen davon ausgehen, dass die Beteiligung an der Politik ohnehin hoffnungslos für sie ist. Durch den herrschenden Informationsmangel über die Politik und die Politiker werden die Frauen beispielsweise daran gehindert, bei den Wahlen ihre Stimme abzugeben oder sich sogar selbst daran zu beteiligen. Da die meisten Frauen in Nigeria in ländlichen Gebieten wohnen und ihre Stimmen benötigt werden, um ihre volle Teilnahme an der Politik sicherzustellen, müssen die Bibliotheken Mittel und Wege finden, um Frauen über die Wahlen im Jahr 2007 zu informieren und sie für eine volle Teilnahme an dieser Wahl zu gewinnen. Dieser Beitrag zeigt auf, in welcher Weise die Bibliotheken in Nigeria ihre Bemühungen in dieser Hinsicht intensivieren und erwähnt auch, was sie weiter tun können, um sich mit allen Kräften daran zu beteiligen, die Teilnahme der Frauen an der Politik zu fördern und sie zu ermutigen, sich um politische Positionen zu bewerben, jetzt und in der Zukunft.

RESÚMENES

Christine Stilwell. **Library and Information Services in South Africa: an overview. [Servicios de bibliotecas y de información en Sudáfrica: visión general.]**
IFLA Journal 33 (2007) No. 2, pp. 87–108

Este artículo comienza con un resumen de la política de información y después describe las fuentes, los sistemas y los servicios de información en Sudáfrica para englobarlos en un sistema de información nacional de mayor envergadura. Posteriormente, se ofrece una descripción del sector de la educación y formación en las áreas de biblioteconomía e información y de los aspectos formales de la profesión. Esta información general se basa en los documentos obtenidos de las bases de datos disponibles, principalmente electrónicas.

Karin de Jager. **Towards establishing an Integrated System of Quality Assurance in South African Higher Education Libraries. [Hacia el establecimiento de un sistema integrado de control de calidad en las bibliotecas de centros educativos superiores sudafricanos.]**
IFLA Journal 33 (2007) No. 2, pp. 109–116

Las recientes exigencias de calidad y el impacto de los servicios de biblioteconomía en la enseñanza y la investigación exigen que las bibliotecas demuestren su responsabilidad y capacidad de responder a las diversas necesidades de los usuarios. En 2004, el Comité de Bibliotecarios de Educación Superior de Sudáfrica (Committee for Higher Education Librarians in South Africa, CHELSA) reconoció la necesidad de disponer de un conjunto de criterios, normas y modelos consensuados para el control de la calidad y de factores de éxito fundamentales para la autoevaluación en las bibliotecas universitarias. Por tanto, CHELSA creó su propio Subcomité de Control de Calidad para facilitar a las bibliotecas una orientación clara y práctica a la hora de preparar las auditorías de calidad obligatorias para centros de educación superior, y para poner en marcha un proceso continuado de evaluación del funcionamiento de las bibliotecas conforme a los criterios acordados. El autor, un miembro de dicho Subcomité, describe el avance hacia la creación de un consenso y el establecimiento de un sistema y proceso integrados para el control de la calidad en las bibliotecas universitarias de Sudáfrica en función de las normas internacionales.

Jabulani Sithole. **The Challenges Faced by African Libraries und Information Centres in Documenting und Preserving Indigenous Knowledge. [Los retos a los que se enfrentan las bibliotecas y centros de información africanos a la hora de documentar y conservar la sabiduría autóctona.]**
IFLA Journal 33 (2007) No. 2, pp. 117–123

Las bibliotecas y centros de información africanos se enfrentan a multitud de dificultades a la hora de documentar y documentar la sabiduría autóctona. Entre ellos se incluyen la falta de recursos financieros y de capacidades humanas, las deficiencias tecnológicas y su carácter absoluto, y la falta de marcos legales a escala nacional e internacional para respaldar las tareas de documentación y comunicación de la sabiduría autóctona que realizan las bibliotecas. La rápida evolución que experimentan las tecnologías de la información y comunicación siguen planteando un reto a la hora de evaluar la mejor manera de documentar y difundir, de la mejor manera posible, esta sabiduría oral y de la comunidad en una base de conocimientos generalmente aceptada. El documento analiza estos retos. Para ello, ahonda en algunas lecciones aprendidas y en las mejores prácticas que han surgido a la hora de abordarlos.

Paiki Muswazi y Dickson Yumba. **Modernization of Library und Information Services in Higher Education in Swaziland: Strategic**

interventions, 2000/1–2005/6. [Modernización de los servicios de bibliotecas e información en los centros de educación superior de Swazilandia: Intervenciones estratégicas, 2000/1–2005/6.]
IFLA Journal 33 (2007) No. 2, pp. 124–135

Este documento aborda la implantación de un plan estratégico de la Universidad de Swazilandia (UNISWA) entre 2000/2001 y 2005/2006. El objetivo de este artículo es evaluar el impacto de las estrategias de tecnologías de la información, políticas y procedimientos, colaboración, financiación, gestión, desarrollo de recursos humanos, conservación, marketing y prestación de servicios para modernizar sus servicios de bibliotecas y de información (LIS). En él se indica que UNISWA ha realizado un gran esfuerzo de formación para sus empleados y ha avanzado en la labor de ampliar el acceso a recursos de suscripción electrónica de calidad y de optimizar el uso de los materiales de libre acceso. La implantación se vio afectada por la escasez de fondos, el reducido contenido local de la Web, la infraestructura inadecuada de tecnologías de la información y comunicación, la escasa capacitación profesional de los empleados y las políticas y procedimientos restrictivos. La conclusión que se extrae es que clave para profundizar en la modernización de LIS en UNISWA es realizar mayores esfuerzos en relación con los factores anteriores, teniendo en cuenta las necesidades que tienen los usuarios de una formación continua independiente.

Elisha Rufaro T. Chiware. **Designing and Implementing Business Information Services in the SMME Sector in a Developing Country: the case for Namibia. [Diseñar e implantar servicios de información empresarial en el sector de las PyMES de un país en desarrollo: el caso de Namibia.]**
IFLA Journal 33 (2007) No. 2, pp. 136–144

Este artículo aborda las estrategias de desarrollo e implantación que pueden aplicarse a la hora de poner en marcha servicios de información empresarial en el sector de las pequeñas y medianas empresas (PyMES) de Namibia. El documento se basa en un proyecto doctoral llevado a cabo en la Universidad de Pretoria del 2005 al 2007 y analiza las distintas etapas para evaluar las necesidades de los usuarios, el diseño de los servicios, la fase de implantación y la evaluación del impacto que producen dichos servicios.

J. Gretchen Smith. **The Impact of Electronic Communications on the Science Communication Process – investigating crystallographers in South Africa. [El impacto de la comunicación electrónica en el proceso de información científico: estudio de los cristalógrafos en Sudáfrica.]**
IFLA Journal 33 (2007) No. 2, pp. 145–159

El autor parte de la premisa de que la comunicación efectiva de la información científica y tecnológica es fundamental para el éxito de la innovación tecnológica y el desarrollo económico sostenible, y que esta condición se cumple especialmente en el caso de Sudáfrica. No obstante, son muchos los factores que incluyen en el proceso de comunicación de la información, entre los que cabe destacar el floreciente sector de la información, la globalización y los rápidos avances tecnológicos. Este factor ha servido de motivación al autor para estudiar el impacto de los modos de comunicación electrónica, y este artículo se basa en dicho proyecto de investigación. La comunidad de científicos que participan en la investigación de cristalógrafos en Sudáfrica fue la población elegida para este estudio. De este trabajo se desprende claramente que el importante aumento del uso de modos y sistemas electrónicos, si bien no afecta a la estructura inherente del proceso de comunicación, ha creado una variedad de formas de comunicación mucho más amplia y ha contribuido positivamente a facilitar la comunicación y la colaboración. Esto se ha puesto especialmente de manifiesto en el caso de la comunidad internacional de investigadores. En el estudio también se refleja claramente que el impacto varía según el entorno de trabajo de los científicos.

Kathy Matsika. **Intellectual Property, Libraries and Access to Information in Zimbabwe. [Propiedad intelectual, bibliotecas y acceso a la información en Zimbabwe.]**
IFLA Journal 33 (2007) No. 2, pp. 160–167

Este documento abordará algunos de los problemas que afectan a la información y el conocimiento en Zimbabwe. En él se analizarán los principales retos que plantean las finanzas, la tecnología, la infraestructura, las leyes de propiedad intelectual y la Ley de Derechos de Autor, en particular. Asimismo, debatirá la función que desempeña ZIMCOPY, la organización de derechos de reprografía de Zimbabwe, en la cadena de información del país. Prestará especial atención a lo que ha hecho Zimbabwe para tratar de aprovechar el potencial de las tecnologías de la información y la comunicación (TIC) para acceder a la información, la disponibilidad de Internet y las restricciones del ancho de banda. Más del 70% de la población del país vive en zonas rurales. Este documento demostrará los intentos que se están realizando para facilitar el acceso a la información mediante bibliotecas y centros de información similares, tanto en las comunidades urbanas como rurales de Zimbabwe. También abordará los retos económicos actuales a los que se enfrentan los habitantes de este país, y cómo se ha llegado a considerar a la información como un lujo cuando se compara con los problemas diarios de suministro de alimentos y supervivencia. ¿Un mejor acceso a la información puede responder a algunos de los problemas inmediatos a los que se enfrenta la sociedad de Zimbabwe?

Ghaji Badawi. **Libraries und Women's Participation in Nigerian Politics. [Bibliotecas y participación de las mujeres en la política de Nigeria.]**
IFLA Journal 33 (2007) No. 2, pp. 168–175

En la historia de Nigeria, los factores culturales han constituido una fuente de graves problemas para el avance de las mujeres en la política, y han seguido afectando al desarrollo y relevancia de las mujeres nigerianas en sus funciones dentro de la política. El país siempre ha tenido gobiernos dirigidos por hombres a todos los niveles, no sólo porque no hay mujeres con la formación adecuada para cubrir los puestos, sino porque la mayoría piensa que la participación en la política es un esfuerzo en vano para ellas. La falta de información sobre la política y los políticos es uno de los factores que impiden que las mujeres voten o participen en las elecciones. Puesto que la mayoría de las nigerianas viven en zonas rurales y sus votos son necesarios para garantizar su plena participación en la política, es fundamental que las bibliotecas encuentren la manera de que las mujeres puedan ser informadas y motivadas para que participen plenamente en las elecciones de 2007. Este documento debate de qué forma las bibliotecas de Nigeria se están preparando para ello y qué otras cosas pueden hacer a la hora de contribuir a que las mujeres participen y opten a argos políticos ahora y en el futuro.

Рефераты статей

Кристин Стилуэлл. **Library and Information Services in South Africa: an overview. [Библиотека и информационные услуги в Южной Африке: обзор.]**
IFLA Journal 33 (2007) No. 2, pp. 87–108

В статье дается обзор информационной политики, описываются источники, системы и услуги в области информации в Южной Африке, а также перспективы введения их в более широкую информационную систему национального уровня. Описывается деятельность сектора обучения и тренинга по библиотечному и информационному делу и организация профессиональных ресурсов. Обзор основывается на литературе, доступной в электронных базах данных.

Карин де Ягер. **Towards establishing an Integrated System of Quality Assurance in South African Higher Education Libraries. [На пути к созданию интегрированной системы обеспечения качества в библиотеках высших учебных заведений Южной Африки.]**
IFLA Journal 33 (2007) No. 2, pp. 109–116

Отмеченное в последнее время увеличение потребности в определении качества и влияние уровня библиотечного обслуживания на качество образования и исследований требуют от библиотек проявления ответственности и способности реагировать на разнообразные запросы пользователей. В 2004 г. Комитет библиотекарей с высшим образованием в Южной Африке (CHELSA) признал необходимость определить согласованный набор критериев, стандартов и моделей обеспечения качества, а также критические факторы успеха для проведения самооценки университетскими библиотеками. CHELSA учредил специальный подкомитет по обеспечению качества. Его задача — разработать для библиотек ясное практическое руководство по подготовке к обязательным национальным аудиторским проверкам качества высшего образования, активизировать постоянную оценку качества деятельности библиотек в соответствии с согласованными критериями. Автор, член этого подкомитета, оценивает прогресс в достижении консенсуса, создании интегрированной системы и обеспечении качества в библиотеках южно-африканских университетов на основе международных стандартов.

Джабулани Ситхоул. **The Challenges Faced by African Libraries and Information Centres in Documenting and Preserving Indigenous Knowledge. [Вызовы, стоящие перед африканскими библиотеками и информационными центрами, по документированию и сохранению коренных знаний.]**
IFLA Journal 33 (2007) No. 2, pp. 117–123

Перед африканскими библиотеками и информационными центрами стоит множество проблем, касающихся документирования и передачи коренных знаний. К числу трудностей относятся отсутствие финансовых ресурсов, ограниченность человеческих возможностей, недостаток технологий и их абсолютность, а также отсутствие на национальном и международном уровнях юридических механизмов по поддержке усилий библиотек, направленных на документирование и передачу коренных знаний. С учетом быстрого развития информационных и коммуникационных технологий библиотеки по-прежнему сталкиваются с проблемами организации работы по оптимальному документированию и инкорпорированию этих устных, основанных на местной специфике, знаний в глобальный банк знаний. В статье описываются примеры преодоления указанных трудностей, некоторые извлеченные уроки и передовые практические методы, наработанные в процессе их решения.

Паики Мусвази и Диксон Юмба. **Modernization of Library and Information Services in Higher Education in Swaziland: Strategic interventions, 2000/1–2005/6. [Модернизация библиотек и информационных услуг в системе высшего образования Свазиленда: стратегическое вмешательство, 2000/1–2005/6.]**

IFLA Journal 33 (2007) No. 2, pp. 124–135

Описывается дискуссия по вопросам имплементации стратегического плана Свазилендского университета (UNISWA) на 2000/1–2005/6 годы. Цель статьи — оценить влияние на модернизацию библиотечных и информационных услуг университета следующих факторов: информационные технологии, принципы и процедуры, коллективное использование, финансирование, менеджмент, развитие людских ресурсов, уровень сохранности, маркетинг и стратегии предоставления информационных услуг. Утверждается, что UNISWA провел серьезную переподготовку кадров и добился определенного прогресса в расширении доступа к качественным электронным ресурсам на основе абонентской подписки и оптимизации использования открытого доступа к материалам. Негативное влияние на имплементацию оказали недостаточное финансирование, ограниченное наполнение веб-страниц содержанием местного значения, неадекватная инфраструктура информационных и коммуникационных технологий, недостаточные профессиональные навыки, а также ограничительные методы и процедуры. Делается вывод, что ключевым элементом углубления модернизации БИУ в UNISWA является дальнейшая работа по вышеперечисленным факторам с учетом потребностей пользователей в независимом пожизненном обучении.

Элиша Руфаро Т. Чиваре. **Designing and Implementing Business Information Services in the SMME Sector in a Developing Country: the case for Namibia. [Разработка и внедрение услуг бизнес-информирования в секторе малого и среднего бизнеса в развивающейся стране: пример Намибии.]**
В стать IFLA Journal 33 (2007) No. 2, pp. 136–144

е, базирующейся на материалах проекта, осуществлявшегося в университете Претории в 2005 — 2007 гг., описываются стратегии разработки и внедрения, которые могут применяться при развертывании бизнес-информирования в секторе малого и среднего бизнеса в Намибии. Рассматриваются стадии оценки потребностей пользователя, планирования услуг и внедрения, а также оцениваются последствия оказания таких услуг.

Дж. Гретхен Смит. **The Impact of Electronic Communications on the Science Communication Process – investigating crystallographers in SouthAfrica. [Влияние электронных средств связи на процесс передачи научной информации – на примере кристаллографических исследований в Южной Африке.]**
IFLA Journal 33 (2007) No. 2, pp. 145–159

Автор исходит из посылки, что эффективная передача научной и технологической информации является основой успеха в области технологических инноваций и поступательного экономического роста, и что это особенно относится к Южной Африке. Однако в настоящее время на передачу информации влияет множество факторов, наиболее важными из которых являются развитие информационной индустрии, глобализация и быстрый технологический прогресс. Это побудило автора исследовать влияние электронных способов передачи информации, что и стало основой данной статьи. В качестве предмета изучения было выбрано сообщество ученых, занимающихся кристаллографическими исследованиями в Южной Африке. Полученные результаты показали, что значительное расширение использования электронных методов и систем, хотя и не влияет на собственную структуру процесса передачи данных, но в действительности создает более широкий диапазон способов передачи данных и облегчает коммуникации и сотрудничества. Это особенно проявилось в сотрудничестве с международным научным сообществом. Также выяснилось, что это влияние изменялось в зависимости от окружающей ученых производственной среды.

Кэти Мацика. **Intellectual Property, Libraries and Access to Information in Zimbabwe. [Интеллектуальная собственность, библиотеки и доступ к информации в Зимбабве.]**
IFLA Journal 33 (2007) No. 2, pp. 160–167

В статье рассматриваются некоторые вопросы доступа к информации и знаниям в Зимбабве, в том числе основные проблемы, связанные с финансированием, технологиями, инфраструктурой, законами об интеллектуальной собственности и, в частности, Законом об авторском праве. Обсуждается роль ZIMCOPY – Организации по правам воспроизведения в Зимбабве – в информационной цепочке страны. Особое внимание обращается на то, что удалось сделать в Зимбабве для использования потенциала информационных и коммуникационных технологий (ICT) обеспечения доступа к информации; доступность Интернета и ограничения пропускной способности. Более 70% населения Зимбабве проживает в сельской местности. Автор описывает усилия, предпринятые для обеспечения доступа к информации посредством библиотек и информационных центров, как в городских, так и в сельских ссобществах страны. В ней также рассматриваются экономические проблемы, стоящие перед Зимбабве в настоящее время, и то, какой роскошью представляется доступ к информации по сравнению с решением каждодневных проблем поиска пропитания и выживания. Может ли расширение доступа к информации дать ответы на самые насущные проблемы, стоящие перед обществом Зимбабе?

Гаджи Бадави. **Libraries and Women's Participation in Nigerian Politics. [Библиотеки и участие женщин в нигерийской политике.]**
IFLA Journal 33 (2007) No. 2, pp. 168–175

На протяжении истории Нигерии культурные факторы были серьезным источником проблем политического развития женщин и продолжают влиять на развитие и роль

нигерийских женщин в политической жизни. То, что руководителями исполнительных структур всех уровней являются исключительно мужчины, происходит не из-за отсутствия женщин, способных занять эти посты, а в силу того, что большинство женщин считает участие в политической жизни безнадежным для себя занятием. Среди факторов, удерживающих женщин от голосования или баллотирования на выборах, выделяется недостаток информации о политике и политиках. Поскольку большинство женщин в Нигерии проживают в сельской местности, а их голоса необходимы для обеспечения их полномасштабного участия в политической жизни, библиотекам необходимо находить возможности для информирования женщин о выборах 2007 г. и побуждения их к полноправному участию в избирательном процессе. В статье обсуждается ход подготовки библиотек Нигерии к этой работе и их возможные действия для максимального участия в мобилизации женщин на выборы и борьбе за выборные должности в настоящем и будущем.