Editorial

This issue broadly focuses on information management aimed at enhancing service delivery and socio-economic development. The first to the fifth papers cover competitive intelligence, public information management, and records management (paper and digital) including legal aspects. The last three papers focus on developing information competencies through information literacy and information intermediation in order to meet respective information needs of users as well as service providers.

In the lead article by Du Toit and Sewdass, the authors studied competitive intelligence in Morocco with the findings revealing that the country lacks competitiveness and as a result much of its industrial base is focused on import substitution, rather than exports. The second article Munge, Rotich and Wamukoya present the results of an investigation into information management (IM) in selected government ministries in Kenya in the context of the country's strategic *Vision 2030.* The authors argue that quality IM in Government is a prerequisite to the successful implementation of socio-economic development strategies outlined in Vision 2030. Abioye's paper is based on a study that examined records management practices in Nigerian courts as they affect the administration of justice. The findings established that the courts generated huge volumes of records predominantly in paper format but the management of such records did not follow the critical elements of records life cycle model, with adverse implication for efficient administration of justice in the country. The article by Ndakasharwa and Khayundi presents the results of a study that sought to investigate the management of digital records in the Office of the Premier (OTP) in the Eastern Cape Province of South Africa. The results revealed that though existing initiatives aimed at establishing records management practices are in place, several challenges associated with managing digital records exist. The fifth article by Nsibirwa, Hoskins and Stilwell is based on survey that investigated the challenges related to legal instruments affecting the legal deposit of digital materials in South Africa. The findings revealed that though the South African legal deposit act covers electronic materials, majority of the depositories do not have policies to manage or collect these types of materials.

The sixth article written by Ojedokun discusses information literacy competence of librarians in Southwest Nigerian universities. The findings reveal weaknesses in librarians' knowledge on each of the steps in the information research process, which range from identifying the concepts to using the results. The seventh article by Fourie and Meyer presents a conceptual analysis of nurses as information intermediaries for patients in palliative care. The authors assert that despite evidence of numerous successful information provision interventions by nurses, they are unable to meet certain information needs of patients and their families. The last article on the study of changing needs of information professionals in Zimbabwe by Chikonzo, Bothma, Kusekwa and Mushowani revealed that the needs of information professionals are changing and that the current curricula in Zimbabwe are failing to cope with the changes.

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Aboyade, B.O. 1989.T*he provision of information for rural development.* Ibadan: Fountain Publications, 104 p.

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Competitive Intelligence (CI) in Morocco

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Abstract

The business environment is highly complex in Morocco, and the purpose of this article is to examine the current situation with regard to competitive intelligence (CI) activities in Morocco. Morocco lacks competitiveness, as much of its industrial base has long been focused on import substitution, rather than on competitive exports. This study is mainly exploratory in nature. A questionnaire survey methodology was used where a questionnaire was administered to CI experts in organisations to determine the current state of CI in Morocco.

Key words:
Competitive Intelligence (CI), Morocco,

Introduction

Morocco is among the emerging nations hence innovation will play an increasingly important role in the country's future growth. The Government has set up the Moroccan Innovation Initiative to promote the country as an innovation hub. This initiative provides an in-depth examination of the role of innovation in Morocco competitiveness and lays out a concrete roadmap of recommendations for the future, organised into three broad categories: talent, investment and infrastructure (African Economic Outlook, 2012). However, Morocco lacks competitiveness, as much of its industrial base has long been focused on import substitution, rather than on competitive exports. This could make the prospect of integration to the global economy a painful one. But Morocco is taking bold steps to change things for the better (Oxford Business Group, 2006).

Therefore, competitiveness has drawn much attention in Morocco. In this regard, the Moroccan government has undertaken an economic development programme and set up a vision derived from an 1800-page survey of the Kingdom's economic potential in the global marketplace. In 2005, McKinsey carried out a diagnosis of 12 sectors and 77 industrial branches, so as to benchmark Morocco's competitiveness against three groups of countries: direct competitors (Tunisia, Egypt, Romania, Turkey and Indonesia), aspiration countries (Poland, Czech Republic, Portugal, Malaysia, China and India) and world-class countries (Spain, Ireland, South Korea and Singapore). The survey also forecasted Morocco's future potential competitiveness and performance in each sector, focusing on prospective improvements, measures and incentives (Oxford Business Group, 2006).

In order to enhance the competitiveness of its industry sector, Morocco carried out the Emergence plan. This plan aimed to identify a number of medium and high value-added activities dubbed Morocco's Global Trades, in which Morocco can gain a key competitive edge, thanks to its access to the main markets, logistical proximity to Europe, abundance of qualified human resources, and quality of life. These will be leveraged to attract export-oriented activities. The Emergence plan aims at achieving several ambitious targets, such as creating 440,000 direct jobs by 2015 (National Pact for Industrial Emergence, 2008).

This article investigates the current state of competitive intelligence (CI) implementation in organisations in Morocco, and it is aimed at looking at the progress made in terms of improving its competitiveness in the global market.

Competitive Intelligence

Since CI is a relatively new management concept, it

is necessary to ensure that an accurate understanding and definition of CI is obtained. Several terms such as business intelligence, competitor intelligence, and even industrial espionage are found in literature to express the concept of CI. According to Calof and Skinner (1999), CI is actionable information arising from a process involving planning, collecting, analysing and disseminating information on the external environment for opportunities that have the potential to affect a company's competitive position. The basis of CI is knowing the difference between information and intelligence. Streamcrest (2003) believes that CI provides a framework of knowledge to organise coordinated activities as a group, to share information, to allow analysis and to incorporate active collection techniques. Executives usually have to read through several reports and proposals before making decisions, and it is often found that they are overwhelmed with information and lack intelligence that will enable them to make more efficient decisions. Therefore, it can be said that companies that are able to turn information into intelligence will succeed (Sewdass, 2012).

A comprehensive definition of CI is "the legal collection and analysis of information regarding the capabilities, vulnerabilities, and intensions of business competitors conducted by using 'open sources' and ethical inquiry" (SCIP, 2012). Kahaner (1997) eloquently discusses what the new world of CI is by showing how companies efficiently, systematically and economically collect information, analyse and use it to make decisions. This understanding can assist the decision makers in organisations in making more informed decisions concerning improving the quality of services or products offered to citizens. Most organisations, and individuals alike, confine competition to the other companies performing the same function as they are, and literature usually refers to these as 'the direct competitors' or 'traditional competitors'.

The basic reason for this could be the fact that it is relatively easy to spot traditional competitors, study and analyse them. However, it must be realised that in the business world, competition can be 'anything and everything' that will send the customer away from your door (Sawyer, 2002).

Competitiveness in the Global Economy

According to Garelli (2003), "the competitiveness of nations looks at how nations create and maintain an environment which sustains the competitiveness of its enterprises." A global study of CI in large companies that was conducted by the Global Intelligence Alliance (2005) revealed the following benefits that companies claimed to have achieved through the use of CI:

- Increased quality of information received,
- Accelerated decision making,
- Improved systematic understanding of information collection and analysis,
- Improved effectiveness,
- Increased awareness,
- Improved dissemination of information,
- Improved threat and opportunity identification,
- Time and cost saving.

The study also indicated that CI was able to fill a primarily strategic role in the companies, with top managers being the most important users of CI information products. CI was also used in strategic planning and business development, continuous monitoring of the companies, and gathering of information on competitors, customers, and industries in the field (Global Intelligence Alliance, 2005).

While, in theory, the process of conducting CI seems to be a relatively logical and simple way of conducting business, the implementation of such a process is more challenging and daunting. Hence, the reason why many organisations have failed to use, or have not even considered utilising CI in their operations. The situation is further compounded by other factors. These factors include: the negative attitudes of managers; the organisation's corporate culture not being conducive for CI; previous research failures of CI programmes that have not worked out as a result of ineffective implementation; lack of understanding of the organisation's strengths and weaknesses; the lack of resources to conduct CI; and, finally the fact that CI is regarded as an additional cost for the organisations (Broome, 2001; Kahaner, 1997; Metayer, 1999; Madden, 2001).

The Situation in Morocco with Regard to Competitiveness

The Kingdom of Morocco is a country located in North Africa. It has a population of over 32 million and an area of 446,550 km². Morocco went through a decade of major political, economic and social change (Semmar, 2012). Despite the uncertainties raised by the Arab Spring, Morocco has been able to show some resilient growth in 2011; and this growth trend is expected to continue in 2012 and 2013 (African Economic Outlook, 2012). The vibrant domestic demand and consistent progress in agricultural and non-agricultural production can also be credited for Morocco's growth trend. Furthermore, it has assisted Morocco to cope with the deteriorating economic situation in Europe which is its main economic partner. However, even with the good economic performance, the country is still facing several social challenges such as persistent inequalities, social disparities, and a dysfunctional labour market. Morocco also has a high unemployment rate, particularly among young graduates and women (African Economic Outlook, 2012).

Clerc (2008) states that Morocco, like any nation with an emerging economy is concerned about the sustainability of its development, or even its survival, the preservation of its identity between Europe and Africa, and the search for new capabilities and economic power (free trade agreements with the United States, with the European Union and with Turkey). The considerable investment, rationalisation and restructuring efforts by the government have deployed to meet Morocco's needs and confront the challenge of globalisation (Semmar, 2012). Structural reforms by the Moroccan government since the early 1980s were to re-establish and stabilise macroeconomic equilibrium and liberalise the economy (Semmar, 2012). The result was to lift the monopoly on foreign trade, liberalise prices and open the national economy to foreign investment. Furthermore, there is a dire need to design the Moroccan intelligence process while taking into consideration the richness of the Moroccan cultural base. In 2011, Morocco was elected 'African country of the future 2011/12' by FDI Intelligence (Semmar, 2012).

In the literature of CI in Morocco (Ahrar, 2011; Clerc, 2008), the terms economic intelligence, social intelligence and competitive technical intelligence are often used to explain competitiveness. Social intelligence is defined as "All activities of a company connected to the intelligence, the ability to adapt to meet changing circumstances in order to achieve agreed development goals" (Clerc, 2008). The effectiveness of social intelligence is further based on the size and dynamism of the country's industry knowledge, as well as the density and quality of information networks and expertise. Economic intelligence is referred to as the intelligence that "allows territory and organisations to act effectively on the environment, to anticipate major trends and opportunities, to warn of the threat of loss of attractiveness, competitiveness or information" (Clerc, 2008). Competitive technical intelligence is the process focused on monitoring the competitive and technical environment of an organisation. It is actionable information about external science and technology developments that could impact on a company's competitive position (Ashton and Klavans, 1997).

Morocco has approximately 10,000 industrial firms with fewer than ten employees, and tissue production is more than 90% composed of small and medium-sized enterprises (SMEs) and very small entities. SMEs account for more than 40% of the industry, employing more than 50% of the workforce (Ahrar, 2011). According to the Global Competitiveness Report (Schwab, 2011), over the past year, the Middle East and North Africa (MENA) region has been affected by a great deal of turbulence that will have an impact on national competitiveness and might further exacerbate the competitiveness gap between the Gulf economies and the rest of the region. The competitiveness of many countries from North Africa stagnates.

According to the Global Competitiveness Index (Schwab, 2011), Morocco was ranked 73rd out of 142 countries. The size of its economy was ranked 57th in the market size. The country's financial market development was ranked 62nd, and this indicates that there is not a very high level of confidence and trust in Morocco's financial markets in other parts of the world. Morocco was also rated 80th in business sophistication and innovation. The most problematic factors for doing business in Morocco are: access to financing, corruption, inadequate supply of

infrastructure, inefficient government bureaucracy, and tax rates and tax regulations in Morocco. These are the most critical areas that pose problems for other countries doing business with Morocco.

The Emergence of CI in Morocco

Morocco suffers from numerous programmes launched by the various governments since independence because they didn't have a common strategy. A lot of financial resources have been wasted as a result. In reaction to this, many experts have launched a call for the Moroccan government to define a new strategy where CI must be integrated. In the last decade, Morocco has followed a strategy of open market to develop its economy. This was a mistake because it compromises the long term development of the country. Hence, a solution can be found from a new way of thinking where geopolitical factors have to be analysed (Senoussi, 2010). The world is not any more limited to the political borders but to the economical dynamics.

Morocco was the first country in North Africa known as the Maghreb to be most interested in CI since November 2004 when the first meeting on CI was held in Tetouan in North of Morocco, under the theme: Economic intelligence and strategic watch: challenges and strategies for the emergent economies. Since that date, many initiatives were undertaken; the first initiative was the creation of the Strategic Watch Committee within the Prime Minister Department. The Committee examined propositions made by sector committees with regard to different sectors; and based on these propositions, new measures have been selected and will subsequently be submitted to the government.

Senoussi (2010) stresses that the lack of a security strategy impacts negatively on economical stakeholders. Morocco also does not have tools to lead the country in a competitive world and to imagine the future. The country does not have a large culture of CI and of sharing information between public and private sectors for common actions of lobbying and markets penetration.

Clerc (2006) states that managers and directors in firms are aware of the importance of information, however, their actions are not structured and formalised. Moreover, there is no professional CI organisation and CI work is not primarily done by professionals. In contrast, CI is more advanced in large Moroccan companies, especially in the finance sector. Some Moroccan groups like Omnium Nord African (ONA) , Barid Al Maghrib, BMCE Bank, and another financial institution called Caisse de Depot et de Gestion (CDG) have already set up a CI service or a CI department and have launched programmes in this field (Clerc, 2008). However, most of these programmes are focused only on environmental analysis.

In recent years, the political, economic and academic Moroccans have gradually accepted CI as a process aimed at using reliable strategic information for business development, public organisations but also projects and territories. Morocco has decided to develop institutions to organise a public CI policy on a national and territorial level (Ahrar, 2011).

Morocco has created sixteen regional centres (to promote investments and assist investors). Moreover, it has created a special agency for SME's to help managers identifying new areas of development and enhance their situation with their competitors. CI as process and tool is recommended and supported by many organisations such as the following:

- *Moroccan Institute of Scientific and Technical Information:* It allows Moroccan scientists both in the public and private sectors to have fast and efficient access to scientific and technical information. Also, it supports the dynamics of technological innovation in all economic sectors.
- *Moroccan Industrial and Commercial Property Office:* It aims to protect patents and to support universities and research centres.
- *Royal Institute of Strategic Studies:* Created in 2007, this institute offers some information analysis at a large scale so as to be able to deal with the country's main issues, adopting a cross-cutting and multidimensional approach.
- *National Centre of Documentation:* The centre keeps tracks of the evolution of different sector, such as mining, agriculture, industry, tourism and crafts, healthcare, and provides timely information.

The Competitive Intelligence and Strategic Management Centre (CIEMS) is an academic centre

that was established in 2011 at Rabat, and it is dedicated to promote the field of CI and Strategic Management, through bringing academics together with business, the public sector and policy thinkers in order to develop and deliver research reports and studies which have an immediate and significant impact on management practice (CIEMS, 2012). CIEMS' goal is to promote the execution and dissemination of the best possible research on issues central to organisations, especially in CI and strategic management. Its mission is to work with partners in industry, government and other organisations to provide exciting new insights and to help improve the competitiveness of organisations. CIEMS's vision is to help the Moroccan society through theoretical and applied CI research projects. CIEMS intends to shift its emphasis from the development of pure research methodologies towards more focused algorithms and approaches to directly address real problems.

Methodology

This study is mainly exploratory in nature. A questionnaire survey methodology was used where a questionnaire was administered to CI experts in organisations in Morocco. The questionnaire was distributed by CIEMS.

The organisations surveyed for the study were based on the Standard Industrial Classification that is used worldwide and comprises ten categories. An additional category, oil and gas industry, was added. Hence, the industry classification used in the study was as follows:

- Agriculture, hunting, forestry and fishing industry
- Mining and quarrying industry
- Manufacturing industry
- Electricity, gas and water supply industry
- Construction industry
- Wholesale and retail trade industry
- Tourism industry
- Transport, storage and communication industry
- Financial, insurance, real estate and business services
- Community, social and personal services
- Oil and gas industry.

A combination of convenience sampling and snowball sampling was used to identify the experts in CI in these industries. Convenience sampling refers to the procedure of obtaining respondents who are most conveniently available (Zikmund, 2003). Snowball sampling on the other hand refers to a variety of procedures in which initial respondents may or may not be selected by probability methods, but in which additional respondents are then obtained from information provided by initial respondents (Cooper and Schindler, 2007). The researchers had to rely on their personal contacts and networks in industries to identify the experts in CI. These experts were assumed to have a sound knowledge of CI, its implementation and benefits for organisations. The snowball sampling technique was then applied, where the respondents of the convenience sampling technique were asked for references of other respondents who would possibly complete the questionnaire. This is perhaps a limitation of this study, as some important experts practising CI could possibly be left out of the survey.

The questionnaire was structured as follows:

- Section A: Background and demographic information
- Section B: Competitive situation in organisations
- Section C: Competitive intelligence implementation in organisations.

The questionnaire was sent as an attachment via e-mail, and it was accompanied by a cover letter to all identified respondents. The completed questionnaires had to be returned to the email of the researchers. The questionnaire was e-mailed to 40 experts identified, and 25 copies of the questionnaire which were completed represent a response rate of 62.5%.

Research Findings

Background Information of the Respondents

The gender of the respondents was mostly male (71%), and the majority (92%) of the respondents were younger than 50 years. The majority of respondents had postgraduate degrees and were in either top management or senior/middle management level of their organisations (88%). Only 29% of the

respondents were employed by companies with more than 500 employees. It was interesting to note that 21% of the companies with less than 50 employees in the organisations also use CI as a strategic tool. Most of the companies that used CI were from construction business (16%), and this was closely followed by financial, insurance, real estate, transport, storage and communication; tourism and agriculture, hunting, forestry and fishing (each with 13%).

Competitive Situation

While the majority of Moroccan organisations indicated that competition in their business environment was very intense (42%), only 13% of the respondents were of the opinion that they coped above average with changes in the business environment. This is an even greater motivation for organisations in Morocco to pay more attention to CI as a strategic business tool.

According to the majority of respondents in Morocco (67%), a formal CI function did not exist in their organisations and the CI function had been in existence for more than five years in only 30% of the companies.

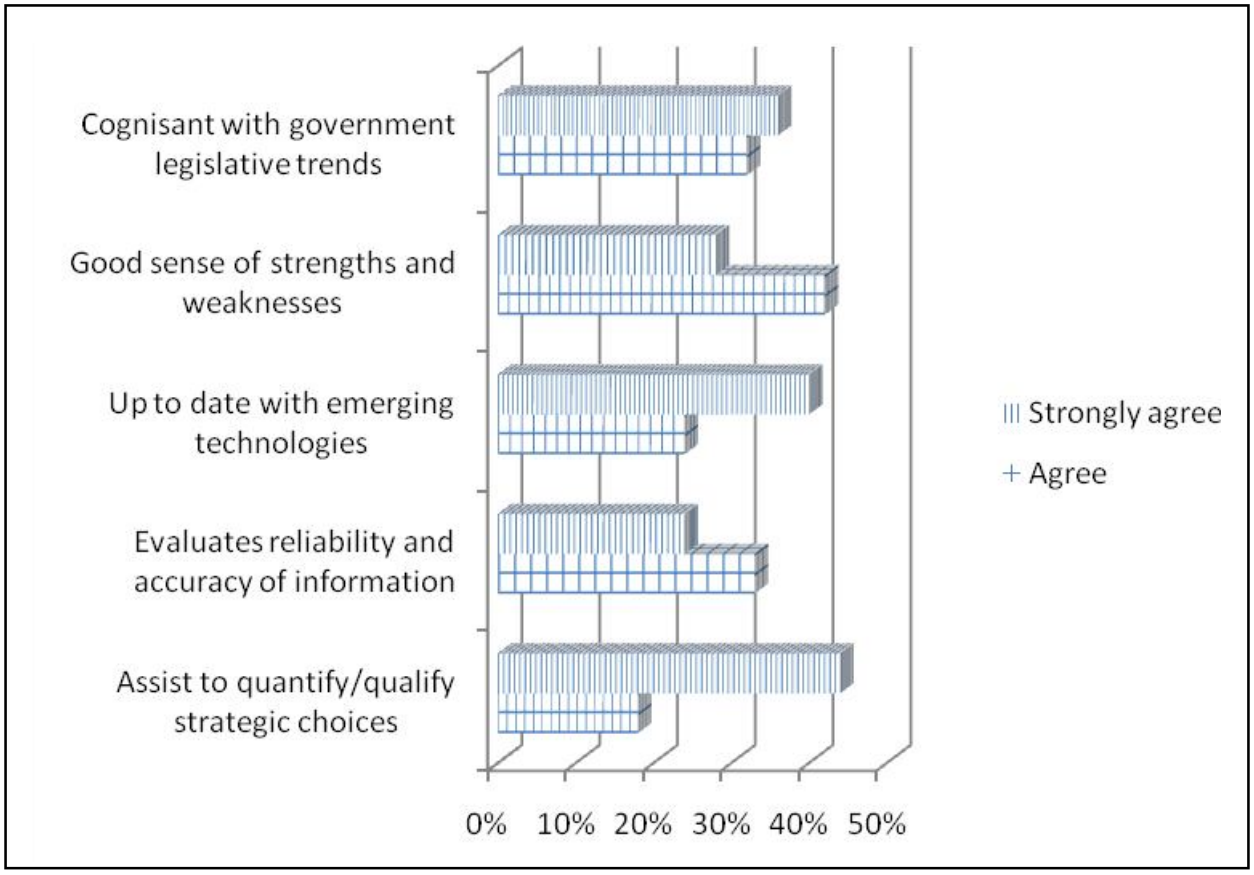

Figure 1: Competitive Intelligence Activities

According to figure 1, 44% of the respondents strongly agreed that the most important CI activity in their organisations was to use CI to assist to quantify/qualify strategic choices, while 40% of the respondents indicated that CI was used to keep up to date with emerging technologies. Thirty-six per cent of the respondents strongly agreed that CI was used to remain cognisant with government legislative trends, while 28% of the respondents strongly agreed that they used CI to make good sense of strengths and weaknesses in the organisations. A further 24% of the respondents used CI to evaluate the reliability and accuracy of information. It was interesting to note that CI was not used extensively by organisations for decision making, only 16% of the respondents strongly agreed that CI was being used for decision making in their organisations.

Use of Secondary Sources

The most important secondary sources used by Moroccan organisations (see Figure 2) were exhibitions/road shows/trade shows (40% used yearly), customer demographics (32% used quarterly), trade journals (28% used daily), information on potential business partners (24% used weekly).

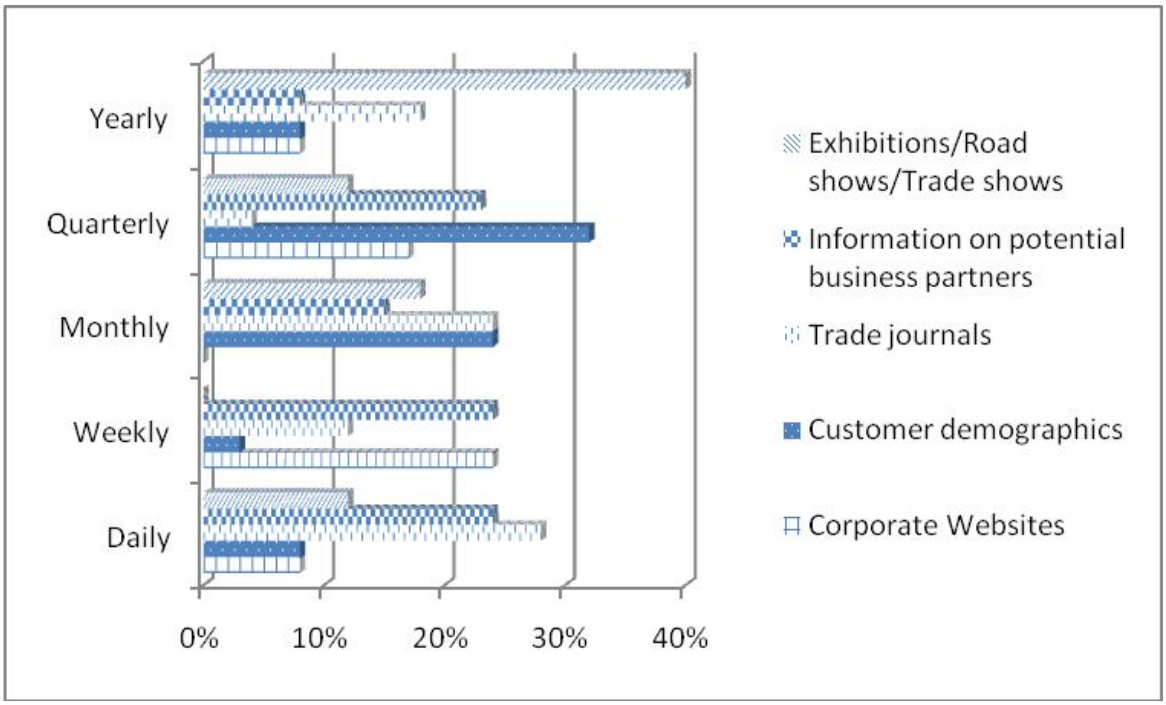

Figure 2: Secondary Sources Most Used

Use of Primary Sources

The most important primary sources used by organisations in Morocco were direct customer feedback and suppliers (see Figure 3). Industry experts, analysis of competitors' products and sales staff were also important primary sources of information for organisations in Morocco.

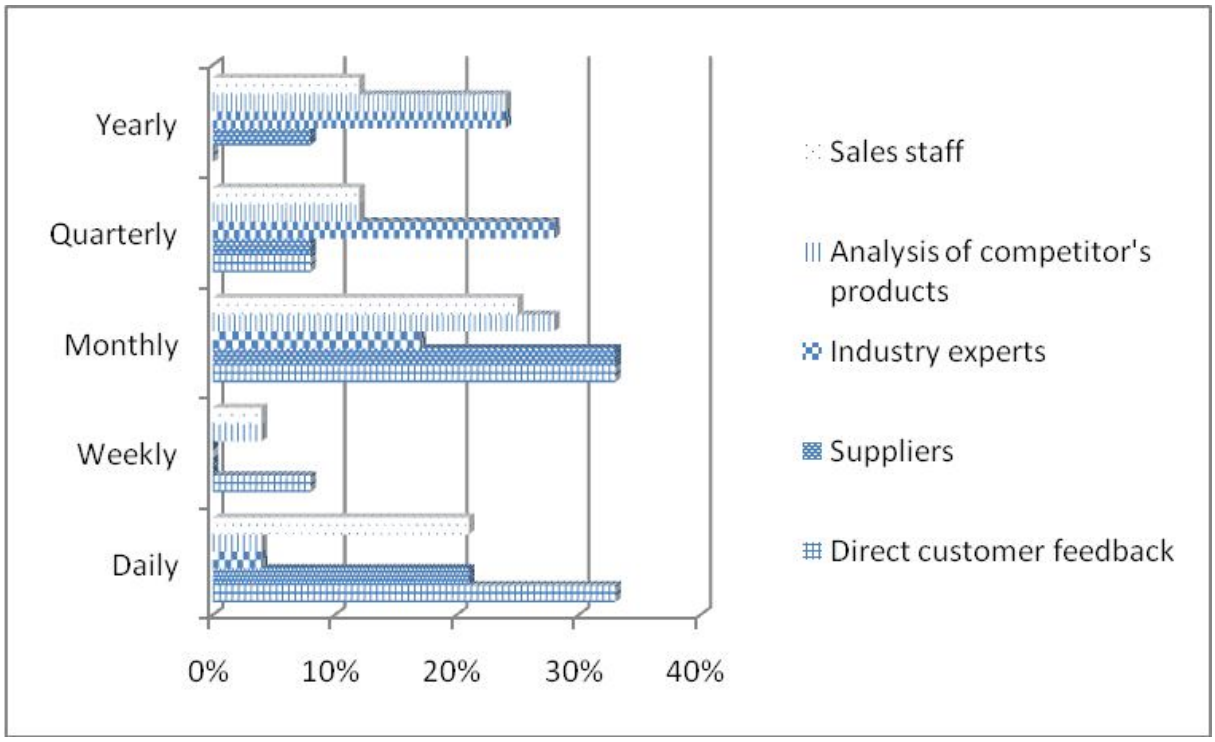

Figure 3: Use of Primary Sources

CI Analytical Methods or Models Used

With regard to the use of CI analytical methods or models, 28% of the respondents used financial analysis and valuation as well as benchmarking to a very great extent. Organisations also used customer segmentation analysis, financial ratio and statement analysis, and GAP analysis to a great extent (see Figure 4).

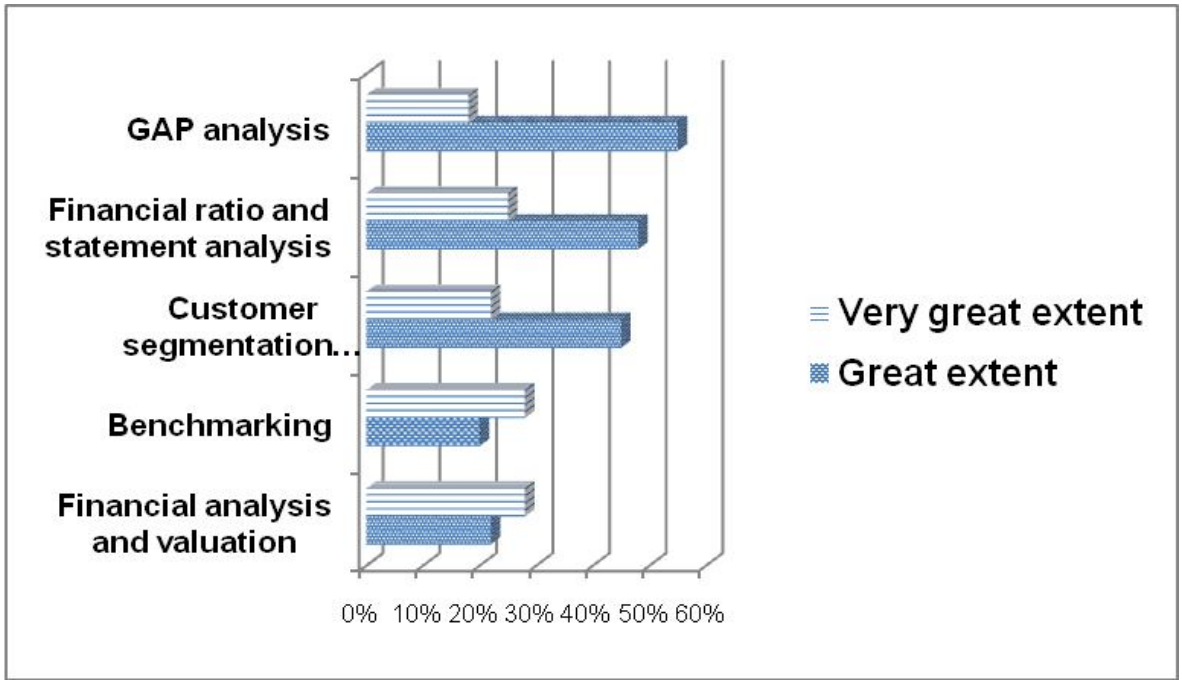

Figure 4: Analytical Methods or Models Used

Methods Used to Distribute and Present CI Findings

The most popular method to distribute CI findings in Morocco was emails which were used by 40% of the organisations to a great extent and by 24% of the organisations to a very great extent. Reports were used by 28% of the organisations to a great extent and by 28% of the organisations to a very great extent. Personal delivery, presentations and newsletters are also used by 76% of the organisations to a very great extent (see Figure 5).

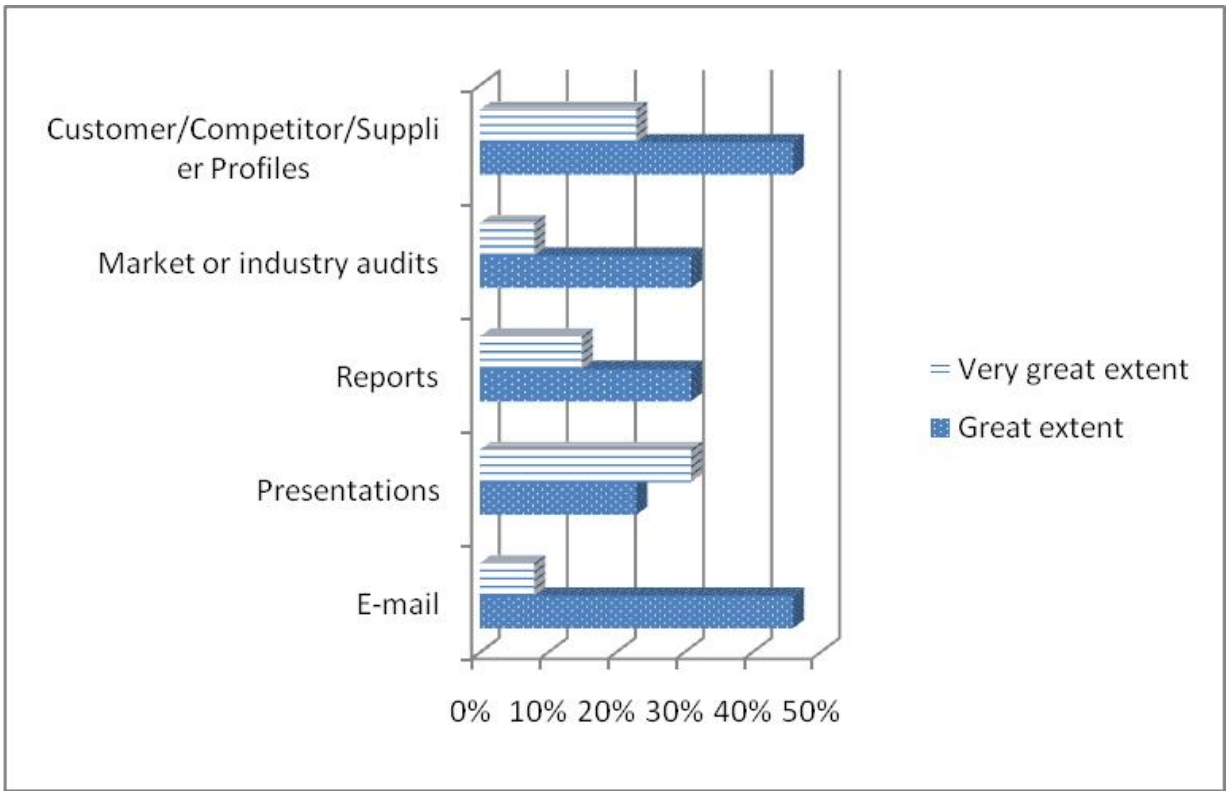

Figure 5: Methods Used to Distribute & Present CI Findings

Conclusion and Recommendations

Morocco as a country continues to rank low in the world of competitiveness. The research done for this article focused on the implementation of CI in the various organisations in Morocco and to see how CI is used to improve the competitive situation of these companies and to assist them in decision making. It was interesting to note that many of the companies are involved in implementing CI. However, most of the companies indicated that they did not use CI for decision making purposes. It is evident from the study that CI is necessary for developing countries such as Morocco. Furthermore, CI as a strategic management tool must form part of efforts to enhance competitive behaviour among Moroccan companies, and it requires commitment and support from government leaders and professional organisations such as CIEMS. Cooperative ventures between other African countries and Morocco should be explored in order for them to learn from the experiences of other successful developing countries in the region.

CI as one of the fastest growing domains has long been acknowledged as a strategic management tool and if it is used in strategic decision-making, it could enhance the competitiveness of Moroccan organisations in the global economy. In the light of the importance for Morocco to compete in the global economy, the hope is expressed that the definition on competitiveness as quoted earlier (Garelli, 2003) can be paraphrased as follows:

The competitiveness of Morocco should focus on creating an environment which facilitates the competitiveness of companies and encourages the implementation of competitive intelligence for long-term sustainability.

Acknowledgement

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A Situational Analysis of Information Management in Selected Government Ministries in the Context of *Kenya Vision 2030*

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Abstract

Information is the fuel that drives government programmes and services. For Government ministries in Kenya therefore, effectively managing information is key to provision of service delivery, development and growth of the country, especially in successfully implementing strategies articulated in the Kenya Vision 2030, the country's long-term socio-economic development blue-print whose aim is to create a globally competitive and prosperous country with a high quality of life by the year 2030. Unfortunately, the role of information and by extension that of information management (IM), as an essential foundation upon which to base this growth strategy is not articulated. Yet, there is urgent need to ensure that line ministries focus on effectively managing information as a driver for the socio-economic transformation envisaged in the Kenya Vision 2030. This article presents findings of an investigation into the state of IM in selected Government ministries as a prerequisite to the successful implementation of strategies outlined in the Kenya Vision 2030. In carrying out this study, three broad objectives were pursued, that is to: establish the extent to which IM is implemented in Government ministries in order to support the realisation of the Kenya Vision 2030; investigate the issues that the ministries face with respect to their ability to effectively manage information within the Vision 2030 framework; and suggest measures that can be taken to ensure that IM is successfully integrated in Government ministries in support of the Kenya Vision 2030 implementation.

Qualitative research methods, including in-depth interviews with 60 respondents drawn from six line ministries that have crucial projects to be implemented in six foundation areas of the Kenya Vision 2030, document and literature analysis, were used to build an understanding of the extent to which IM has been implemented in Government ministries. The data was analysed and interpreted qualitatively. The findings show that IM infrastructure is inadequate.

Keywords:
Information, Information Management, Kenya,Policy implementation, Vision 2030, Public Service Delivery

Background

There were grave concerns about Kenya's economic performance when a new National Coalition Government took office in the year 2003. This resulted in the design of a socio-economic blueprint, Economic Recovery Strategy for Wealth and Employment Creation (ERS) covering the period 2003-2007. ERS was largely credited for the country's economic recovery and as its lifespan came to an end there was need to develop a new development strategy to build on the successes achieved under the ERS. In 2005, the Government accepted a recommendation by the National Economic and Social Council (NESC) to prepare a long-term vision to guide Kenya's development up to the year 2030. NESC is an advisory body that was appointed by President Mwai Kibaki of Kenya in September 2004 to advise on important development matters across the sectors. The advisory body is composed of representatives of the government, the private sector

and the international community.

The result was the unveiling of the *Kenya Vision 2030*, Kenya's long-term national socio-economic planning strategy, whose aim is to create a globally competitive and prosperous country with a high quality of life by the year 2030. The *Vision* is anchored on three key pillars: economic, social, and political (Republic of Kenya, 2007) which are, in turn, firmly anchored on the following six foundations: infrastructure, science, technology and innovation, land reform, human resource development, security, and public service reform. The *Vision* is being implemented in five year medium-term plans, the first one covering the period 2008-2012. Simultaneously, the *Vision* aspires to meet the millennium development goals (MDGs) for Kenya by the year 2015.

The realisation of this vision will impact government ministries in a big way. Government ministries are the main source that citizens can turn to for information regarding policies, strategies and the requirements for the realisation of the *Vision*. Information is an essential component of effective management and service delivery in all organisations, in both the private and the public sectors. In particular, information generated and held by government ministries is important to the development of a country because it concerns many issues relevant to the quality of citizens' lives, including public health, environmental problems, education, water supply, sanitation, housing, roads and demographic and employment trends. In other words, information should be the fuel that drives government programmes and services. Wilson (2006) points out that:

> All of the services that [government] provides to citizens, businesses, and to internal clients are about information in one way or another. The provision of information is often the service itself.

The consequence of all this should be the continued focus on improving the management of information by government through its various ministries and other public sector organisations, driven by a range of factors, including a need to improve the efficiency of business processes and the desire to deliver new and/or improved services to internal, as well as external clients. It cannot be gainsaid, therefore, that for government ministries, effective management of information is key to development and growth of the country. In the Kenyan context, this is crucial, especially in shepherding the nation through the socio-economic transformation envisaged by the *Kenya Vision 2030*, and particularly in successfully implementing strategies articulated in that *Vision*.

Sadly, the role of information and by extension that of information management (IM), as an essential foundation upon which to base the growth strategy provided for in the *Vision* is not articulated. Indeed, Kenya has a poor track record of successfully implementing policy directives articulated in such visions or roadmaps. Good examples that come to mind include:

- *Sessional Paper No.1 of 1994 on Recovery and Sustainable Development to the Year 2010* which made some reference to the need to improve agricultural information flows, and hence the need for investment in agricultural information systems, production of appropriate literature and development of libraries at district and sub-district levels (Republic of Kenya, 1994).
- *Sessional paper No.2 of 1996 on industrialisation to the year 2020* which aimed to map a strategy for Kenya's industrialisation policy and to lay the foundation for the structural transformation required to enable Kenya become industrialised by the year 2020. It mentioned the need to put in place "a well defined means of transferring technology and information to entrepreneurs…" (Republic of Kenya, 1996). There was no policy on how ministries were to integrate IM in the industrialisation strategy implementation matrix.

It is evident that there has only been the occasional reference to the role of information (and thus IM) or even adequate integration of information-related issues in these policy documents. This state of affairs may be attributed to various reasons, but arguably, the biggest shortcoming has been failure to anchor them on a sound IM strategy. Similarly, an analysis of the *Kenya Vision 2030* reveals the same

situation. The *Vision* contains some mention of how information and communication technologies (ICTs) will be utilised to accomplish a few strategies in some of the growth areas but it does not assure a "whole-of-government" approach to IM, especially in the ministries. It is difficult to envisage how the *Vision* is to be implemented successfully without incorporating information in its implementation strategy.

Consequently, an investigation into the state of IM in Government ministries is therefore more important today than at any other time in Kenya's history; it could be the start of a journey towards developing an overall IM strategy for successful implementation of *Kenya Vision 2030*, and any other related government initiatives. For the purpose of this study, the following six line ministries, namely: Energy (MoE); Higher Education, Science and Technology (MHEST); Lands (MoL); Public Service (MoPS), Provincial Administration and Internal Security (MPAIS); and Planning, National Development and Vision 2030 (MPND), were investigated. These ministries provided a "whole-of-government" IM perspective.

Statement of the Problem

Information is a critical resource in driving government programmes and services. For Government ministries in Kenya therefore, effectively managing information is key to provision of service delivery as well as to development and growth of the country, especially in successfully implementing strategies articulated in the *Kenya Vision 2030*, the country's long-term socio-economic development blueprint whose aim is to create a globally competitive and prosperous country with a high quality of life by the year 2030. Unfortunately, the role of information and by extension that of information management (IM), as an essential foundation upon which to base this growth strategy is not articulated. Indeed, apart from the occasional reference to the intention to use information and communication technologies in a few areas, the *Vision* has not targeted an overall IM strategy within government ministries.

In particular, it is postulated that the IM framework existing in government ministries is impeded by a number of weaknesses, including: poor planning for IM issues with the consequence that resources allocated for IM are inadequate; low regard for IM by managers and staff; and the information needs of public sector players are not adequately met. Consequently, an investigation into the state of IM in the public sector is deemed important, as a prerequisite to developing an overall IM strategy for successful implementation of *Kenya Vision 2030*, and any other related government initiatives.

Aim and Objectives

The aim of the study was to investigate the state of IM in selected Government ministries as a prerequisite to the successful implementation of strategies outlined in the *Kenya Vision 2030*. In carrying out the study, three broad objectives were pursued, that is to: establish the extent to which IM is implemented in Government ministries in order to support the realisation of the *Kenya Vision 2030*; investigate the issues that the ministries face with respect to their ability to effectively manage information within the *Vision 2030* framework; and, suggest measures that can be taken to ensure that IM is successfully integrated in Government ministries in support of the *Kenya Vision 2030* implementation.

Literature Review

There are many ways to conceptualise what information management (IM) is. This is reflected by the many definitions of IM found in the professional literature. However, the scope of any such conceptualisation must be viewed in the context of the environment in which information itself will operate. For example, according to the *International Encyclopaedia of Information and Library Science (quoted in* Kahn and Blair, 2004), IM may be understood to deal with the value, quality, ownership, use, and security of information in the context of organisational performance. According to Ocholla (2011:27), citing Wikipedia, IM is the collection and management of information from one or more sources and distribution of that information to one or more audience. Information therefore would refer to all types of information of value, whether having their origin inside or outside the organisation, including data resources, such as production data, records and files related, for example, to the personnel

function, market research data and competitive intelligence from a wide range of sources (Williams, 2004).

Onyancha and Ocholla, Skyme, and Gu as cited by Ocholla (2011) understand IM from the point of view of information processes that involve information technology (IT). This view does not include all information processes; and unfortunately, it is the view that has been shared for a long time by many chief executives, who more commonly limit the information officers' (whatever their designation may be) portfolio to IT processes. From these and other different approaches, it may be argued that in practical terms, IM consists of a wealth of actions that can be taken to achieve business objectives, and whose possible uses and relationships can be better understood through the lens of IM processes, which include: information planning, creating/collecting, evaluating, organising/storing, analysing, using/ disseminating, reviewing, maintaining, and disposing information.

These processes compare very well with the stages of the information life cycle management framework, and a combination of these two (IM processes and IM life cycle management) may therefore be used to conceptualise a simplified framework of IM that can be applied in any organisation, including Government ministries in Kenya, as shown in figure 1 below.

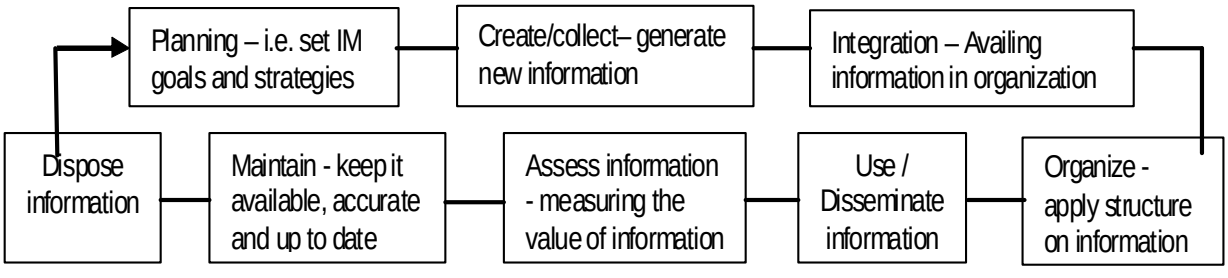

Figure 1: A Simplified Conceptual Framework for Information Management

This conceptual framework was adopted in this study as a basis on which to discuss the extent of IM integration in the business processes within Government ministries. It also provides us with a working definition of IM within the context of this study, that is: the means by which Government ministries plan for, identify, create, collect, organise, govern, secure, control, use and disseminate, preserve and dispose of all types and formats of information from a wide range of internal or external sources, as well as any means through which the value of that information is identified and exploited to its fullest extent. The focus of IM is to ensure that the right information is available to the right person, in the right format and medium, at the right time.

Impact of Information Management on Government Performance

Government is the largest producer of information. It cannot, therefore, be gainsaid that information is government's most critical resource for managing national resources, executing national functions, measuring performance and delivering services (Ngulube, 2001). When such information (often existing in a variety of formats) is properly managed, it becomes the fuel that drives government and public sector programmes and services, which are often in the form of information itself. Thus, it is incumbent upon government to manage its information in such a way that it is easily accessible and usable by the policy makers and the public in general.

Governments empower citizens and place them at the centre of the development process by providing them with access to relevant, accurate, timely and comprehensive information. This is in recognition of information as a key driver of socio-economic development and an essential component for effective management and service delivery, and for informed decision-making. IM can build public confidence in government planning and decision-making, result in the delivery of high-quality services and programmes, and lead to improved efficiencies in government.

Information Management Landscape in Kenya

Information management infrastructure comprises all

the systems, legislation and policies related to information generation, processing, access and use for a variety of purposes by both individuals and organisations. Like most other governments the world over, the Kenyan government and its public service have used paper records to record the decisions of government, the statutes of the nation and correspondence with citizens over the years.

There is evidence of a gradual recognition in recent years of the importance of information for development. Towards this end, there have been developments in the area of information systems growth and policy environment. There are several local initiatives put forward by different groups such as the Building Information Communities in Africa (BICA -Kenya) a collaborative effort between the British Council and key organisations in Kenya working towards providing a strategic direction and leadership on Information Society agenda and on the global knowledge society issues; the African Virtual Library Kenya Chapter (AVL-K) project aims at mobilising mainly academic and public libraries around the country to form an on-line information sharing partnership (Wanyoike, 2005); the Kenya Education Network (KENET) initiative; the Nepad e-initiative for schools – a programme m to connect all primary and secondary schools to the Internet in 10 years (Barasa, 2005), and the DrumNet project, an IDRC-sponsored project that aims to improve the livelihoods of farmers through the provision of information via the Internet (Opala, 2004).

However, the integration of information into the processes that lead to national economic, social, scientific and technological development has been far from satisfactory. Government is in the information business; everything it does is based on information – from briefing notes to senior executives, to cheques issued to citizens, to licences issued to businesses, to statistics provided to researchers and academics, and to information designed to provide the accurate, complete, and relevant context public servants require to make decisions and deliver their programmes (McDonald, 2000). This is true of all governments, whether in developed or developing economies such as Kenya.

Information and its effective management are important at all levels: from the government as a whole, to individual ministries and programmes, to individual civil servants. Yet, at all levels, the ability to create, use and preserve information effectively is being challenged. Getting the right information to the right person or persons, at the right time, in the right form and format, at a reasonable cost is a generally accepted principle that is becoming difficult to operationalise, especially in an electronic environment. This study also raises concerns about the quality and integrity of the Kenya Government ministries' IM infrastructure. These challenges are, of course, not unique to government ministries *per se*. The problems associated with different aspects of IM within the public sector in Kenya have been noted by scholars and practitioners (Wamukoya, 1996; Mnjama, 2003; Kemoni and Ngulube, 2008). These help to illustrate the inadequate way in which the issue of IM has been handled within the government and public sector as a whole. Failure to address these concerns has resulted in a number of challenges, including:

- citizens and public servants are unable to find government information recorded in multiple forms and formats, and access government services;
- the absence of a well articulated IM strategy has increased the risk to government ministries of having to rely upon a poorly designed infrastructure to support decision making, and the delivery of programmes and services, and;
- the absence of an effective accountability framework where public servants can be held to account for their stewardship of government information has resulted in confusion (in terms of roles and responsibilities), and increased costs.

Information Policy Environment

Kenya lacks a comprehensive national information policy. However, there are several sectoral policies in the form of legislation, regulations and guidelines that influence information acquisition, accessibility, dissemination, utilisation and availability. They include public libraries (the KNLS Board Act), archives (the Public Archives and Documentation Services Act), legal-deposit (the Books and Newspaper Act). Other relevant laws include the Copyright Act, the Industrial Property Act, the Science and Technology Act, the

Museums Act, the Universities Acts, and the Education Act. There is also the Sessional Paper No.5 of 1982 dealing with science and technology information, and the District Focus for Rural Development Circular No. 1/86 which dealt with the establishment of the District Information and Documentation Centres (DIDCs).

Kenya has also not formulated integrated national ICT policies. The policy activities in the recent years indicate an eager awareness of the potential of IT in the development of Kenya's economy. The lack of integrated policies is probably due to the political, legal and technical difficulties of formulating and implementing them. The government is optimistic about setting up national frameworks for IT development by using less difficult approaches, and is therefore in the process of formulating and implementing IT sectoral policies, which would evidently bring about increased use of IT in the country.

It is instructive, however, that Kenya does not have a sessional paper or even a long-term strategy that focuses on information policy as a strategic national resource which can become the foundation upon which the socio-economic development process can be anchored.

Methodology

The units of analysis for this study were the Head Office Departments and Units in six line ministries, namely: Energy (MoE); Higher Education, Science and Technology (MHEST); Lands (MoL); Public Service (MoPS), Provincial Administration and Internal Security (MPAIS); and Planning, National Development and Vision 2030 (MPND),

The study adopted a qualitative approach, which was mainly concerned with the participants' perspectives of the topic under study. The units of analysis for this study were the Head Office Departments and Units in six line ministries, namely: Energy (MoE); Higher Education, Science and Technology (MHEST); Lands (MoL); Public Service (MoPS), Provincial Administration and Internal Security (MPAIS); and Planning, National Development and Vision 2030 (MPND), which have flagship projects that are being implemented within the six foundations upon which the *Vision's* three pillars (economic, social and political) are anchored.

Data were obtained through personal interviewing from the collective membership directly responsible for managing information, and those who influence, in one way or another, the implementation of IM in the ministries. Personal interviewing is a preferred method in collecting qualitative data and when researchers seek to obtain data that is both reliable and valid (Silverman, 1993). Each interview lasted 30-40 minutes. Data were collected between July and December , 2011. A total of 60 interviews were conducted as shown in the table below.

Table 1: Sampling Methods and Distribution of Sample Size for the Study

Strata	Sampling Method	MPND (n_1) Sample size	MoE (n_2) Sample size	MHEST (n_3) Sample size	MoL (n_4) Sample size	MoPS (n_5) Sample size	MPAIS (n_6) Sample size	Total
Heads of Information-related Services (Library, Records Management, and ICTs)	Census	3	3	3	3	3	3	18
Other Information-related Services Staff	Systematic	4	3	4	4	5	4	24
Top Administrators	Purposive	2	2	2	2	2	2	12
Project Planning Unit Staff	Purposive	1	1	1	1	1	1	6
Total		10	9	10	11	11	10	60

Presentation of Findings and

sues that were

deemed to hinder effective and efficient delivery of government programmes and services within the *Kenya Vision 2030* context. The most significant of these issues are organised according to the conceptual IM framework identified above.

Information Planning

The study determined that a common understanding of the concept of IM, even among senior ministry staff, was lacking. Additionally, the role of IM in decision making, programme and service delivery, among the middle and low cadres, had yet to be established. There does not exist a Government-wide (nor Ministry-specific) IM policy framework to guide employees in handling and/or managing different types of information within the ministries. It is instructive that though all ministries had strategic plans, none of those recognises or even states clearly the role that information should play in the successful implementation of the strategic plan. As the head of library services at the Ministry of Higher Education candidly observed:

> "Lack of an information policy within the ministry and even within the government as a whole compromises the quality of information services. We submit plans for our units but they are rarely included in the overall ministry strategic plans."

Human Resource for IM

Questions were raised about the extent to which the Government ministries had the right people in place with the requisite knowledge, skills, and abilities to build and maintain an IM infrastructure. Among the concerns expressed were the following:

- A government-wide perspective on the nature of the work required to build and maintain an IM infrastructure has yet to be established.
- A shared view of what ministries need to know about IM and what skills and abilities they need to have yet to be established.
- The roles and responsibilities of ministry employees for managing the information resources they create, use and preserve to support their work have not been reflected in their job descriptions;
- An IM competency framework has yet to be defined and there is no mechanism in place for ensuring that whatever competency profiles are developed can be maintained.
- Existing training, education, and recruitment programmes for ministry staff do not yet reflect IM considerations adequately.
- IM is not part of the performance appraisal process for civil servants.
- Where there is an absence of expertise, standards and practices for IM, users resort to making up their own rules concerning the management of their information.

These issues can be summed up in the following interview response by an employee in the Human Resource Division at the Ministry of Lands:

> "Most job descriptions for common cadres in government are uniform across government or public service, and so the best we can do now is to make recommendations, for example on the issues you are raising about IM, for inclusion in future."

And also in the following response from the Ministry of Provincial Administration:

> "It is only recently that many information-related staff have began to be motivated enough to upgrade their training from diploma level. Now we are seeing many of them requesting for funding to enable them go for further training."

The above concerns concur with Nzioki, Kariuki and Murigu (2009) in their proposal for training of personnel who intent or are working in the private and public sector to handle land and property related transactions so as to conform to the new National Land Policy in Kenya.

Creating Information

The volume and complexity of information (in both paper and electronic formats) continues to be a major

concern for information managers and users. This is particularly prevalent at the Ministry of Lands where different types and formats of documents are presented from across the country by citizens seeking to solve pressing land issues.

It is obvious that in a complex environment featuring multiple forms of information from paper to electronic, ministry staff lack the criteria for helping them determine what information is needed to be created, received, collected, and so on, to support or document their work. Consequently, although information contained in the documents that is generated by ministries is important for government operations, respondents were clear that their respective ministries did not exercise adequate control in the creation of information and records. Indeed, there were no quality control procedures to ensure the information produced is based on the demonstrated needs of end-users, such as employees and the general public.

Organising Information

An investigation into the adequacy and suitability of some of the resources or factors considered essential in supporting integration of IM into the ministries' business process revealed the following results:

- The number of IM staff (technical, managerial and support staff) was inadequate, and even those available were not suited to handle IM-related tasks because they lacked appropriate training.
- Funding was largely inadequate, with provision being made mostly for staff salaries
- Information-related procedures and guidelines were lacking.
- ICT infrastructure (including computers and accessories, Internet, technical support) were inadequate.
- Office equipment and supplies, as well as storage space and facilities were both inadequate and unsuitable for IM-related work.

Information Use

The following highlights from the interview sessions identify some of the challenges Government ministries face that make it difficult to implement IM in their business processes:

- Information standards have not been established to set out the conditions to be used in accessing government information and services.
- Standards and tools for describing information to facilitate access and retrieval have yet to be established.
- Apart from ministries' websites, there were almost no other automated information systems for sharing information across the ministries. Indeed, although interview responses with the heads of ICTs in all ministries revealed that they maintained websites, evidence showed that the websites provided very little in the way of crucial information and policies to guide both ministry and non-ministry staff on the state of implementation of government projects and plans;
- Mechanisms to support dissemination of published government information to the general public through libraries and documentation centres could be enhanced. In this respect it was only at the MPND where the librarian in-charge gave an elaborate response to the process used in disseminating information materials from the ministry through the District Documentation and Information Centre (DIDCs) which are under the ministry;
- Citizens and government employees confront technology barriers (e.g., software and format incompatibilities) when accessing or exchanging information electronically.
- It is difficult to access and retrieve the information needed to do specific tasks, because much of the information is already fragmented across different locations, paper-based file drawers, and other unique systems and databases.
- There were no mechanisms in place to manage government records generated in electronic formats. This constrained the use of such records.

These results are given credence by the following response from one employee at the Ministry of Energy:

> "Our senior managers do not seem to appreciate the problem we have in managing all the documents in our custody... when we ask for resources to help us manage them better, we are not given."

The above findings correlate those of a survey by the Association for Information Management (AIIM) and reported by Miles (2011) which showed that access to records and information by employees across their businesses is either poor or very poor. This is not a new position. The EIU (2008) Report showed that sharing data across organisations remains difficult where only 43% and 21% of organisations globally can be considered to have 'good' and 'poor' ability respectively to integrate and share information.

Assessing Information

Government has not formulated any tool that can be used to benchmark IM practices across government ministries. This was confirmed by all the 18 heads of information-related services interviewed in the six ministries. Consequently, ministries are unable to determine whether the information they generate and maintain is of benefit to intended users (both internal and external). It is paramount that any information that is generated is targeted to a certain group or groups of clients, and their mode of accessing is determined. It is important also to establish a means that will be used to evaluate occasionally whether the information that is availed has been used and whether it satisfies the needs of those clients.

Maintaining Information

Information maintenance encompasses those activities meant to ensure authentic, reliable, available, usable, and understandable information over time. This is central to serving the information needs of Kenyans and to supporting the successful implementation of strategies outlined in the *Kenya Vision 2030*. Many respondents expressed concern about the capability of Government ministries to maintain information (especially that recorded in electronic form) in an authentic and reliable manner to meet user requirements. This is how the situation was characterised by the head of records (registry) services at the Ministry of Higher Education:

> We are supposed to ensure that our clients, that is, ministry staff, obtain the information they need to make decisions. But often we are handicapped because many of our colleagues in the information profession do not have the capability to know what information they should keep, for how long and what information they are permitted to dispose of and why.

Of particular concern was the long term preservation of electronic information. This can only be addressed effectively if the preservation requirements were identified at the time the information was being created, which is currently not the case.

Conclusion and Recommendations

It is imperative that Kenya builds a sustainable IM infrastructure in order to support the successful implementation of the strategies outlined in the *Kenya Vision* 203*0*. Although such an infrastructure may well take some time to emerge, initiatives leading to its development can, nevertheless, be established in the short-term based on the following principles and characteristics:

- Information is an asset which needs to be managed with the same diligence as any other asset;
- Information in both paper and electronic formats will continue to co-exist for a long time to come and so any IM strategies must take this fact into consideration.
- The requirements of government programmes or services drive the decisions about what information needs to be created, collected, received, etc. and how that information should be used and preserved.

Specifically, however, the following practical

recommendations are made with regard to addressing the IM issues revealed in this article:

(a) Development and implementation of an IM policy framework, which will assist in the following ways:
- Provide a basis at both the ministry and whole-of-Government level to identify and prioritise requirements for IM standards, policies and tools by mapping current policy efforts and identifying gaps or duplications.
- Organise whole-of-Government IM policy, information standards, guidelines and tools, making ministry and other agency requirements in specific areas clearer and related assistance more accessible.
- Develop policies, standards and practices, and technologies for the management of the multiple forms of information.
- Incorporate preservation requirements and requirements for long term access to government information.

(b) Enhance the awareness of government employees about the role and importance of government records, their responsibilities for managing records, and the implications of not managing records properly for decision-making, programme and service delivery, and accountability.

(c) Develop strategies for enhancing records management education and training programmes directed at public servants (senior executives and officers) and records management specialists.

(d) Incorporate IM considerations into:
- the audit and evaluation function of government institutions;
- the performance measurement systems for all government employees;
- the systems development methodologies and related tools used to plan, design, install, test, maintain, and evaluate information systems in all sectors including finance human resource, procurement, among others;

(e) Establish mechanisms for the exchange of information about standards, guides, services, best practices and other matters pertaining to the effective management of information.

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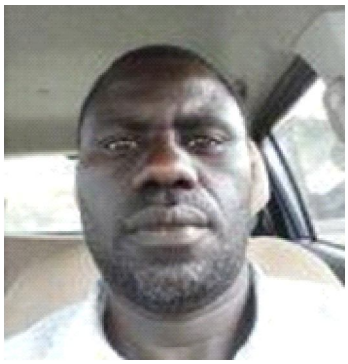

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Court Records Management and Efficient Administration of Justice in Nigeria

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Abstract

This study investigated the records management practices in Nigerian courts as they affect the administration of justice in Nigeria. Focusing particularly on the Court of Appeal and the Supreme Court of Nigeria, the population of the study comprised 634 records personnel out of which 160 were purposively sampled. The descriptive survey research method was adopted with questionnaire, interview and observation as the instruments for data collection. The study established that courts in Nigeria generated huge volumes of records predominantly in paper format but the management of the records did not follow the critical elements of records life cycle model. This had some adverse implication for efficient administration of justice in the country. Based on the findings, the paper made a case for the formulation of a comprehensive records management policy for court records and the implementation of an integrated records management programme in Nigerian courts to facilitate efficient administration of justice in Nigeria.

Keywords:
Court Records, Records Management, Archives Management, Administration of Justice, Nigeria.

Introduction

Records play a crucial role in the administration of justice. Without records, the administration of justice would be impossible as they constitute the bedrock upon which the judicial service in any country is built (Musembi, 1999). Court records are official legal records (Shepard, 1984) and they constitute an important category of legal records. They are invaluable source-materials that document the process of the enforcement of legal rights and obligations. Law is the basis of most institutions and a way of regulating and adjusting the desires and claims of men in an organised society (Jordan, 1970). Court records are the evidence of the activities involved, therefore, constitute an invaluable asset to the society.

Adjudication in cases and protection of people's rights could be impossible in the absence of records. Paucity of records may not only occasion delay but also lead to "still birth" in the delivery of justice. More than any other institution, the courts depend very heavily on records in discharging their responsibilities. Without records, the court will become the "lost hope" of the common man. Oputa (1993) observed that "law is part of life and life, law and justice are inseparable". By extension, records and justice are inseparable, as records constitute an essential ingredient for the administration of justice. Besides, the courts also generate a great deal of records in the course of their operations which document the process of administration of justice. Little wonder that the term 'record' originally denotes the written documents kept by a court as evidence of its proceedings (Report of the Committee on Legal Records in Britain, 1966).

The doctrine of judicial precedent or *stare decisis* by which a lower court is bound to follow the decision of a higher court is a well-tested doctrine which the courts guard jealously and which makes for the certainty of the law and prevents judicial anarchy. As observed by Amaizu (JCA) in the case of *Okafor V. Okafor (2002) F.W.L.R (Part 120) 1712* at page 1725, "The common law system which this country {Nigeria} inherited from Britain depends on binding precedents". The doctrine is promoted and made effective by the availability of records.

Equally important to the judicial system is the

plea of *res judicata*. The plea postulates that once a matter or an issue between parties has been conclusively litigated upon and decided, it cannot be raised again between the same parties. The plea, according to Igu (JSC) in *Ezeanya v. Okeke (1995) 4 S.C.N.J. 60 at p. 77* "is an application of the rule of public policy that no man shall be vexed twice for one and the same cause on the same issues". *Res judicata* is a valid defence in appropriate cases. The plea can only be sustained by relying on records.

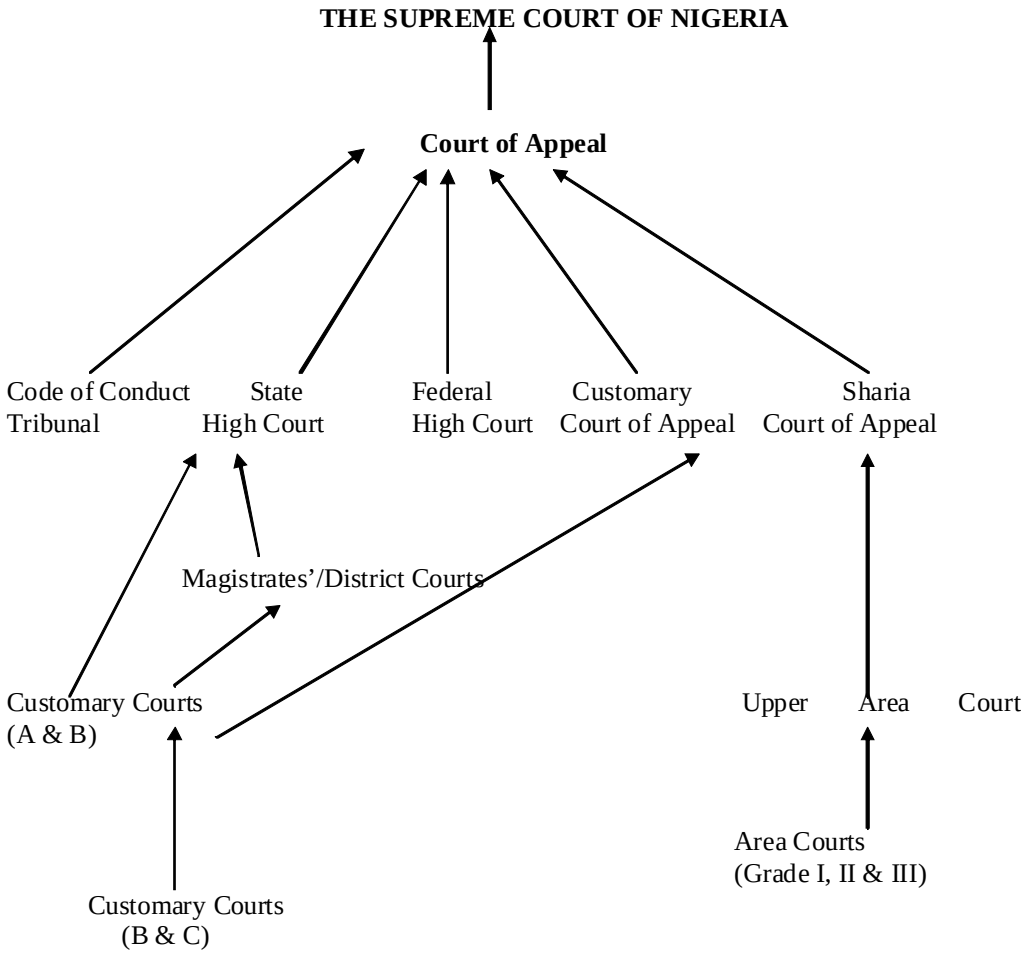
Administration of Justice and Court Structure in Nigeria

In Nigeria, the court was one of the first official institutions introduced by the British administration. The necessity to administer some form of justice between African and European traders along the Niger Coast informed the establishment of the courts of equity, the first of which was set up in Bonny in 1854 (Adewoye, 1977). By 1872, consular courts were established. These courts existed independent of the courts of equity and the consul's jurisdiction covered old Calabar, Bonny, Cameroon, Degema, Brass, Opobo, Nun and Benin Rivers. The term 'justice' derives its origin from the Greek word "*justium*" or "*jussum*" which means," that which has been ordered" (Lamikanra, 2003). The very essence of justice is fairness, equity, good conscience and affirmation of the rule of law. According to Haruna (1990), the administration of justice is, therefore, aimed "at furthering national unity, patriotism, public security, peace, order and good government". At the heart of the administration of justice are the courts, which occupy a unique position in the justice system. It has been observed, and it is undeniable that "the establishment of courts was a very big step forward on the human road to peace and progress" (Oputa, 1981). It can therefore be asserted that the generation of court records in Nigeria dates back to the nineteenth century when the English judicial institutions made their first appearance in the country.

Perhaps it is pertinent to mention that the establishment of the English courts did not mark the beginning of the administration of justice in Nigeria. The customary law was, before this time, the sole legal system even though it largely unwritten and was administered by customary tribunals that were not governed by any written rules (Aguda n. d.). The traditional and informal justice system met by the British was, however, allowed to exist side by side with the English legal system provided its rule satisfied the repugnancy doctrine of not being contrary to natural justice, equity and good conscience. Today the customary courts or the Area Courts in Northern Nigeria are part of the judicial structure of the country. They are at the lowest while the Supreme Court of Nigeria is the highest and the final court for the country. In between is the Court of Appeal, which is next to the Supreme Court. It is followed in hierarchy by the Federal High Court, the High Court of the Federal Capital Territory, Abuja, High Court of a State, Sharia Court of Appeal of the Federal Capital Territory, Abuja, Sharia Court of Appeal of a State, Customary Court of Appeal of the Federal Capital Territory, Abuja, and Customary Court of Appeal of a State which are all courts of co-ordinate jurisdiction and the Magistrate's/District Court. Figure 1 shows the structure of the courts system in Nigeria.

The survival of the court system and, indeed the administration of justice are closely tied to the availability, use and proper management of records. Delay of cases in courts could be occasioned, among other factors by poor records management practices. The consequence of delay of cases is enormous for litigants, counsel, judicial authorities and the society at large. For litigants, delay translates to increasing cost of litigation in addition to the trauma associated with the long waiting period in obtaining justice. The resultant pain and frustration experienced by the litigants and their counsel make recourse to the judicial process unattractive. This situation does not augur well for the image of the judiciary and can promote recourse to extra-judicial means of settling disputes and consequent anarchy. It is in the light of the foregoing that this study investigated the court records management practices in Nigeria with particular focus on the Court of Appeal and the Supreme Court of Nigeria.

Structure of Court System in Nigeria



Adapted from Alabi (2002)

In the light of the problem stated above, the following set objectives guided the study:

1. Identify the types and formats of the court records generated by the Court of Appeal and the Supreme Court of Nigeria.
2. Find out whether the institutions have a records management policy and to analyse the policy (where available) in the light of standard records management practices.
3. Establish the record filing/classification system in use in the institutions.
4. Identify the type of finding aids in use, how long it takes to retrieve records and whether the institutions experience misplacement or loss of records.
5. Find out whether the institutions undertake records disposal activities and how these are done.
6. Establish how often records are appraised and whether the records are governed by records schedule.
7. Find out whether the institutions have a records centre and archives and the state of such records centre and archives.

Literature Review

Court records constitute invaluable source – materials (Greenwood & Bockweg, 2012). They assist in the enforcement of rights and obligations of organisations (private or public) and individuals International Records Management Trust (IRMT), 2011. They document and serve as evidence of the activities involved in the enforcement of such rights and obligations. Oputa (1993) underscored the importance

of law in the society. It is a way of regulating and adjusting the desires and claims of men in organised society. The records of the activities involved are by no means less important.

Solomon (1979) was of the opinion that court records enable the society to develop further its ideas of the process of adjudication and to have a better understanding of the social, political and economic concerns affecting legal development. Court records, according to Gersack (1973), are among the most fruitful (and least harvested) sources of historical data of inestimable value. He was of the opinion that "when Archivist acquires court records he becomes the custodian of source materials covering the spectrum of human experience" (Gersack, 1973).

Dumbauld (1973) stressed the importance of availability of judicial opinions to lawyers and judges, which assists the doctrine of precedent or *stare decisis*. The rule of *stare decisis*, according to him, is a genuine use of historical processes within the legal system itself. Connor (1960) emphasised the value of court records as sources of history. They are valuable sources for historical research. According to Connor (1960), the writing of the history of any unit of government is incomplete without recourse to court records that invariably contain the ultimate meaning and sometimes the original cause of the actions of the executive and legislative branches of government.

Shepard (1987) highlighted the research value of court records, particularly criminal records of the court. According to her, they throw light on the nature and types of crime over a given period. The US Federal Bureau of Investigation (2010) acknowledged the value of records for law enforcement. In apparent appreciation of the importance of this category of records to a legal historian, Kates (1987) submitted that the absence of these records in archival depositories presented a hindrance to the writing of legal history. World Bank (2002) rated court records as the basis and substance of court management and described them as "part of the very heart of any modernization process to improve the efficiency and delivery of justice to the citizens." Despite their importance, court records seem to suffer absolute neglect and poor management. This constitutes a big threat to government programmes, processes and service delivery including the administration of justice (IRMT, 2011).

Over the years, there has been widespread disenchantment with the Nigerian judicial system (Lamikanra, 2003) due to inordinate delay often experienced in the administration of justice. Delay as the principal factor for popular discontent with the administration of justice has, for several decades, received the attention of jurists all over the world. Miller (1978) reported that as far back as 1906, Roscoe Pound had emphasised the issue of delay and singled it out as the major consideration for administrative reform of the judiciary in America. Unprecedented delay is a manifestation of decline in the administration of justice (Agbakoba, n. d.) and a disincentive to invocation of the machinery of justice by aggrieved citizens to enforce their rights.

Efficient administration of justice is considered to be dependent on a number of factors. These include the registry and its officials (Olali, n.d.), availability of material resources and modern technology (Lamikanra, 2003), the quality of the judge (Sagay, 1988) and dedicated lawyers and judges (Burger, 1990). It is rather unfortunate that the importance of court records and good records management programme seems to have rarely been identified as an important factor in ensuring efficient administration of justice in Nigeria. Even when the registry is considered as a critical factor in the administration of justice, the emphasis is usually on the competence of its officials.

The ability to process and make records available at the right time together with the proper documentation and preservation of records relating to the judicial process is the hallmark of the registry of any judiciary. Poor records management can, therefore, affect efficient administration of justice and bring about delays that can erode the people's confidence in the judicial system.

The extent to which records aid the administration of justice depends on the records management practices of the judiciary. Records management entails the control of recorded information (record) throughout its life cycle. The life cycle of records begins at creation and moves through maintenance and use to its final disposal. Three stages of current (active), semi-current (semi-active) and non-current (inactive) are, however, discernible in the life span of records (Enwere, 1992).

Specific elements are associated with each of the phases of the records life cycle (Rhoads, 1989) to ensure proper control of records. A good records management policy is crucial to the records management programme of any institution or organisation. In the absence of a records management policy, the programme becomes haphazard and uncoordinated. Availability of records storage facilities and equipment also helps in sustaining a records management programme. Technical support and qualified records management staff are no less important in records management.

Proper management of court records is an essential requirement for efficient administration of justice (Motsaathebe and Mnjama, 2009) and protection of people's rights. Efficient administration of justice cannot be expected in an environment where court records are difficult to retrieve or are susceptible to loss (Musembi, 1999). The consequence of poor records management in a court environment is that cases are delayed or stalled which in effect means that justice is delayed or denied. A situation whereby the rights of individuals are violated without any redress will lead to loss of faith in the judicial system and a resort to self-help and consequent anarchy.

The World Bank (2002) identified the management of court records as a cornerstone of the overall efficiency of the courts, records being the basis and substance of court management. Stressing the importance of court records and court records management further, the World Bank stated that "statistics drawn from court records serve as a roadmap for court administrators and presiding judges alike" and that "proper records management is of special interest to court users who often cannot afford the consequence of delays, corruption and inaccuracies" (World Bank, 2002). Proper court records management facilitates the administration of justice and this, in turn, enhances the image of the judiciary and brings about the much-desired peace in the society. It also "allows judges and attorneys … to research old cases that may have an impact on the outcome of their current cases" (Office of Court Administration (OCA), New York State, 2008).

However, the importance of a records schedule in the implementation of a records management programme cannot be over-emphasised. Penn, Pennix and Coulson (1994) have itemised the objectives of records scheduling as follows:

(a) the prompt disposal of records whose retention period have ended;

(b) the storage of records which must be temporarily retained after they were no longer needed in current business; and

(c) the preservation of records which were of longer-term value.

Methodology

The study employed the descriptive survey research design. The population of the study comprised 634 registry personnel of the Court of Appeal and the Supreme Court of Nigeria who were responsible for records management in the institutions. While the Supreme Court of Nigeria is based in Abuja, divisions of the Court of Appeal are located across the country. As at the time of this study in 2012, there were sixteen divisions of the Court of Appeal. A purposive sampling technique was adopted to select five divisions of the Court namely Abuja, Enugu, Ibadan, Kaduna and Lagos. With the exception of Abuja, the selected divisions were the oldest divisions of the Court of Appeal. The sample size consisted of 160 respondents made up of 115 from the Court of Appeal and 45 from the Supreme Court of Nigeria, the breakdown of which is contained in table 1.

Table 1: Sample Size

	Division	Location	Registrar Cadre	Clerical Cadre	Total
Court of Appeal	Abuja	Abuja	8	12	20
	Enugu	Enugu	10	10	20
	Ibadan	Ibadan	10	15	25
	Kaduna	Kaduna	10	10	20
	Lagos	Lagos	11	19	30
Supreme Court of Nigeria			19	26	45
		Total	**68**	**92**	**160**

The research instruments were questionnaire, interview and observation. Copies of the questionnaire were administered personally and with the assistance of some members of staff to personnel in the registrar and clerical cadres in the Supreme Court and sampled divisions of the Court of Appeal. A total of 160 copies of the questionnaire were administered while 138 copies were completed, returned and found valid for analysis, giving a response rate of 86.25 per cent. Data gathered through questionnaire administration were analysed using Statistical Package for the Social Science (SPSS). Interviews were conducted with selected registrars and registry staff in the two institutions on records management activities of their institutions, particularly records management policy, records centre operations and records disposal activities. The interviews took place at different time at different courts over a period of six months from June to November 2012. Notes were taken during the interview sessions while the content analysis based on the key issues in the study was undertaken thereafter. Observation also took place in the registry, records centres and Archives of the Supreme Court and the sampled divisions of the Court of Appeals during the same period. In particular, the available filing equipment, filing/classification system in use, orderliness in the arrangement of records as well as the adequacy and suitability of the records storage environment were observed and noted.

Findings and Discussion

The findings of the study are presented in table 2 and discussed under the following headings:

Background Information of the Respondents

The majority of the respondents (50 or 36.2%) possessed the Ordinary National Diploma and National Certificate in Education as their highest educational qualification. Those who possessed the School Certificate or General Certificate of Education (48 or 34.8%) ranked second. Twenty-one respondents (15.2%) possessed a bachelor's degree in Laws, Arts and Science; two respondents (1.4%) with a master's degree while the rest (5 or 3.6%) claimed to possess other educational qualifications which were not specified. Twelve respondents (8.7) provided no answer to this item on the questionnaire.

As for the rank or position of the respondents, the majority (71 or 51.4%) were in the registrar cadre. This category was followed by the respondents in the clerical cadre (55 or 39.9%). Ten respondents (7.2%) were litigation officers while two (1.4%) were Assistant Directors.

Table 2 Simple Percentages Showing Responses from the Respondents

S/N	Statement	Yes
Types of Records Generated		
1	Court of Appeal and Supreme Court of Nigeria generate:	
	(a) records book	126 (91.3%)
	(b) judgment book	110 (79.7%)
	(c) case register	86 (62.3%)
	(d) case book	72 (52.2%)
	(e) others	33 (23.9%)
	(f) enrolment register	23 (16.7%)
Availability of Records Management Policy		
2	Records management policy is available in the Court of Appeal and the Supreme Court of Nigeria	111 (80.4%)

Records Filing/Classification System		
3	The records filing/classification systems in use are:	
	(a) chronological	
	(b) numerical	93 (67.4%)
	(c) l alphanumerical	85 (61.6%)
	(d) alphabetical	33 (23.9%)
	(e) subject	28 (20.3%)
	(f) others	8 (5.8%)
	(g) colour coding	2 (1.4%)
		0 (0%)
Types of Filing Aid and Rate of Records Retrieval		
4	(i) The types of finding and in use are:	
	(a) register	93 (67.4%)
	(b) index	32 (23.2%)
	(c) inventory	6 (4.3%)
	(d) guide	3 (2.2%)
	(e) others	3 (2.2%)
	(f) simple list	1 (0.7%)
	(ii) Records retrieval takes	
	(a) 21-30 minutes	67 (48.6%)
	(b) 1-10 minutes	35 (25.4%)
	(c) 11-20 minutes	14 (10.1%)
	(d) Several hours	13 (9.4%)
	(e) A day or More	5 (3.6%)
	(f) 31-60 minutes	1 (0.7%)
Records Disposal Activities		
5	Records are disposed by:	
	(a) sending them to the archives	118 (85.5%)
	(b) sending them to the records centre	4 (2.9%)
	(c) destroying them	2 (1.4%)
Records Appraisal and Schedule		
6	(i) Records Schedule is available	26 (18.8%)
	(ii) Records schedule is undertaken	25 (18.1%)

Types of Records Generated

The results of the study indicated that the Court of Appeal and the Supreme Court of Nigeria generated a preponderance of records that included case register (86 or 63.3%), record book (126 or 91.3%), cause book (72 or 52.2%), enrolment register (23 or 16.7%) and judgment book (110 or 79.7%). Other records such as guard book that contains the original judgments of the courts as well as record of appeal or record of proceedings were also generated. The last type of record forms the platform upon which a case file is built in any case on appeal. A typical appeal case file contains the record of appeal as well as briefs i.e. the appellant's brief, the respondents brief and reply brief (if any) as well as motion papers and supporting affidavit, in appropriate situation. Some of these records particularly the latter types are created by counsel representing parties in cases from whom they are recieved by the courts and they form the basis for the administration of justice. Clerks, registrars and judges are all actively involved in the generation of records in a court environment. The results thus confirmed the court as one of the most prolific institutions generating records of legal importance. They also confirmed paper as the dominant medium of information recording. This finding supports Ubogu (2000) and Mnjama (2003) who noted a phenomenal increase in the use of paper despite the growth of information technology.

Availability of Records Management Policy

The majority of the respondents (111 or 80.4%) confirmed the existence of a records management policy in the Court of Appeal and the Supreme Court of Nigeria. An analysis of the policy, which is contained in the Court Rules, however, shows that it relates to records creation and use. Other important aspects of records management like records maintenance and disposal have not been taken care of in the policy. This is a big gap and an important shortcoming in the records management policy of the institutions, as absence of guidelines on records disposal has negatively affected records accumulation, storage, maintenance and use by the institutions. This finding on the dearth of a comprehensive records management policy supports that of Akussah (1996) and Kenosi (1999).

Records Filing/Classification System

The study has shown that the Court of Appeal and the Supreme Court of Nigeria employed a combination of chronological (93 or 67.4%), numerical (85 or 61.6%) and alphanumeric (33 or 23.9%) filing/ classification system. Interviews conducted with some of the registrars as well as observation in the registries confirmed this position. This is in line with the practices in some other jurisdictions and this finding supports International Records Management Trust (1999).

A good records filing/classification system is essential in ensuring easy retrieval of records. Where the system is complex or uncoordinated, delay is experienced in the records retrieval system and timely availability of records for decision-making is impaired with adverse implication for operational efficiency. The cost implication of misfiling is enormous. Southwood (1987), for instance, estimated the average cost of each misfiled record in Canada to be over £60 as far back as 1987.

Type of Finding Aid and Rate of Records Retrieval

The majority of the respondents (93 or 67.4%) confirmed the register as the most popular type of finding aid used in both institutions. This finding was not surprising considering the fact that cases are usually registered as they are filed and the register of such cases comes handy in locating records relating to them. The index also ranked second as a type of finding aid relied upon by the institutions. These are common in-house finding aids relied upon by most records creating agencies and organisations for the control and retrieval of their records.

Finding aids are crucial to records retrieval and access. In the absence of a good finding aid, records retrieval becomes difficult, if not impossible since it facilitates physical and intellectual control over records. Although there are various types of finding aids, each designed to meet specific purposes, an institution like the judiciary requires the type that can assist easy identification and retrieval of records. It is only in an environment where records are easily retrieved for functional activities that high level of efficiency can be attained in the administration of justice.

The majority of the respondents (67 or 48.6%) also claimed that records retrieval took an average of twenty-one to thirty minutes in both institutions. This is not the best records retrieval rate for institutions like the Court of Appeal and the Supreme Court of Nigeria that rely heavily on records in the administration of justice, more so when delay has often been regarded as the bane of the justice system in Nigeria. Easy retrieval guarantees timely availability of records for decision-making. Delays in records retrieval process are a manifestation of poor records management practices which breed inefficiency in the administration of justice. As observed by Musembi (1999), efficient administration of justice is not possible "in an environment where court records cannot be easily retrieved, or where the incidence of missing and lost files is a common occurrence."

Records Disposal Activities

The outcome of the study revealed that there was no coordinated records disposal programme in the Court of Appeal and the Supreme Court of Nigeria. The main records disposal action taken in the institutions, according to the majority of the respondents (118 or 85.5%) was to send records to the archives. Interviews conducted with some registrars revealed that records of disposed of cases, particularly the case files and exhibits originating from the lower court were also disposed of by sending them back to the lower court. Observation of the records storage facilities and interview also revealed that inactive records due for disposal were, sometimes, found among active records, a situation that made records retrieval stressful and cumbersome.

Records disposal, which is the third phase of records life cycle, is a critical phase. It is through records disposal processes that records of permanent value are retained and transferred to the archives while those that have no value for permanent preservation are eliminated or disposed of in any other way mandated by the governing records schedule. They also guarantee savings and cost effectiveness.

Records Appraisal and Schedule

The study revealed that appraisal of records was rarely undertaken in the Court of Appeal and the Supreme Court of Nigeria, as the majority of the respondents (113 or 81.9%) claimed that this important activity was not undertaken in their institutions. Consequently, court records were disposed of upon conclusion of cases without any form of appraisal. Records appraisal constitutes a crucial activity in any records disposal programme. A decision as to the permanent retention or otherwise of records can only be well informed if based on appraisal.

The institutions had no records schedule as attested to by the majority of the respondents (112 or 81.2%). As such, there was no policy on the retention and disposal of records, particularly the inactive ones. This finding supports Adjei (2004) and Adams (2005). The implication is that records were disposed of in the institutions without any laid down or written guidelines or any consideration as to the secondary value of such records. A records schedule is, therefore, crucial in the management of the records of the institutions as it determines the life expectancy of records.

Existence of Records Centre and Archives

Interviews conducted with some registrars revealed that the Court of Appeal had no records centre while they indicated the existence of a records centre in the Supreme Court of Nigeria. The study, however, noted in both institutions, a misconception as to what a records centre is, as some of the respondents, when probed further in the course of interview, could not draw a distinction between a registry or records office and a records centre. In some cases, unkempt rooms where inactive records were dumped were regarded and designated as records centres or archives. Besides, records centre operations were unknown in the institutions.

There is, therefore, a strong suspicion that some of the respondents that indicated the existence of a records centre in their institutions were not sure of what a records centre, in technical term, is. A finding of the study that the institutions, particularly the Court of Appeal, had no semi-active records reinforced this suspicion. Records were either active or inactive. This finding is similar to that of Adams (2005) who carried out a study on the management of chieftaincy records in Ghana and found that the records were

active and inactive, thus leaving a gap in the records life cycle chain.

The study, however, revealed the existence of archives in each of the institutions, even though it was unorganised. The researcher's observation revealed that the storage space and equipment were grossly inadequate. In some cases, wooden racks were used for the storage of records while records were also dumped on the floor unorganised. Each search left the records more disorganised and retrieval became increasingly difficult. The implication is that inordinate delay occurred in facilitating access to records. Besides, inadequacy of storage facilities and equipment has negative implication for the physical well being of the records. Emphasising the importance of equipment, Piggot (1987) stated that "the choice of equipment on which to shelve and in which to store archives provides the archivist with an excellent opportunity to minimise further deterioration." Similarly, good storage, according to Child (1991), is essential to stabilise the conditions of records.

The physical state of records in the archives of the institutions is of grave concern to this study. The records storage environment was not regulated in terms of temperature and relative humidity control. In the archives of the Supreme Court of Nigeria, ventilation was provided through occasional opening of the windows. In the Court of Appeal, however, the archives of some of the divisions visited had no windows to provide the much-desired ventilation in the absence of the air-conditioning system. This situation is of grave consequence to the preservation of the materials in the archives and, indeed access. As observed by Drijfhout (2001), "without preservation, access becomes impossible and collections will decay and disintegrate".

Conclusion and Recommendations

Court records play a crucial role in efficient administration of justice. The management of the records in Nigerian courts falls short of the acceptable standard with dire consequence on efficient administration of justice in Nigeria. Based on the findings of the study, the following recommendations are made for the improvement of the court records management practices of the Court of Appeal and the Supreme Court of Nigeria:

1. The records management policy of the Court of Appeal and the Supreme Court of Nigeria should be reviewed. More comprehensive provisions relating to all aspects of court records management (maintenance and disposal inclusive) need to be included in the Court Rules of the institutions. In the event of the Court Rules being too unwieldy, separate court records management rules or policy could be formulated and strictly followed in the same manner the Court of Appeal Rules and the Supreme Court Rules are strictly applied in cases before the courts.
2. A records system that will guarantee easy retrieval of records and eliminate misplacement and loss of records needs to be put in place.
3. The institutions should adopt and implement an integrated records management programme with the records centre as a necessary component. It is better that the records centre exists not just in name but also in full professional operation.
4. Records appraisal and scheduling need to be undertaken to determine the life expectancy of the court records of the institutions. Although court records are special types of records, it is utopia to assume that they are all records of permanent value that should end up in the archives. A records schedule is essential to stipulate the disposal action to be taken in respect of the court records of the institutions. A well-developed records schedule to meet the peculiar needs of the institutions is, therefore, required to be formulated.
5. The records management programme of the institutions need to be well- funded. Budgetary provision is required to be made annually for records management to ensure procurement of suitable equipment and materials. A periodic evaluation of the programme will guarantee improvement and sustain timely availability of court records for efficient administration of justice in Nigeria.

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The Management of Digital Records in the Office of the Premier of the Eastern Cape Province, South Africa

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Abstract

The study sought to investigate the management of digital records in the Office of the Premier (OTP) in the Eastern Cape Province. The objectives of the study were to determine the compliance to the legal framework, identify the requisite infrastructure for digital records management (DRM), describe the security and preservation measures for DRM, and find out the challenges of managing digital records. The results of the study revealed that the OTP had taken a number of initiatives aimed at establishing records management practices. However, the results showed that the OTP is faced with a number of challenges in its efforts to manage digital records. Majority of those required to manage digital records lacked skills and competencies necessary for the implementation of an Electronic Document Management System. The study also revealed the need for OTP to overhaul the existing arrangements for the security and preservation of digital records.

Keywords:
Records Management, Digital Records Management, Legal Framework, Compliance, Electronic Records, South Africa

Introduction

Parrish, James and Courtney (2007) define electronic records as a combination of text, data, graphics, images or audio information that is created, maintained, modified or transmitted in digital form by information and communication technologies (ICTs). Records in digital form are becoming more influential in government operations as many countries embark on electronic government strategies (Lichpak and McDonald, 2003). E-government refers to the use of information and telecommunication technologies, to enable government to deliver services and information more effectively as well as enhancing accountability of the public administration and strengthening economic performance (Heeks, 2002; IRMT, 2005).

In view of the above, electronic records need to be efficiently managed by putting in place adequate infrastructure. Inadequate infrastructure is not only risky to reduced government programmes effectiveness but may also lead to a government facing increased operating costs, gaps in recorded memory, reduced public access to entitlements and erosion of rights, inability to comply with laws and policies, weakened capacity for decision making, increased legal, financial and political risk and reduced transparency, accountability and trust. (Mutiti, 2001; Harris, 2001; Barrett, 2005; IRMT, 2005).

This paper covers some aspects of a study which sought to investigate the management of digital or electronic records in the Eastern Cape Provincial Government in South Africa. The Office of the Premier which was the study site is responsible for ensuring effective and efficient governance in the Eastern Cape through its leadership role. The main purpose of the OTP is to provide guidance and focus

for the province as a whole through the development and implementation of policies, and the monitoring and evaluation of the performance of departments to ensure service delivery to all the people in the province. The OTP monitors the level and quality of government services and promotes a culture of access, openness and transparency that in turn should build more confidence between the government and the public it serves (South Africa, 1997).

Digital Records Management

Shepherd and Yeo (2003) point out that until recently, almost all records were on paper, but due to developments in technology many organisations are increasingly using information and communication technologies (ICTs) to create, receive, and manage their records. Ngoepe (2008) states that today there is an ever increasing flood of records generated through media such as computers, tape and digital video disks (DVD) recorders in different formats. Considering the speed at which digital records are created, their management becomes a challenge for most organisations. For government departments to be able to retrieve information quickly, they need to have proper digital records management systems in place (Milner, 2002). Proper records management as noted by Chinyemba and Ngulube (2005) involves establishing systematic controls at every stage of a record's life cycle, in accordance with established principles and accepted models of records management.

The anxiety by governments to adopt electronic or digital records management systems (EDRMS) does, however, face limitations, especially in the developing world. In most cases, both government officials and the public who may want to use government services maintained in digital form lack basic skills in accessing the information. This obviously impacts the relationship between the government and the users of its services. Ngulube (2007) avers that government information, especially in the sub-Saharan Africa (SSA) is not properly organised as records management systems in many countries lack the necessary equipment, infrastructure and trained records managers hence they are collapsing. According to Ngulube (2007) the advent of ICTs has brought about a paradigm shift in the production of government information. The transition from paper based records to digital records is happening at a time when many records managers in SSA do not have the necessary skills to deal with digital records.

In South Africa, the government has committed itself to e-government as a strategy for better service delivery to the public. This includes government to citizens, government to employee, government to business and government to government online interactions. This transition has seen digital records being increasingly generated in most government departments. According to Moloi (2001), the greatest challenge lies in the management and preservation of such records as evidence of business transactions to enable governments to capture the corporate memory. The National Archives Records Service of South Africa (NARS) strives to ensure that, in the transition to e-government, evidence of transactions in electronic records remains accessible and understandable. To manage records effectively, the NARS has endorsed the South African National Standards (SANS) 15489 and SANS 15801 which prescribe trustworthiness and reliability in records management; and SANS 23081 which requires metadata for records is embedded in the records. Electronic service delivery is seen as a new way of doing business in government, and is therefore part of on-going reforms and transformation of government (Moloi and Mutula, 2007).

The National Archives and Records Service in 2006 developed guidelines for managing electronic/ digital records in government bodies. According to the National Archives and Records Service of South Africa (NARS) (2007), electronic records include all components of an electronic information system, namely: electronic media as well as all related items such as input documents, printouts and metadata. In addition, the NARS endorses national standards which require government bodies to put in place the necessary infrastructure, policies, strategies, procedures and systems which guide the management of records both in hard copy and in electronic format.

Research Problem

The use of technology has enabled government departments to create databases that now handle huge amounts of data online (Keakopa, 2006). This

has raised concerns that if the information is not properly managed, it may not be accessed, resulting to violation of citizen's individual rights. The South African government (at national, provincial, and local levels) has committed itself to eventual digitisation of its records. While some are 'digitally born', some records in hard copy are deliberately being digitised to ensure their easy access and preservation. Digital or electronic records unlike paper based records demand special management regime at all stages of the record's life cycle. This in turn impacts the functions of the creator which in this case is the government. South Africa like many other governments in the world is grappling with the challenging issues of managing and preserving of digital records (McDonald, 2003).

Moloi and Mutula (2007) point out that those government departments that have computerised need to have a framework for managing their digital records. It has been established that South Africa has the requisite blue print for the management of electronic records but its efficacy has not been sufficiently evaluated and documented, especially at the provincial and local government levels.

Research Questions

The following research questions were addressed:

1. Does the department comply with the legal framework that governs the management of digital records in governmental bodies?
2. Has the OTP got the requisite infrastructure to promote the creation and management of digital records overtime?
3. Does the OTP have security and preservation measures in place for the management of digital records?
4. What are the challenges of managing digital records in the OTP?

Research Methodology

A case study approach was adopted for this investigation. Yin (1984) argues that case studies can involve either single or multiple cases, and numerous levels of analysis. Yin (1984) defines a case study as "an empirical inquiry that investigates a contemporary phenomenon within its real life context, especially when boundaries between a phenomenon and a context are not clearly evident".

Mixed method approach was adopted for data collection. In case study research, the use of various methods to collect the same data is highly regarded, because when you have really triangulated the data, the events or facts of the case study have been supported by more than a single evidence (Yin 1984). Studies carried out by Kemoni and Wamukoya (2000), Ngulube (2003), Chinyemba (2003), Chinyemba and Ngulube (2005), Makhura and Ngoepe (2005) and Ngoepe (2008) also made use of a combination of methods. The mixed research method employed draws primarily on both primary and secondary methods of gathering information and data. By employing the primary method, the researcher was able to collect both quantitative and qualitative data by interviewing the key informants. Secondary methods involved referring to both published and unpublished sources. Also, the study made good use of the Internet to access current literature relevant to the study. Thirty (75%) responses out of a sample of 40 were received. Data collected were categorised into themes based on the research questions, coded and analysed using the Statistical Package for Social Sciences (SPSS) version 14.

Results and Discussions

The results and their discussions logically linked to the research questions.

Legal and Regulatory Framework

Keakopa's (2007) study revealed that South Africa had established the necessary policies and procedures to guide the management of digital records. The national Archives and Record Service Act (NARS) of South Africa (No.43 of 1996 as amended), in April 2003, issued three guidelines to help government agencies manage their records namely: records management policy manual; performance criteria for records managers of governmental bodies, and managing digital records in governmental bodies' policy guidelines. NARS Act No 43 of 1996 as amended has implemented policies, guidelines and directives for the management of both paper and electronic records by government bodies. All governmental bodies are obliged by legislation to

provide for proper management of records in all formats and to give effect to the following legal regulatory instruments (for records management):

- The National Archives and Records Service of South Africa Act (no. 43 of 1996 as amended)
- The Public Finance Management Act (No. 1 of 1999)
- The Promotion of Access to Information Act (No. 2 of 2000)
- The Promotion of Administrative Justice Act (No. 3 of 2000)
- The Electronic Communications and Transactions Act (No. 25 of 2002)
- Municipal ; Finance Management Act (No.56 of 2003)

The majority of the respondents (90%) stated that they were aware of a records management policy in the OTP while three (10%) did not know whether the department had a records management policy. Popper and Millar (1997) observed that policy and legislative framework are necessary to create a favourable environment for the effective management of digital records. The legal and regulatory framework spells out how an organisation must manage its records. Available literature indicates that countries around the world are at different stages of development with regard to DRM. Most countries have archival and records management laws that require effective DRM and provide the authority on disposal of such records. Such countries have put in place digital records management policies, programmes and systems for efficient management of the records. On the other hand, developing countries, especially those in Africa, are lagging behind in the area of digital records management because of the lack of digital records management policies and inadequate expertise for developing sound digital records management programmes (Kemoni, 2009).

Interviews were conducted with the Legal Services Manager on whether the department complies with the legal and regulatory framework for digital records management. The respondent was aware that the South African National Archives and Records Service Act 108 of 1996 specifies the requirements for creating authentic digital records that are usable and reliable for as long as they are required for functional, legal and historical purposes. He further mentioned that section (5) of the South African National Archives and Records Act No 43 of 1996 as amended, authorises the use of digital systems to manage public records. The respondent was not sure if the existing records management policy catered for the management of digital records.

An interview with the Records Manager sought to clarify if the existing records management policy covered the management of electronic records. The Records Manager stated that the department was yet to incorporate the management of electronic records in the existing records management policy but efforts were being made to do so. This position concurred with Makhura and Ngoepe (2005) who found that of 30 organisations surveyed in South Africa, 25 did not have a digital records management policy.

Records management policy must be seen as an important function by all government departments involved in the generation of records in all formats. Mutiti (2001) reiterates this by pointing out that the DRM as part of the records management programme must become one of the core functions of the public sector, because digital records have come to stay and must be made an integral part of an organisation's routine operation and if possible, this responsibility should be given to a specific unit. This is also in conformity with the International Organisation for Standardisation (ISO) 15489-1:2001 which sets out the requirements to be met for ideal management of records within the digital records management systems.

Level of Education and Professional Skills

The majority of the respondents (46.7%) had degrees, seven (23.3%) had matric certificates (O' Level equivalent) whilst five (16.7%) had diplomas and four (13.3%) indicated other qualifications as their highest qualifications. Although the majority had degrees it was evident that their qualifications were less related to records management and as a result they were not familiar with records management principles and context and therefore were unable to respond meaningfully to some questions pertinent to records management in general and digital records

management in particular. The majority of the respondents (60%) did not have training in records management whereas five (16.7%) had obtained a certificate in records management. Four (13.3%) respondents held a diploma in records management and one had a Master's degree in records management as reflected in Table 1.

Table 1: Qualification in Records Management (N=30)

Level of Education	Frequency	Percentage
No training in Records Management	18	60.0
Certificate in Records Management	5	16.7
Diploma in Records Management course	4	13.3
Records Management Competency	2	6.7
Masters in records management	1	3.3
Total	**30**	**100**

The results also showed that although some members of staff in the OTP had received training in records management, they were not conversant with the management of digital records. In South Africa a shortage of professional training has been identified (Keokopa, 2006). Studies done by Kemoni and Wamukoya (2000) into the preparedness of Moi University records personnel to manage digital records revealed that it is not possible for staff with no training in records management to work effectively in an e-records environment. The International Records Management Trust (IRMT) has underscored the importance of capacity building for effective records management. IRMT (1999) pointed out that the lack of trained records managers and other relevant staff in government departments affects the operations or practices necessary for effective management of digital records. To address inadequate training and human resources development the IRMT and the World Bank came up with training programmes which address issues of information technology and policies as well as strategies in the management of digital records. A number of governments and institutions have adopted this and developed training materials for digital records management. It is generally accepted that education and training play an important role in updating knowledge and skills. It applies to both those who are already working and prospective workers.

Digital Records Management Infrastructure and Facilities

The extent to which the OTP was prepared to use the ICT environment for the management of digital records was considered important. This was based on the fact that though ICT infrastructure does not solve the problem of managing DRM, its availability is a key factor to consider when adapting digital systems (Meijer, 2001). The ICT tools allow records creation, capture, storage and preservation processes. Interviews with the ICT support staff revealed that although ICTs were being used in the department they were not deliberately targeted at records management activities. On the question of whether the OTP had a separate directorate or unit with the responsibility for the management of ICT infrastructure dedicated to the capture and management of digital records, majority of the respondents (70.0%) said there was a separate unit with the responsibility of ICT management in the department but had no idea if digital records were being properly captured and managed. Seven (23.3%) did not know if there was a separate unit

with the responsibility of ICT management in the department whereas the other two (6.7%) had no idea if there was any unit with the responsibility of ICT management.

Although the impact of ICTs on digital records management in OTP could not be well established at the time of this study it was evident that ICTs were being applied in the creation and capture of some digital records. Majority of the respondents (83.3%) said the application of ICTs led to the creation of digital records in the department, whilst five (16.7%) were not aware of the generation of digital records using ICTs in the department. Those who were aware were further asked to indicate categories of digital records which were generated through the application of ICT. As shown in figure 1, the Office of the Premier generates some digital records.

The data gathered indicated that the OTP has adopted ICT into its business operations. Interviews with the Senior Manager in HRM found that the Electronic Document and Records Management System (EDRMS) which was being then piloted in the HRM sub-directorate has substantial databases which resulted from generation of digital transactions and digital records. Interviews with the Records Manager and different managers in HRM directorate on the types of digital records being generated indicated that the following records were being generated: leave forms, records of benefits of employees, employee wellness records, and employee records of service condition, correspondence, dismissal and recruitment forms. It was highlighted that the EDRMS had improved the service delivery by the OTP. For example, enquiries from clients and staff were dealt with by searching online documents stored in the EDRMS. It was mentioned that backlog on business transactions was reduced. For example, the processing of pensions funds could now be done online and those pensioners with Internet connectivity were able to access their files online. This was a major step towards accountability and transparency as the public would be able to use this mode of access to hold the government accountable.

Among the major obstacles identified towards the achievement of generating, capturing, using and preserving digital records was the shortage of records management skills in the department. Senior managers highlighted the need to equip staff with requisite skills in order to work effectively with digital records management systems. They indicated that those charged with recordkeeping did not have adequate RM skills and therefore using EDRMS became a challenge.

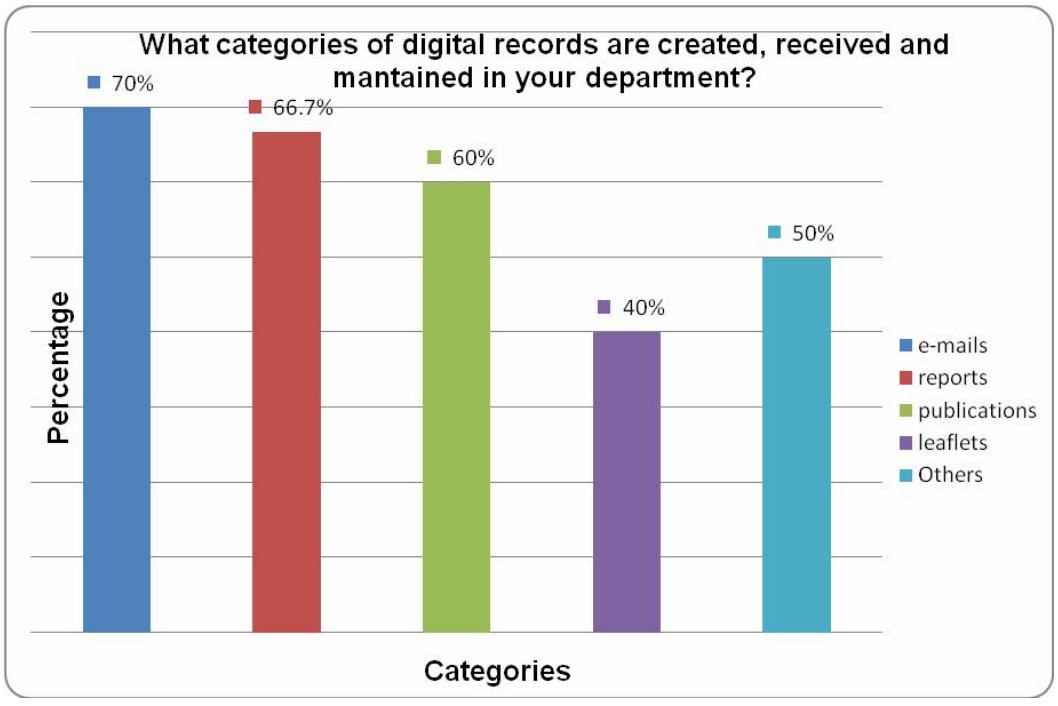

Figure 1: Categories of Digital Records, Created, Received and Maintained

Access and Security

The respondents were asked if the OTP had a system in place to ensure security and protection of digital records. The majority (60%) had no idea, ten (33.3%) said there was a system in place whilst two (6.7%) did not respond as depicted in table 2. The variations in these responses may be attributed to lack of awareness about digital records management systems. Interviews with the Records Manager indicated that the department does not place much emphasis on the security of its records but tries to secure confidential records by storing them in the EDRMS. The Records Manager reported that there was an offsite backup server where the information is stored should the system crash. Observations revealed that there were no definite guidelines on digital records security. The Records Manager pointed out that storage space was a major problem as the records store rooms were already congested and could not handle the bulk of records generated by the department. In addition most of the rooms which housed paper-based records lacked air conditioners and this tended to expose records to conditions not suitable for their preservation. The RecordsManager also revealed that there were no special storage facilities for digital records. At the time of the investigation the OTP depended on the databases in the yet to be fully implemented EDRMS solution. The interview with the Records Manager also established the absence of specific security policy for the management and storage of digital records.

Table 2: System in Place to Ensure Access and Security (N=30)

Access and security	Frequency	Percentage
No idea	18	60.0
Yes	10	33.3
No response	2	6.7
Total	**30**	**100**

An interview with the Chief Information Officer (CIO) established that staff were not allowed to provide to users and the public, information and records that were not in the public domain without consulting the Chief Information Officer. Members of staff were required to follow specific guidelines regarding requests for information as stipulated in the Promotion of Access to Information Act No.2 of 2000. However, the Chief Information Officer conceded that the level of secrecy was yet to achieve best practice benchmark. The CIO was of the view that protecting the security and confidentiality of digital records stored on databases was a problem since there were possibilities of manipulating and corrupting the records. Such concerns tended to generate uncertainty about the use of digital records systems. To mitigate this, the IT Security Manager stated that access to server rooms was managed electronically. The senior managers from HRM also pointed out that not all users were allowed to access confidential records in digital form. For example, there are people who can view the documents while others have only access rights depending on the level of access security one has. Access to storage areas where electronic records are stored is limited to the Information Technology (IT) staff whose duties are concerned with the maintenance of the hardware, software and media.

The Records Manager stated that the department was compiling a disaster recovery plan which aiming to retrieving information should the system crash. It is the view of the researcher that disaster recovery plan should not be limited to recovery of information if the system crashes. According to Tshotlo (2010) a disaster preparedness plan is an important tool central to the protection and preservation of records, and it should be incorporated into the overall management plans of the organisation.

Records in digital format are more vulnerable to various threats than records in paper format. Such threats include, among others, viruses, unauthorised access to digital records, environmental security and database security. Interviews with the IT Manager indicated that he was responsible for the day-to-day maintenance of electronic systems that store digital records. He pointed out that he normally ensured that systems that manage and store records were virus free. All users (employees) of records within the OTP are provided with usernames and passwords to access records. The IT manager pointed out that there was lack of equipment to ensure that digital records remained accessible.

Challenges to Digital Records Management

Respondents were asked to select as many as possible challenges faced by the department in using ICTs for digital records management. Majority of the respondents (66.7%) as shown in figure 2 indicated that shortage of DRM skills as the biggest challenge, followed by inadequate expertise reported by (50%), ICT facilities (46.7%) and inadequate legal and regulatory system indicated by 26.7%. Those who indicated (other) saw resistance to change as an important challenge facing the OTP department when it came to the use of EDMS. It was revealed by the Records Manager that most employees were not comfortable with the EDMS solution being implemented in the department because they fear losing their jobs. Those who were interviewed reported that there was no integrated approach to managing digital or electronic records in the Office of the Premier. Records were stored in the existing registries and also in offices with little or no control over them. This resulted into inability to locate documents and this often led to delays in responding to requests from internal and external clients. Due to these challenges, the OTP is not able to effectively hold members accountable for documents especially those in digital format.

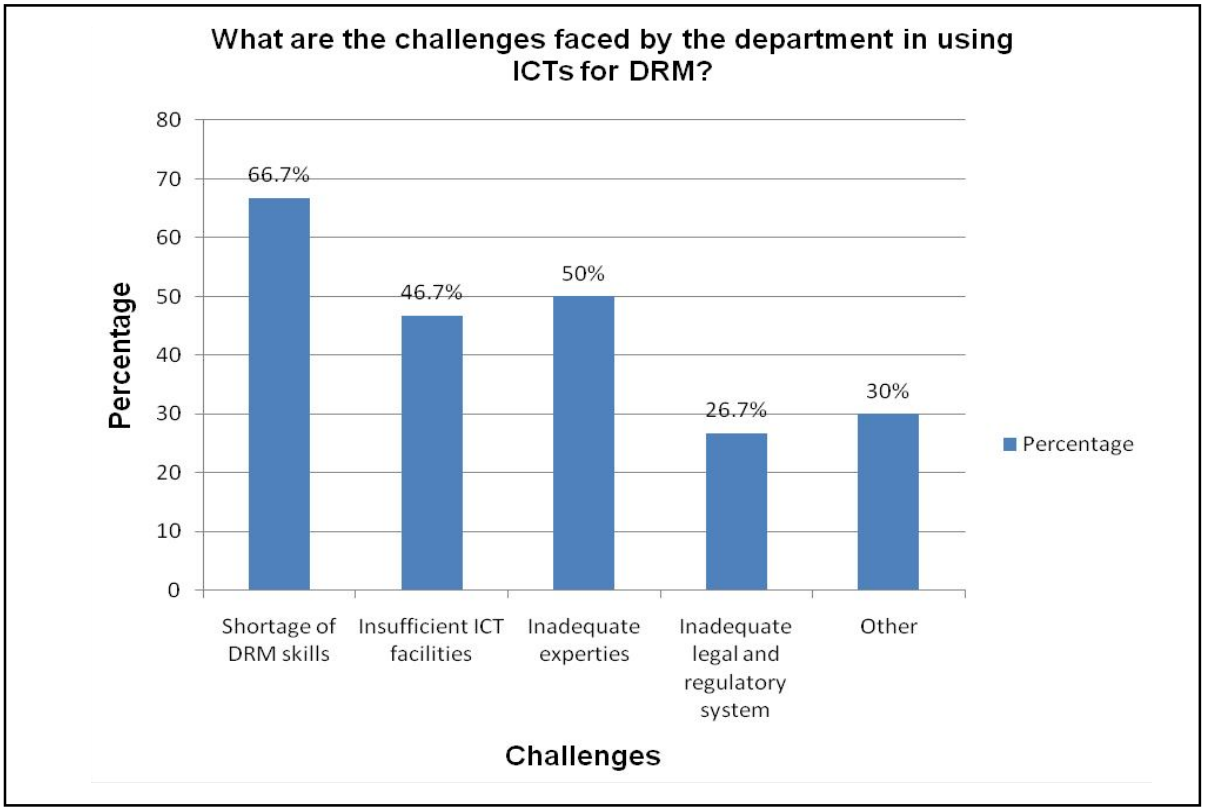

Figure 2: Challenges Faced in Using ICT for DRM

The problem of retaining highly skilled personnel especially the ICT staff was also highlighted. Staff with the necessary IT skills more often left the government for greener pastures elsewhere. This emphasised the need to address existing capacity building strategies (IRMT, 2004).

Senior management staff recommended (see table 3) that all the correspondences (memos, letters, circulars and reports) be accessed electronically as this can save time of running around and drafting letters. They were of the view that if all the documents were online they could easily be accessed remotely. About twelve (40%) of the respondents proposed that the department should put training and human resources development as the first priority. They indicated that it was important for staff to gain sufficient knowledge and expertise especially on the use of the EDRMS being implemented in the department. One of the respondents recommended that all documents in the OTP should be scanned to save space because the department did not have enough space to store the physical documents which are currently stored in the boxes and remained lying idle in the offices. Another member of staff indicated that the department should fast track the process of implementing EDMS to facilitate the delivery of services within the department to include order forms and requisitions, recruitment forms, vacancies and files on condition of services online, while another respondent suggested that the department should secure backup storage facilities for digital records management as part of disaster preparedness plan.

Table 3: Recommendations for Improving DRM in the Office of the Premier (N = 30)

	Frequency	**Percentage**
Training & human resources development	12	40
Flow of documents by scanning all of them	1	3.3
Implementing DRM	1	3.3
Backup systems and standardized format of saving digital records	1	3.3
No response	15	46.7
Total	**30**	**100**

The problems identified in this study are in agreement with findings from sub Saharan Africa by International Records Management Trust (1999, 2004), Kemoni and Wamukoya (2000) Mutiti (2001), Keokopa (2006), Tafor (2003), Makhura and Ngoepe (2005), Mutula and Wamukoya (2005), Ngulube (2007) and Kemoni (2009). This suggests that these challenges are not peculiar to South Africa.

Conclusions and Recommendations

The study established that the Office of the Premier was aware of the required legal and regulatory framework for the management of digital records and had taken a number of initiatives aimed at establishing records management practices. However, the OTP is faced with a number of challenges including the lack of necessary skills, competencies and security to sustain a digital records management programme. The need for OTP to overhaul the existing arrangements for the security and preservation of digital records is recommended. Adoption and implementation of this recommendation can bring a great deal of improvement in the management of digital records in the OTP.

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Building the South African Nation through Legal Deposit: The Impact of Legislation on Preservation of Digital Materials

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Abstract

The legal deposit of and preservation of digital materials depends on the proper legislative framework and implementation of the Legal Deposit Act. This article examines the challenges related to legal instruments affecting the legal deposit of digital materials in South Africa. Two main objectives of the study upon which this article is based were to find out the systems in place to help collect and ensure long term accessibility to print and electronic publications. This included the examination of the legislative regulatory and policy framework relating to preservation and access to legal deposit materials. The different legislations reviewed included the Legal Deposit Act No. 54 of 1997, copyright laws, the Promotion of Access to Information Act No 2, 2000 and the current Protection of State Information Bill of South Africa. Four legal deposit libraries and three Official Publications Depositories (OPDs) were the units of analysis, with a population of 17 staff directly involved with legal deposit. The survey revealed that though the South African Legal Deposit Act covers electronic materials, majority of the depositories did not have policies to manage or collect these types of materials. The greatest challenge that comes with collecting and preserving electronic materials are the multifaceted issues regarding legislation, as well as the preservation of technology used to create, store and access these records in comparison with paper.

Keywords:
Legal Deposit, Digital Materials, Preservation, South Africa, Legal Framework, Cultural Heritage

Introduction

The development of technology has fostered new and faster ways of publishing electronically but many countries are losing a significant proportion of their cultural heritage because they are unable to capture and preserve these electronic documents for posterity. The problems associated with the collection and control of electronic materials, with the lack of a comprehensive legal deposit model, have made the drafting of suitable legislation both problematic and extremely slow (National Library of Australia, 2003). The rate of change, the amount of digital material being published and the diversity of digital technology and culture overwhelm the possibility of applying the same level of human intervention as with analog materials (Feather, 2004; Smith, 2004a; Mason, 2007; Besek, 2008). Smith (2004a) asks "how are we expected to bound or fix an information object for preservation if it has no clear boundaries and is dynamic – appearing in many versions, often simultaneously, as it is on the Web?" This loss of cultural heritage is due to a number of factors including: the need to rewrite or amend legislation, a lack of knowledge, the nature of electronic documents, technical expertise and funding, as well as the fast rate at which technology becomes obsolete.

Research Questions

This paper is based on three research questions that include:

- What systems are in place to help collect electronic publications?
- What means and processes are used to help make materials accessible?
- What systems are in place to ensure electronic publications will be accessible, especially in the long term?

Preservation and Access

Digital preservation is defined by van der Merwe and van Deventer (2009) as: the processes and actions that will help to ensure continued and indefinite access to information and records that exist in a digital format even when the digital files are taken out of their creation context.

The greatest challenges that come with electronic publishing is the complex issues regarding the preservation of technology used to create, store and access these records in comparison with stable paper. The stability of electronic records is at a far greater risk including loss of materials, reliability and authenticity, security than paper records. Wilson (2004) emphasises that the "preservation of digital information is the retention of the electronic information, while access to digital information is the ability to retrieve, comprehend, and use digital resources." The reason for the preservation of all legal deposit materials is to be able to access these documents in the future. The concerns surrounding preservation and access are that as technology changes, software and hardware become obsolete and are replaced. Harvey (2005) states that there is a need to store the digital publications bit streams, the means to process them, the devices that allow us to access them, as well as the contextual information to ensure integrity and authenticity. Yet, there is lack of standard hardware and software, the fast pace of technological obsolescence and many points in an electronic documents life where its integrity can be compromised.

Legislation

Apart from the nature of electronic documents, volume of materials produced within a short space of time, lack of skills and funding, legislation issues associated with collecting and preserving, as well as accessing electronic information also present obstacles. There are already well established legally recognised frameworks for print materials, for example, copyright permits a level of copying for preservation purposes (Harvey, 2005). According to Kavcic-Colic (2003) "technological developments have changed the concepts of publication, reproduction and distribution." Yet, legislation has not changed at the rate of which technology is developing.

Legal Deposit Legislation

Due to a tremendous increase in electronic publications, many countries are revising or have revised their legislation. According to Larivière (2000), a number of jurisdictions since 1990 have rewritten their legal deposit laws including Germany, Norway, Indonesia, France, Sweden, Canada and South Africa. To date, many more have modified their deposit laws like Britain in 2003, and others are in the process of doing so. Although South Africa and a number of countries have included digital materials in their legal deposit legislation it can take several years for it to be fully effective. Verheul (2006) states that: 'Increasingly, material is being published in digital form: this material also needs to be collected and preserved to ensure a complete record of a nation's published material. Legal deposit legislation, therefore requires a new legal framework in order to encompass digital publications. The complications associated with the collection and control of electronic materials, together with the lack of a comprehensive model, have made drafting appropriate legislation problematic and slow.

There is a definitive lack of literature detailing the processes and activities concerned with practically implementing legal deposit for electronic material (Penzhorn, 2007). However, a few are collecting some online publications namely: Sweden, Denmark, France, Australia, Netherlands and the United States of America. Others are paving the way to start collecting electronic documents, such as Britain.

Although South Africa is amongst the first countries to include electronic publications in their legal deposit legislation in the world, it is still wrestling with the concept of electronic/digital legal deposit. The Act makes provision for a Legal Deposit Committee which is responsible for implementation of the Act by making recommendations to the

Minister of Arts and Culture with regard to regulations. These regulations help develop policies which set frameworks and standards that are vital to achieve the preservation goal. The Legal Deposit Committee has not made any recommendations to the Minister with regard to regulations for the deposit of digital materials (Mpholefole, 2012). However, the Legal Deposit Committee has responded to a call for help with the Cultural Laws Third Amendment Bill with regard to legal deposit (Mpholefole, 2012).

Lack of revised deposit laws and the ability of institutions to implement these laws lead to crucial documents being lost. Britain revised their Act in 2003 to include electronic materials; despite the fact that the Act does not stipulate how it should be implemented, they have created secondary regulations to do so (Milne and Tuck, 2008; Gibby and Green, 2008). Britain has a Legal Deposit Advisory Panel that is an independent, non-departmental public body. This body has drafted regulations for the implementation of digital materials and put them forward to the British public to assess (British Department for Culture, Media and Sport, 2010). Comparatively, South Africa lacks human resources as well as a strong institution to implement the Legal Deposit Act competently.

Copyright

South Africa is making efforts to collect online publications. However, legal deposit of dynamic electronic publications that are only available online raises serious issues with copyright, authentication and preservation (Larivière, 2000). Depending on the preservation strategy adopted, the acquisition, storage and preservation of electronic documents over time involves repeated acts of copying (Muir, 2004). Yet, generally, the current legal deposit and copyright law is unclear regarding the preservation roles and methods for electronic materials. Muir (2004) emphasises that the copyright issues that arise depend on the scope of copyright legislation and the nature of the material. There may be conflicts between what copyright allows preserving institutions to do and what library and archive laws require them to do.

Valberg (2008) states that "it is important that the wording of the Act is in accordance with the authorities' policy and the rapid changes in society." Selections made of what to preserve need to be outlined in the legislation clearly and amended regularly according to the developments in technology. On the other hand, legislation (Intellectual property rights- copyright) involving restrictive mechanisms can bar the preservationists from collecting and preserving electronic documents (Day, 2006; Wilson, 2004). These issues may be overcome by careful structuring of the legal deposit laws allowing depositories rights to software licenses. Larivière (2000) states that "copyright gives an author the exclusive right to authorise the reproduction and dissemination of a work" with the exception that the permission is granted through legislation or licence.

A few countries in Europe and America have developed copyright laws for digital materials. In the United States of America, the Digital Millennium Copyright Act permits certain institutions to make a maximum of three digital preservation copies (Muir, 2004; Harvey, 2005). However, Besek et al. (2008) state that the three copies are inadequate for digital preservation for posterity. Other initiatives include the Canadian Copyright Act, European Union Directives on the Aspects of Copyright and World Intellectual Property Organisation (Muir, 2004; Moorthy, 2006). Some countries have data protection rights (Harvey, 2005). The rights to preservation of digital materials are complicated and are time-consuming to implement in that currently libraries and archives have to ask the right holders for permission to preserve digital documents. This is due to the fact that deposit for digital publications has not yet been fully implemented, and arrangements of this nature have been made for web material in Australia; e-theses/research papers in Austria and Germany; online material and university output in Switzerland; and on dissertations in America (Verheul, 2006; Harvey, 2005).

Besek et al. (2008) found another barrier to digital preservation as the dilemma with 'orphan works' that is the works of owners who cannot be identified. This includes digital materials created by collectively using Web 2.0 tools like Wikis. Muir (2004) emphasises that complex digital material, such as multimedia, depends on particular software to function and needs different software to enable searching and retrieval. It also contains different elements belonging to different individuals/ organisations.

Copyright affects preservation as well as access to digital publications. This is due to the fact that technology has changed the way information is produced, distributed and reproduced. All digital materials are subject to copyright, including information on the World Wide Web. Kavcic-Colic (2003) and Larivière (2000) stress that anyone collecting these materials without the author's permission is breaking copyright law, with the exception for documents in the public domain. Other exceptions include all publications that are clearly marked to state that duplication is permitted, and when digital preservation is done with the permission of the owner (Besek et al., 2008). Publishers on the Web also use technological protection measures like login procedures to control access to digital material. Masango (2007) states that "digital content is increasingly protected by multiple layers of intertwined legal and technological devices – copyright law, licensing agreements, software and hardware management systems and criminalising anti-circumvention laws.".However, Besek et al. (2008) state that these measures can be barred by law, while Besek et al. (2008) and Masango (2007) are of the view that a number of countries including the United States of America, Australia and the United Kingdom have clauses protecting these contractual agreements which override legislative provisions in most circumstances.

Wilson (2004) emphasises that "one of the foremost pieces of legislation barring libraries from actively archiving digital resources, especially electronic journals, is copyright." With the off-line electronic materials, the procedures for depositing are similar to those for print material. With on-line material, the publisher may send directly to the depository or the depository would have to download it causing serious copyright questions since downloading is reproduction (IFLA, 2000). IFLA (2000) insists that "with copyright legislation, legal deposit legislation within the electronic environment should be the result of a compromise based on the balance of rights between citizens and publishers." However, Larivière (2000) asserts that if the rights are compromised, there is a need to verify the main copyright instruments (Berne Convention or the Universal Copyright Convention) to which a country is signatory . South Africa is a signatory to the Berne Convention and is bound to frame its national copyright legislation within certain parameters. The Protection of Literary and Artistic Works in the Berne Convention provides the foundation for the control of copyright law internationally (Besek et al., 2008). The Berne Convention entails copyright protection with no rules and regulations, and therefore deposit of copies cannot be enforced (IFLA, 2000a; Larivière, 2000). Countries need to also support treaties like the World Intellectual Property Organisation Copyright Treaty (WIPO-WCT) that provides modern updates to the Berne Convention (Besek et al., 2008).

Most copyright laws that provide the exceptions for preservation institutions were created in the analog era, and often have limitations with regard to digital preservation (Besek, 2008). Yet digital preservation entails more complicated copyright issues than the preservation of the traditional print materials. Besek et al. (2008) emphasise that many of the activities involved in digital preservation, such as making multiple copies of a work, distributing copies among multiple institutions, and migrating works to new technological formats and media, involve the exercise of exclusive rights, including but not limited to the reproduction right.

Unlike the United States of America and Ireland, the South African Legal Deposit Act is not part of the country's Copyright Act. Copyright law, however, has not changed as quickly as the radical technological changes of recent decades (Shuttleworth Foundation, 2008). The South African Copyright Act No. 98 of 1978 has been amended from time to time, but section 13 that makes provisions for libraries and education has not been amended to date (Nicholson, 2008; Shuttleworth Foundation, 2008). Nicholson (2008) points out that the Act and its regulations are outdated and they do not address the digital environment, nor do they take advantage of appropriate limitations and exceptions ("legal flexibilities") allowed in international intellectual property agreements.

According to the Shuttleworth Foundation (2008) "the difference in pace of change generates uncertainties about creativity using new media and copyright." There are no specific provisions in South African copyright law to address libraries/archives and if copying takes place in terms of section 12(1) of the Copyright Act, it must be in accordance with undefined "fair dealing" (Shuttleworth Foundation,

2008). This implies only parts of the document can be copied, and complete documents are not covered. However, the Shuttleworth Foundation (2008) in their Open Copyright Review report found that the definition of 'fair dealing' and the exceptions it allows for are very vague and not clear at all. Fair dealing does not specify how much may be copied without the permission of the copyright holder. With the new issues that the digital environment has brought along, Smith (2004b) argues that "access will be driving preservation, and to succeed in their preservation mission, libraries must therefore stake out a public right of access".

Apart from not addressing the digital preservation issues, the South African Copyright Act No. 98 of 1978 conflicts with the South African Constitution's Bill of Rights that mandates access to information. Nicholson and Kawooya (2008) observe that the provisions in section 5 of the Copyright Act subject the majority of government documents to copyright restrictions. Nicholson and Kawooya (2008) argue that although government information is a publicly funded information "the public requires copyright clearance to reproduce it for any purposes beyond fair dealing." However, the Department of Arts and Culture submitted a Cultural Laws Third Amendment Bill to parliament that included a number of amendments to the Legal Deposit Act No. 54 of 1997. Amongst other amendments, a recommendation was made for a public interest copyright exception that included allowing places of legal deposit to make copies (including digital copies) of works in their lawful possession for purposes of preservation, replacement or security (Department of Arts and Culture, 2012).

Besides the South African Bill of Rights that supports the Universal Declaration of Human Rights Article 19, the Promotion of Access to Information Act (PAIA), 2000 (Act No 2) arises from the constitutional right, and provides more detail with regard to access to information (National Library of South Africa, 2004). The impact of the PAIA Act No 2, 2000 is that all other legislation providing access provisions is subordinate to it but access can still be managed in terms of other laws as long as it does not conflict with the PAIA (Harris, 2000). For legal deposit, this means unrestricted access to all materials even though the Legal Deposit Act No. 54 of 1997 section 7(5) (d) states that "the head of a place of legal deposit may, on the recommendation of the Committee, impose restrictions on certain categories of documents …" Lor (2003) asserts that "the two pillars of democracy are freedom of expression and freedom of access to information including, crucially, access to government information." This recognition should help to foster access to government and other records which are essential to develop a democracy. However, the range of freedoms of access to information, symbolic of liberation from apartheid, is under threat with the draft of the current Protection of State Information Bill that has been put before parliament (Library Association of South Africa (LIASA), 2010; Steward, 2010).

In a statement about the Protection of State Information Bill, LIASA (2010) emphasises that "this 'draconian' bill will have a major effect on media freedom and the democratic values of accountability [and] transparency" with regard to access to government information. If the Protection of State Information Bill becomes an Act it will affect the Legal Deposit Act that makes provision for official publications depositories which promote and provide access to publications and information held by the government.

Preservation Policy

Apart from the examination of other legislations affecting legal deposit in South Africa, there is a need to organise the different processes, and that requires a country to have a digital preservation policy. Drijfhout (2006) states that "a digital preservation policy would state the principles and long-term direction that would guide preservation strategies and action." A number of developed countries have digital preservation policies. However, South Africa, according to Drijfhout (2006), still has a long way to go, although research indicates that some progress has been made. Mpholefole (2011) confirms this, and states that a policy for the preservation of digital publications in South Africa is in the process of being created but is still at the draft stage.

The National Library of Australia's Digital Preservation Policy, third edition (2008), precisely sums up the current challenges of digital preservation and accessibility including issues related to the volume of materials, obsolescence, data corruption and loss, high costs and the need to preserve electronic

materials at creation. Harvey (2005) agrees with National Library of Australia (2008) with regard to digital preservation challenges and notes that there are still too many unknowns. Drijfhout (2007) emphasises that a national long-term digital preservation (LTP) policy is needed for South Africa with the purpose of enabling cooperation between major stakeholders and its positioning for discussion on the political agendas of government.

Research Methodology

The population of the study was surveyed using a self-administered questionnaire for 14 professional library staff (principal librarians and librarians) working in the OPDs and legal deposit sections of the libraries, and a semi-structured interview for the three heads (National Librarian and Library Managers) of the libraries. Non-professional library staff were excluded from the study, as an earlier study indicated that they lacked knowledge about the preservation of materials (Nsibirwa, 2007). The heads of OPDs were not interviewed, as the OPDs have not been in existence and functional for a long time. The decisions about the managerial issues pertaining to the OPDs are made by the Legal Deposit Committee.

Sampling for the questionnaire was not necessary because the population was small. Non-probability sampling in the form of purposive sampling was used to select a sample of the population to be interviewed based on the researcher's knowledge of the population. Although the study employed both qualitative and quantitative research approaches to shed light on the concepts, it was partially mixed because the instruments used were predominantly quantitative and therefore employed methodological triangulation. To organise and analyse data collected from the self-administered questionnaire, statistical analysis using SPSS was used. Conceptual content analysis was used to analyse the content from the open-ended questions of the questionnaire and the interview schedule. The data was summarised and presented in tables using descriptive statistics.

Results and Discussion of Findings

The findings of both the questionnaire and the interviews are combined and presented together. First, all general preservation policies were looked at to ensure that legislation is complied with. Then researcher looked at the written policies for managing these digital/electronic material,s as well as the storage methods and formats.

Preservation Policies

Preservation policies provide frameworks for the present, as well as the future and ensure that access to information is guaranteed. Table 1 clearly shows that South African depositories did not have policies to guide preservation, develop conservation facilities or train and recruit staff. Ten (90.9%) respondents mentioned that their libraries did not have a policy to improve preservation conditions and one (9.1%) respondent said that they had a policy. Nine (81.8%) respondents said they did not have a policy to develop conservation facilities and only two (18.2%) respondents said they had a policy. Four (36.4%) had a policy to recruit and train staff, six (54.5%) did not have a policy and one (9.1%) was unsure whether their library had a policy or not. This was a major flaw that was confirmed by the heads of depositories during the interviews. The interviewees confirmed that they had mission statements but not preservation policies. The mission statements provided by one depository clearly showed that the purpose, values and beliefs of the institution had nothing to do with preserving cultural heritage but support the vision and goals of a public library.

Yet, the Cultural Law Third Amendment Bill did not include any content with regard to regulations and policies for the legal depositories. However, the Legal Deposit Committee has, however, through the National Library of South Africa, created a manual specifically for OPDs in 2004. The OPD manual has guidelines for best practice and encourages OPDs to set their own policies based on generic guidelines (Baker, 2004). Yet, all the OPDs involved in the study did not have any policies in place. The need for change or revision of legislation was mentioned when a legal depository head expressed concern that regulations stated that they had to preserve materials in the original format received. Without preservation, conservation, training and recruitment policies that create frameworks and standards of the preservation of digital/electronic materials and other aspects of preservation management are affected.

Table 1: Existence of Library Policies (N=11)

Policy	Yes		No	
	Frequency	Percentage	Frequency	Percentage
To improve preservation conditions	1	9.1	10	90.9
To develop conservation facilities	2	18.2	9	81.8
To train and recruit staff	4	36.4	6	54.5

Digital/Electronic Materials Policy

A significant number of respondents, eight (72.7%), acknowledged that they did not have policies for preservation of electronic publications compared to three (27.3%) who said they had a policy. The few who said they had a policy are most probably referring to the draft digital preservation policy or the Legal Deposit Act. The heads of legal depositories clearly stated that they did not have digital preservation policies. However, the study indicated that slightly over half of the respondents (54.5%), accepted or acquired electronic materials although they did not have policies to guide them.

Collection of Electronic Materials

In addition, respondents were asked if the depositories accepted or acquired electronic materials for which it assumes preservation responsibility. Six (54.5%) respondents specified that they did, and five (45.4%) respondents indicated they did not. The six respondents whose depositories accepted and acquired electronic materials were questioned further to find out what types of electronic records they accepted. The six respondents stated that they accepted any electronic materials. The objects of deposit included static electronic documents only and not dynamic online materials. Valberg (2008) points out that the Act should be in accordance with specialists' policy. The British Act makes provision and even has a section regarding regulations for non-print materials. Policies help to set frameworks and standards, and are a requirement to build the foundation for digital preservation.

Digitisation

In terms of whether depositories create digital material as a result of digital conversion projects, the study revealed that nine (81.8%) respondents said they did not and two (18.2%) were unsure. Though an open-ended question about storage formats resulted into two (18.2%) stating that old newpapers were stored as Tagged Image File Format (TIFF), which indicated that they were scanned and digitised.

Formats and Storage Methods

To find out more information about the preservation of electronic material, several questions were asked with regard to storage methods and formats. The study also revealed that the majority that had digital materials in their holdings were available in physical format and were offline materials (shown in table 2). This is no surprise as publishers in South Africa are, currently expected to deposit static electronic documents at South African depositories. These electronic materials include videos, cassettes, text files, images, word processing formats, databases and pictures. Four (36.4%) respondents specified they did not have dedicated hardware/software for long term preservation, and only two (18.2%) respondents stated they did. The two respondents who stated they had dedicated hardware/software for long term preservation were asked to specify what systems were used. They both stated they had a scanner: Zeutschel AO.

Table 2: Digital Holdings Formats (N=11)

Formats	Yes	No	Non-response	Not applicable	Total
	Count	Count	Count	Count	Count
Video/Moving Images	5	0	1	5	11
Magnetic tape (open reel) (e.g., cassettes, and so on)	5	0	1	5	11
Flat ASCII files (e.g. , Text file with the file extension .TXT)	4	1	1	5	11
Spreadsheet format (e.g., Excel, and so on)	4	1	1	5	11
Text files with markup (e.g., SGML, HTML, XML, and so on)	4	1	1	5	11
Word processing format (e.g., MS Word, and so on)	4	1	1	5	11
Database format (e.g., Access, FoxPro, and so on)	4	1	1	5	11
Image format (e.g., TIFF, GIF, etc.)	4	1	1	5	11

(Source: Field data)

In addition, a question was asked to establish how digital materials received were stored. Shown in table 3, five (45.4%) respondents stated that electronic records were stored as received, one (9.1%) respondent did not respond to the question.

Table 3: Storage Methods (N=11)

Methods	Yes	No	Non-response	Not applicable	Total
	Count	Count	Count	Count	Count
Store as received	5	0	1	5	11
Hard drive	2	3	1	5	11
Optical Disc (Rewritable)	2	3	1	5	11
Magnetic tape (cassette or cartridge)	0	5	1	5	11
CD-ROM	0	5	1	5	11
WORM Optical Disk (Write-once-read-many)	0	5	1	5	11
Contract with third party for storage	0	5	1	5	11

(Source: Field data)

Respondents were asked to provide further examples of storage media and format in an open-ended question. Of the six respondents, this question was applicable to three (27.3%) who indicated that all were stored as received; two (18.2%) stated that they stored all old newspapers as TIFF; and one respondent did not respond to the question.

Respondents were questioned further if their institution refreshed or migrated their digital materials. This question was not applicable to five respondents. As shown in table 4, five (45.4%) respondents specified that their institution did not refresh materials, and three (27.3%) respondents indicated that their institution did not migrate, that is, transfer file formats from one software/hardware configuration to another. All institutions surveyed indicated that they did not use any preservation strategy of either migrating or refreshing the electronic materials. This is most probably due to lack of expertise in digital preservation. Ngulube (2003) also speculated that "lack of expertise in digital preservation partly explains the unsatisfactory state of affairs in the preservation of digital materials in South Africa." However, a number of developed countries have found that due to the complex nature and size of the problem, archivists and librarians cannot work in isolation; instead, they have formed national and international coalitions.

Table 4: Method of Digital Preservation (N=11)

Method	Yes	No	Unsure	Non-response	Not applicable	Total
	%	%	%	%	%	%
Refreshing	0	45.5	0	9.1	45.5	100
Migration	0	27.3	18.2	9.1	45.5	100

(Source: Field data)

Lastly, the respondents were asked to rank threats to the loss of digital materials (shown in Table 5).

Table 5: Threats Leading to Loss of Digital Materials (N=11)

Threats	Greatest threat	Moderate threat	Minor threat	No threat	Undecided	Non-response	N/A	Total
	%	%	%	%	%	%	%	%
Technological obsolescence	27.3	0	0	18.2	0	9.1	45.5	100
Insufficient policy or plan for preservation	18.2	9.1	0	18.2	0	9.1	45.5	100
Insufficient resources for preservation	9.1	9.1	0	27.3	0	9.1	45.5	100
Physical condition	9.1	0	0	36.4	0	9.1	45.5	100

(Source: Field data)

All these materials were stored as they were received on hard drives or optical discs shown in table 3. Like print materials, electronic materials should remain accessible and usable over time, in spite of technological changes (Millar, 2010). Of the six (54.5%) respondents who accepted or acquired electronic materials, only two (18.2%) stated that some of their materials (microfilm, floppy disks and diskettes) could not be mounted, read or accessed and had become obsolete. This finding could be attributed to lack of knowledge and skills in the preservation of electronic materials and inaccurate reporting. The results in table 5 show that only three (27.3%) respondents indicated that technological obsolescence was seen as the greatest threat. It is surprising that two (18.2%) respondents indicated that technological obsolescence was not a threat, nor were inadequate policies and insufficient resources. Yet, digital preservation requires constant funding to constantly manage change and the continuous growth of the collection (Jones and Beagrie, 2003; Kavcic-Colic, 2003; Wilson, 2004; Harvey, 2005). Other resources required are equipment, computers as well as ongoing staff training.

In addition, four (36.4%) respondents thought the physical condition of materials was not a threat, although all the different types of storage media were threatened by external elements like dust, magnets, excessive heat, direct sunlight and moisture. This finding could also be due to the fact that magnetic tape and microfilm are more robust than today's CD-ROM and memory sticks. However, equipment used to read microfilm and magnetic tape is becoming obsolete.

Conclusion and Recommendations

There is still a lot that needs to be done with regard to refining and reviewing legislation including the Legal Deposit Act, the Copyright Act and development of a national preservation policy. There is also an urgent need for an able institution with enough human and financial resources to implement the Legal Deposit Legislation, as millions of crucial documents are currently lost. The study concluded that efforts are being made to develop a digital preservation strategy for electronic publications, as this is needed as a matter of urgency. This includes efforts to amend the Legal Deposit Legislation to add a public interest copyright exception according to the Department of Arts and Culture (2012) that allows "places of legal deposit to make copies (including digital copies) of works in their lawful possession for purposes of preservation, replacement or security". This is highly recommended as preservation strategies as well as the acquisition, storage and preservation of electronic documents over time involve continual acts of copying (Muir, 2004). However, the Department of Arts and Culture (2012) emphasises that "legislation needs to take into account the collection of associated software, manuals and hardware needed to ensure access in the future." In addition, the public interest copyright exception should forbid copying for commercial advantage. Depositories should also be allowed to bypass digital rights management features, especially when owners fail to deposit copies (Department of Arts and Culture, 2012).

To ensure access for the future generations, legal depositories require a solid foundation from proper legislation, adequate funding, staff with preservation skills and knowledge, proper preservation policies, activities and strategies, as well as collaboration with other countries to look at a way forward with the preservation of electronic publications.

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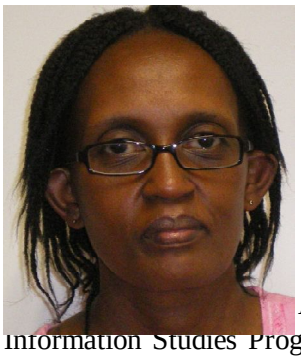

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Information Literacy Competence of Librarians in South West Nigerian University Libraries

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Abstract

The purpose of this study was to determine librarians' information literacy skills and provide reliable data to support the study recommendations. The study used the survey approach. The sampling frame is the National Universities Commission approved list of universities in Nigeria as at August, 2012. Sampling of participating universities in the Southwest was by convenience sampling, a non-probability sampling technique, while that for the study participants (librarians) was census. Except for their understanding of the role of natural language, reference citation, encyclopaedias, periodicals and search engines, the study revealed weaknesses in librarians' knowledge of each of the steps in the information research process, from identifying the concepts to using the results. This suggests that librarians are clearly deficient in the essential skills required for successful information research process. The study thus confirms the perceived negative impression of librarians' information literacy competency. The practical implication is that library users, which include the students, will not be able to receive proper instruction in information literacy skills and may therefore not be information literate. This will affect their effectiveness, efficiency and productivity at work after graduation. The social implication is that their graduates and other library users may not be able to function effectively in today's information society. To remedy the deficiencies, the study recommends regular training and re-training through professional development workshops, librarians' access to regular use of the Internet, and the review of the curriculum of the library schools to incorporate the teaching of Information Literacy with particular emphasis on the practical components.

Keywords
Information Literacy, Information Literacy Competence, Nigerian University Libraries, University Libraries

Introduction

With the application of information and communication technologies (ICTs) to information production, processing, packaging and dissemination; teaching, learning and research are taking on new shapes and boundaries particularly with the advent of the Internet. The impact has particularly changed how librarians access, manage and disseminate information. It has also changed their roles within the workplace and opened up an entirely new information arena within which to apply their unique information skills. As a consequence, what started in libraries as 'library orientation' grew to be 'library instruction' and 'bibliographic instruction' and finally became 'information literacy', which involves teaching users how to access, understand and use information effectively.

Williams and Zald (1997) note that s, tudents often lack the skills necessary to succeed in this rapidly changing information environment, and faculty needs training and support to make use of new technologies for effective teaching and learning. Thus, the current information environment provides an opportunity for librarians to play a key role in the evolution of an integrated information literacy curriculum/process. Their role is to empower users

by helping to develop their information skills so that they may be able to find, evaluate and use information effectively. Indeed, according to Wilson (2003), requests to librarians for information literacy training have reached the proportions of an educational epidemic. The role of librarians as classroom teachers has steadily expanded, boosting the teaching responsibilities of librarians to new heights. They are uniquely situated according to Williams and Zald, to create and foster new ways of teaching and learning information technology.

Statement of the Problem

Library users/customers have sometimes questioned the information literacy competence of librarians in some Nigerian university libraries. They have the impression that some librarians know very little, or nothing at all, about basic library research. With no tangible proof, however, the observations of these users/customers remain hypothetical. Although the study by Okojie (2012) on the information literacy skills and use of information and communication technologies by librarians in Nigerian university libraries reports average use of ICT in the librarian's work and high positive perception of information literacy skills, it is worth noting that perception of skill is not the same as possession/acquisition. Likewise, skill in the use of ICT is not the same as possession of information skill.

Julien (2002) cited in Issa (2009) was of the view that if an individual is information literate, he/she must be able to efficiently and effectively use information sources, and should possess specific online searching skills, which include the ability to select appropriate search terminology, construct a logical search strategy, and evaluate information appropriately. Andretta and Debowski cited in Leong (2006) were also of the view that the practice of information literacy involves not only the development of digital skills but also including higher level analytical and evaluative skills needed to engage effectively with the formulations of complex ideas.

By definition, Information literacy is closely related to the research process. While the research process follows the following steps: defining the information need, formulating the research topic and identifying the concepts, developing a search strategy (involving concept mapping and formulation of search statement, selection of document types, selection of search tools and refining of search statement), executing the search, and using the results (involving locating and retrieving documents, evaluating information and citing sources), information literacy emphasises the set of abilities requiring individuals to recognise when information is needed and have the ability to: locate, access, critically evaluate, communicate and use the information effectively. Information literacy encourages critical thinking and reflection, both of which are considered as the hallmark of library research.

However, because of the complexities of the current information environment, some schools of thought now consider the concept of information literacy a broad form of literacy, subsuming all the skill-based literacies such as computer literacy, information technology literacy, library skills, information skills and learning to learn (Abubakar and Isyaku, 2012). Information literacy programmes do a great deal more than tell how to use the library. Information literacy according to Wooliscroft (1997) is vitally tied to the strategic value and use of information.

The goal of this study is to verify whether the users/customers' impressions have validity and to determine whether these librarians have the ability to retrieve, process, evaluate and use information notwithstanding the media. The study is a replication of a similar study conducted in 2003 on the in-coming first-year undergraduates entering Quebec universities in Canada. The author's assumption is that if librarians could answer the questions correctly, they can be considered to possess information literacy skills and therefore can effectively teach information literacy skills to both staff and students (especially the undergraduates) in their universities.

Conceptual Framework

The study is situated within the conceptual framework of *Information Literacy Competency Standards for Higher Education* as done by Mittermeyer and Quirion (2003) in their study of information literacy of the incoming first-year undergraduates in Quebec. On the basis of these standards, a number of research skills essential to the success of a search were identified. The skills were then linked to

Table 1: Themes Adapted for the Study

Themes	Variables	Question Number
Theme 1. Concept Identification	Significant words	8
	Significant words	12
	Significant words	17
Theme 2. Search Strategy	Translation in keywords	6
	Boolean operator "OR"	13
	Search indexes	15
	Controlled vocabulary	16
	Boolean operator "AND"	20
Theme 3. Document types	Encyclopaedias	7
	Periodicals	19
	Scholarly journals	24
Theme 4. Search tools	Databases	5
	Search engines	10
	Library catalogues	11
	Metasearch engines	18
	Library catalogues	21
Theme 5. Use of results	Reading citations	9
	Bibliographies	14
	Evaluation of information (Internet)	22
	Ethical use of information	23

Source: Mittermeyer and Quirion (2003) Information Literacy Competency Standards for Higher Education

variables, which their study grouped under five themes as provided in table 1 below.

Research Methodology

The author decided to use the survey as a means of collecting data on information literacy of practising librarians in some Southwest Nigerian Universities. It adapted Mittermeyer and Quirion's study questionnaire consisting of 20 reviewed and revised questions. It is therefore a replication of the study, but on the librarians rather than students.

A few changes were made to the questions to reflect the context of the study/environment. The questionnaire was pre-tested at Bowen University, Iwo, Osun State. The results were analysed and each question was reviewed, making necessary changes before finalising the questionnaire. The questionnaire was administered from the 1st of November, 2012 through the 31st of May, 2013.

The sampling frame is the National Universities Commission approved list of Universities in Nigeria at http://www.nuc.edu.ng/pages/universities.asp?ty=1&order=inst_name. As at August, 2012, there were 37 each of federal, state and private universities, that is, a total of 111 universities in Nigeria. Of these, there are 7 federal, 8 state and 19 private universities in the Southwest, a total of 34 universities, some of them, newly established. Convenience sampling, a non-probability sampling technique, was used to select the participating universities. Seven (4 Federal, 2 States and 1 Private Universities) of the 34 universities (i.e. 17.6%) (table

Table 2:Distribution of Respondents according to Universitiese

	Library		Sample	Questionnaires received and analysed	Response Rate (%)
1.	University of Agriculture, Abeokuta, Ogun State	Federal	14	12	85.7%
2.	Obafemi Awolowo University, Ile-Ife, Osun State	Federal	14	14	100%
3.	University of Ibadan, Ibadan, Oyo State	Federal	21	16	76.2%
4.	Federal University of Technology, Akure, Ondo State	Federal	14	5	35.7%
5.	Osun State University, Osogbo, Osun state	State	10	4	40%
6.	Tai Solarin University of Education, Ijebu-Ode, Ogun State	State	10	8	80%
7.	Lead City University, Ibadan, Oyo State	Private	6	6	100%
	Total		**89**	**65**	**73%**

2) were selected because of their convenient accessibility and proximity to the researcher and are considered adequate to provide satisfactory results.

The sampling of study participants (librarians) was census. To encourage librarians to complete the questionnaire, a personal approach was adopted. The author made personal contacts with known individuals in each institution to assist in persuading librarians to complete the questionnaires. This resulted in the overall response rate of 73% considered quite high. The completed questionnaire was analysed using the Statistical Package for the Social Sciences (SPSS). The questionnaire contains multiple choice questions. Some of the questions require respondents to select more than one correct option. However, where respondents chose more than one option in a single option question or did not choose any of the options; the conclusion was that the respondent did not know the correct answer.

The Findings

Background Information of the Respondents

Of the 65 respondents, 47 (72.3%) were from the four federal universities, 12 (18.5%) from the two state universities and 6 (9.2%) from the only private university. Eleven of the respondents (16.9%) graduated before 1990 while 46 (70.8%) graduated during the 1990s (table 3) when according to

Table 3: Category of University and Year of Graduation of Respondents

University Category	Frequency	%	Year of Graduation	Frequency.	%
Federal Univ.	47	72.3	< 1990	11	16.9
State Univ.	12	18.5	> 1990	46	70.8
Private	6	9.2	No response	8	12.3
Total	**65**	**100**	**Total**	**65**	**100**

Adegbore (2010), serious application of information technology (IT) to library processes began in Nigerian university libraries.

Table 4 shows that thirty-two (49.2%) of the respondents have been in librarianship profession for more than six years during which they are expected to have familiarised themselves with the skills requirement for effective services delivery. Sixty (92.3%) of the respondents and above had masters degree as their highest qualification,

Table 4: Highest Qualification and Year of Employment as Librarian

Highest Qualification	Response Distr.	%	Year of Employment as Librarian	Response Distr.	%
Ph.D	2	3.1	1-5 yrs	33	50.8
MLS/MLIS/M. Inf. Sc.	58	89.2	6-10 yrs	16	24.6
BLS/BLIS	4	6.2	11-15 yrs	8	12.3
No response	1	1.5	16-20 yrs.	5	7.7
Total	**65**	**100**	>20 yrs.	3	4.6
			Total	**65**	**100**

Eleven respondents out of a total of 65 or 17% wrote comments after the statement "Your comments are welcome". While some expressed appreciation, a few considered the questionnaire a set of difficult, imprecise, long and technical examination questions thus failing to appreciate the importance of the exercise. The comments are as follow:

"Why are you subjecting us to another examination? Anyway, it is good for our profession. It helps to refresh my brain."

"This is a well thought out questionnaire.".

"Is this an examination or questionnaire?"

"These are examination questions"

"I'm just wondering if this was a profession competency test".

"I think information literacy skill should be taken back to Nigerian library school curricula. Workshop on this subject can only build on background knowledge and not on no-idea, most especially as many attend workshops to get per diem."

"The questionnaire is too long and a little technical for comprehension."

"This questionnaire is not simple and precise. Questionnaire should not be difficult to fill or complete. Subsequent one should be checkmated."

"Quite an interesting research. Information literacy education is long overdue."

"This research is no doubt going to be very informative and educative if pursued to a logical conclusion."

"The onus is on Library schools to emphasise IT skills and information literacy and search strategy skills in their curriculum. It is still being treated superficially in Library schools."

The above comments are a clear departure from comments received from students to which the same questionnaire was administered at Quebec. Some comments received from the students are as follow:

"Thank you for taking an interest in our academic success."

"It's a great idea! I find fantastic your real interest in our success. Thank you!"

"This is an excellent initiative by the University to care about students' research skills. Thank you!"

"I couldn't answer half of the questions asked. Good idea to do a survey to be able to help us!"

"Good to see that you are interested in young people's difficulties with research and that you try to help. Thanks very much."

"Excellent idea to do this survey because it isn't easy to find things in a library."

"This is a great idea. It made me realize how little I know about research! Thank you."

suggesting that they have received instruction in library research process.

"It's encouraging to see that some people have the students' interest at heart for research and learning." (Source: Mittermeyer and Quirion, (2003). "

Responses to Questions

Since the questions have been grouped by theme, the purpose, the results and their interpretation, as well as the corresponding step in the research process, are given for each. The correct answer or best practice is as identified in the Mittermeyer and Quirion study and indicated in bold print.

Theme 1: Concept Identification

Variable: Significant Words

Question 8: You must use a psychology database to find information on "The effect of family relations on the academic

Table 5: Significant Words 1

Options	Response Distribution	Percentage
a) **Family relations, academic results, primary school**	**22**	**33.8**
b) Family relations, academic results	7	10.8
c) Effect, family relations, academic results	1	1.5
d) Effect, family relations, academic results, primary school	29	44.6
e) Others (please specify)	1	1.5
f) Don't know	3	4.6
No response	2	3.1
Total	65	100

The purpose of this question was to find out how respondents select concepts in their search strategy. It is to find out whether they hold to the wording of the statement of the problem, able to distinguish between significant terms and non-significant or meaningless words, and whether they include all the appropriate terms.

Analysis revealed that about one-third of the respondents (33.8%) chose the best answer (a) (table 5), the option which includes the three concepts in the original question. Nearly half (44.6%) however, did not appear to be able to distinguish between significant and non-significant terms when formulating a search statement as they selected options which include the non-significant term, "effect".

Question 12: Using Yahoo search engine to search for documents on "The depletion of the ozone layer and the impact on health", I use the words:

Table 6: Significant Words 2

Options	Response Distribution	Percentage
a) Impact, depletion, ozone layer, health	35	53.8
b) Ozone layer, health	**20**	**30.8**
c) Ozone layer	4	6.2
d) Skin cancer, ozone layer	-	-
e) Others (please, specify)	-	-
f) Don't know	5	7.7
No response	1	1.5
Total	65	100

results of primary school students". Which combination of words will you use?

The purpose was as for question 8. The inclusion of non-significant words reduces the number of results obtained, while the omission of significant words renders the strategy too broad and will retrieve irrelevant results.

Analysis of responses to this question again revealed that only one-third of respondents were able to recognise significant words by selecting the option (b) (table 6). A greater number of respondents (69.2%) did not choose the most efficient strategy or admitted that they did not know the answer. Those who selected (a) which includes the non-significant term "impact" selected an overly restrictive search strategy. The same can be said of those who selected (d), since cancer is only one of the many effects of ozone layer depletion. Those who selected (c), selected a strategy that is too broad.

Question 17: You must make an oral presentation on the topic "*Measures currently used across the country to decrease the damage to the natural environment.*" Among the following choices, which one best describes the ideas contained in your subject?

Table 7: Significant Words 3

Options	Response Distribution	Percentage
a) Damage to the natural environment, Nigeria	7	10.8
b) Measures currently used, country	4	6.2
c) Damage, environment, measures currently used	15	23.1
d) Protective measures, environment, Nigeria	**27**	**41.5**
e) Others (please, specify)	1	1.5
f) Don't know	7	10.8
No response	4	6.2
Total	65	100

In addition to our goal in questions 8 and 12, the goal here was to find out if librarians are able to distance themselves from the formulation used in the statement of the problem when selecting search terms.

Analysis revealed that 41.5% of the respondents did not hold to the wording of the question and selected the option (d) (table 7), while retaining all the important concepts. Thirty-three point nine per cent (33.9%) selected (a) or (c), an answer in which one of the important concepts was missing. Few, 4 (6.2%) of respondents retained the wording of the question and did not realise that although "country" was an important concept, it needed to be translated into a more significant word for the search strategy.

What is clear from the three questions under this theme is that respondents have difficulty identifying significant words, even when their task is facilitated by being presented with a choice of possible answers. Identifying significant words corresponds to "formulating the research topic and identifying concepts" in the "information research process".

Theme 2: Search Strategy

Variable: Translation into keywords

Question 6: You have used the words "business letters" in a computerised library catalogue search. No document is found by the computer. What do you conclude?

Table 8: Translation into Keywords

Options	Response Distribution	Percentage
a) The library does not have any documents on this topic	23	35.4
b) I have not used the right words	**29**	**44.6**
c) All documents on this topic are already on loan	1	1.5
d) The system is down	-	-
e) Others (please, specify)	-	-
f) Don't know	9	13.8
No response	3	4.6
Total	65	100

The purpose of this question was to find out if librarians are able to identify a common problem researchers face when using words to describe their topic, such as using words that do not correspond to those employed by the search tool. It is worth noting that the identification of synonyms, related terms or descriptors to represent a subject is an important component of the search strategy and improves retrieval of relevant documents.

Analysis of results revealed that 44.6% of the respondents chose the right answer, (b) (table 8). This result is an indication that many librarians themselves do have difficulty identifying the preferred search terms in a particular context and may therefore not be able to assist students having such difficulty.

Variable: Boolean Operator "OR"

Question 13: In order to find more documents on my topic I can include synonyms in my search statement. To connect those synonyms in my statement, I use:

Table 9: Boolean Operator 1

Options	Response Distribution	Percentage
a) AND	12	18.5
b) +	13	20.0
c) NOT	-	-
d) OR	**24**	**36.9**
e) Others (please, specify)	-	-
f) Don't know	16	24.6
Total	65	100

The purpose of this question was to assess if librarians are familiar with Boolean operators, specifically the "OR" operator. It is important that librarians understand the Boolean logic used by most search tools so as to be able to develop a sound search strategy. Boolean operators can be used to formulate a query that reflects the logic of the original question and clearly indicates to the system the relationship between the keywords.

Analysis of results revealed that only 36.9% of the respondents chose the right answer (d) (table 9). With synonyms and related terms, the search operator to use is "OR". This operator tells the system to include in the search results, all the documents that contain one or more of the query terms. Some of the respondents (18.5%) chose the "AND" operator, which has the opposite effect to "OR" in limiting the search to documents containing all the terms. A slightly higher percentage (20%) chose the "+" symbol, often employed by some search engines (such as Google) to represent the Boolean operator "AND" or to indicate that a term must show in the search results.

The fact that 24.6% of the respondents did not know the answer to the question is an indication that the Boolean operators are not well understood by some librarians.

Variable: Search Indexes

Question 15: To find all the documents about Margaret Atwood in the library catalogue, I would do a search:

Table 10: Search Indexes

Options	Response Distribution	Percentage
a) By title	7	10.8
b) By Publisher	-	-
c) By Subject	**2**	**3.1**
d) By Author	49	75.4
e) Other (please, specify)	1	1.5
f) Don't know	6	9.2
Total	65	100

The above question is meant to assess the librarian's understanding of the search indexes in a library catalogue. A good search strategy requires an understanding of the structure and content of the fields in a library catalogue or database in order to select the appropriate search indexes when executing the strategy.

It is, however, rather disappointing that only 3.1% of the respondents chose the right answer (c) (table 10) that is they would search the subject field to look for the documents about an author. The answer (d), search by author, selected by 75.4% of the librarians, will find texts written by Margaret Atwood but not documents about her. While the question is not difficult, it did not have a high success rate. Librarians must know how information is structured and indexed in a search tool, be it a catalogue, a database or a search engine.

Variable: Controlled Vocabulary

Question 16: When searching a specialised database for documents on my subject, it is recommended to use the terminology specific to the database. To identify these terms, I would consult:

Table 11: Controlled Vocabulary

Options	Response Distribution	Percentage
a) An ideogram	3	4.6
b) A dictionary	4	6.2
c) A thesaurus	**36**	**55.4**
d) An Internet search engine	12	18.5
e) Others (please, specify)	-	-
f) Don't know	4	6.2
No response	6	9.2
Total	65	100

The purpose of the question was to determine if librarians are familiar with the concept of a controlled vocabulary tool, such as a thesaurus. Since a given concept may be represented by different terms, according to the search tool used, it is a good idea to consult the database thesaurus, where one is available. The thesaurus facilitates document retrieval by providing a list of preferred terms used to describe a subject in the database.

A good percentage (55.4%) of the respondents chose the right answer (c) (table 11). It is encouraging to know that many librarians are familiar with this concept. The option (b), a dictionary, selected by 6.2% of librarians, is not completely incorrect; however, as dictionaries are not associated with any specific search tools, they cannot indicate which terms to use in a given tool. Again, dictionaries do not situate terms in their linguistic environment by providing generic, specific and related terms for each descriptor. Many catalogues and databases use controlled vocabulary to describe the documents they identify.

The concept of controlled vocabulary must therefore be mastered in order to develop a sound search strategy.

Variable: Boolean Operator "AND"

Question 20: You have to write a paper on the "Treatment of depression". Which search strategy will find the least number of documents?

Table 12: Boolean Operator 2

Options	Response Distribution	Percentage
a) Depression and psychotherapy	6	9.2
b) Depression or psychotherapy or antidepressants	12	18.5
c) Depression and psychotherapy and antidepressants	**17**	**26.2**
d) Depression	19	29.2
e) Others (please, specify)	-	-
f) Don't know	8	12.3
No response	3	4.6
Total	**65**	**100**

Again, this question was to verify if librarians understand Boolean logic. The intention here is to verify if they were familiar with the "AND" operator which has the effect of limiting the search to documents containing all the specified search terms.

Only 26.2% of the respondents chose the correct answer (c) (table 12). This search will retrieve the smallest number of documents. If this result is compared with that obtained for question 13, the "AND" operator appears to be even less understood than the "OR" operator, although question 13 was formulated differently. Of the 73.8% who did not choose the correct answer, 29.2% chose (d), which contains only one term, making the mistake of thinking that the fewer words there are in a search statement, the fewer results there will be. This strategy will however produce many more results than (c). Option (b) will retrieve the most documents, opposite of what was asked.

Translation into keywords and controlled vocabulary correspond to "*refining the search statement*", Boolean operator corresponds to "*mapping the concepts and formulating the search statement*", and search indexes corresponds to "*selecting the search tools*" in the information research process.

Theme 3: Document Types

Variable: Encyclopaedias

Question 7: In order to become familiar with a subject about which I know very little, first I consult:

Table 13: Document Types

Options	Response Distribution	Percentage
a) A journal	-	-
b) An encyclopaedia	**50**	**76.9**
c) A database	4	6.2
d) A book	5	7.7
e) Others (please, specify)	1	1.5
f) Don't know	4	6.2
No response	1	1.5
Total	**65**	**100**

The aim of this question was to know if librarians know that an encyclopaedia can be used to familiarise oneself with a subject. An encyclopaedia is a basic reference tool that makes it easier to learn about a new field by given an overview of the topic.

A large percentage of respondents (76.9%) chose the correct answer (b) (table 13). This is an indication that over three quarters of librarians recognised the usefulness of encyclopaedias. Other options are incorrect, as they do not provide an overview of the subject.

Variable: Periodicals

Question 19: To find the most recent information about drug abuse, I consult:

Table 14: Periodicals

Options	Response Distribution	Percentage
a) A book	2	3.1
b) A journal	**54**	**83.1**
c) An encyclopaedia	2	3.1
d) A dictionary	-	-
e) Other (please, specify)	2	3.1
f) Don't know	3	4.6
No response	2	3.1
Total	**65**	**100**

The purpose of the question was to find out if librarians understand the characteristics of various document types and, more specifically, if they know that periodicals contain more recent information than other document types.

A large percentage of the respondents (83.1%) chose the right answer (b) (table 14). This is an indication that librarians have knowledge of the characteristics of a journal.

Variable: Scholarly Journals

Question 24: Which of the following best describe(s) articles published in a scholarly journal?

(a) The information is written for the layperson

(b) It includes a list of references

(c) The research method used is described

(d) It has been evaluated by an editorial board before publication

e) None of the above

f) Don't know

Table 15a: Scholarly Journals

Option					Response Distribution	Percentage
a					2	3.1
	b				4	6.2
			d		34	53.1
				f	2	3.1
	b	**c**	**d**		**14**	**21.9**
	b		d		2	3.1
		c	d		3	4.7
a			d		1	1.6
a	b	c	d		2	3.1
Total					**65**	**100**

Table 15b: Scholarly Journal options

Answers including option	Percentage
A	7.8
B	34.3
C	29.7
D	**87.5**
F	3.1

The purpose of this question was to find out if librarians' knowledge of various document types enables them to distinguish between scholarly journals and popular magazines. It is important to distinguish between these publications when conducting research, as they do not have the same objectives nor are they written for the same audience. A scholarly journal contains theoretical discussions or research results for a specialised public whereas a popular magazine provides information for the general public.

Only 21.9% of the respondents selected the three answers (b), (c), and (d) that characterise the scholarly journal (table 15a). Others merely demonstrated a partial understanding of these characteristics by selecting only one or two of the three valid answers (b, c, d), alone or with an invalid answer, (a) or (e). The second table (table 15b) revealed that peer review of articles (d) is the best well-known characteristic among the librarians; 87.5% of the librarians selected it. In a context where the importance of critical assessment of information is emphasised, it is important that librarians themselves are familiar with this characteristics to be able to properly instruct their students.

While knowledge of reference works relates to "*formulating the research topic and identifying the concepts*", knowledge of the characteristics of the various document types and knowledge of the characteristics of scholarly journal relate to "*selecting document types*" in the research process.

Theme 4: Search Tools

Variable: Databases

Question 5: If I want to find journal articles about "*The popularity of video games*", I will search in:

Table 16: Search Tools

Options	Response Distribution	Percentage
a) The library catalogue	7	10.8
b) A database	**17**	**26.2**
c) Yahoo	9	13.8
d) The journals in the library	6	9.2
e) Other (please, specify)	6	9.2
f) Don't know	19	29.2
No response	1	1.5
Total	**65**	**100**

The purpose of this question was to find out what strategy librarians adopt when they have to find journal articles. The choice of a search strategy is related to knowledge of the search tools at the user's disposal for finding various types of documents.

The result of the analysis revealed 26.2% of the librarians (table 16) selecting the right answer (b), because the search tool that enables one to search for journal articles is the database. The answer "Yahoo" (c), selected by 13.8% of the librarians is a poor choice. Although Yahoo does provide links to certain electronic journals and magazines, one would still have to browse the website to find articles on one's topic. Seven of the respondents (10.8%) selected the library catalogue, (a), but since the library catalogue does not index journal articles; this answer is also incorrect. While it is possible to browse the journals in the library (d) in the hope of finding one or more relevant articles, it does not represent a particularly efficient search strategy. This ironically was selected by 9.2% of the librarians.

These results show that very few librarians in academic libraries are familiar with databases despite the fact that they will have to instruct the students on how use them to find periodical articles to complete their assignments.

Variable: Search Engines

Question 10: Using a search engine such as Google, I would not find:

Table 17: Search Engines

Options	Response Distribution	Percentage
a) The books available in the library	**51**	**78.5**
b) Biographical information about famous people	2	3.1
c) Merchandise catalogues	3	4.6
d) Information about companies	-	-
e) Others (please, specify)	-	-
f) Don't know	8	12.3
No response	1	1.5
Total	**65**	**100**

This question was meant to verify if librarians do understand that search engines are not appropriate tools for finding documents held by the library.

Fifty-one of the respondents (78.5%) (table 17) selected the right answer (a), an indication that they recognised that library books cannot be found using search engines. While it is possible to find the library catalogue using a search engine such as Google, search engines do not enable one to directly access titles within the catalogue. The choice of (a) is also an indication that many librarians are aware that search engines have certain limitations.

Variable: Library Catalogues

Question 11: A friend told me that I should read an article published in the November 2001 issue of Internet Guide, "The Microsoft Xbox Console", by Mark Kenney. To check the availability of this article at the library, I search in the catalogue under:

Table 18: Library Catalogues 1

Options	Response Distribution	Percentage
a) Internet Guide	**9**	**13.8**
b) Mark Kenney	9	13.8
c) The Microsoft Xbox Console	7	10.8
d) Answers (a), (b), and (c) are correct	25	38.5
e) Others (please, specify)	-	-
f) Don't know	12	18.5
No response	3	4.6
Total	65	100

The objective of this question was to evaluate librarians' knowledge of the library catalogue, specifically their knowledge of the kind of documents that can be found using the catalogue and how to use the different search indexes within it.

Only 13.8% of the respondents (table 18) chose the right answer, (a). Many librarians do not seem to know that the catalogue does not index individual journal articles, and as a result, one cannot search by author or by article title. The only access point is the journal title. A large percentage of the respondents (38.5%) believe that they can search indiscriminately by journal title, article title, or author (d).

The importance of this theme should be noted by librarians because a better understanding of the structure and content of search tools would enable students to avoid wasting time and to be more efficient when searching.

Variable: Metasearch Engines

Question 18: Using a metasearch engine such as DogPile and MetaCrawler, it is possible to:

Table 19: Metasearch Engines

Options	Response Distribution	Percentage
a) Launch a search in many search engines simultaneously	**23**	**35.4**
b) Execute a search in all the existing websites	5	7.7
c) Extend search into foreign language websites	2	3.1
d) Execute the search in all the databases available in the library	4	6.2
e) Others (please, specify)	-	-
f) Don't know	24	36.9
No response	7	10.8
Total	**65**	**100**

The objective of this question was to assess librarians' understanding of metasearch engines, a type of Internet search tool. The use of the Internet as a source of information is on the increase, it is therefore important for the librarians to familiarise themselves with, and be able to distinguish between the various categories of Web search tools and to understand the particularities and limitations of each.

Just about one-third of the respondents (35.4%), (table 19) chose the right statement (a) that best characterises metasearch engines. About one-third of the librarians chose (f), "Don't know", while 7.7% of the respondents think that metasearch engines search all existing Web sites (b), something no Internet search tool can do. This result shows that many librarians do not necessarily have a good understanding of this type of tool and probably believe all web search tools do the same thing. However, the differences between these tools have an impact on the choice and efficiency of a search strategy.

Variable: Library Catalogues

Question 21: Some of the items that can be found in the library catalogue include:

[a] All the titles of the books available in the library

[b] All the titles of the books available on the market

[c] All the titles of articles found in the journals available in the library

[d] All the titles of journals available in the library

[e] None of the above

[f] Don't know

Table 20a: Library Catalogues

Options						Response Distribution	Percentage
a						19	29.2
	b					1	1.5
				e		1	1.5
					f	3	4.6
a		C				1	1.5
a			**d**			**22**	**33.8**
a		C	d			17	26.2
No response						**1**	**1.5**
Total						**65**	**100**

Table 20b: Library Catalogues options

Answers Including Option	Percentage
A	90.7
B	1.5
C	27.7
D	60
No response	1.5

The objective of this question was to determine, using an approach different from that used in Question 11, whether librarians know how to query the library catalogue and for what types of searches it can be used.

Only 33.8% of the librarians (table 20a) selected the right answers (a) and (d) since books and journals available in the library are indeed indexed in the catalogue. Some of the other respondents demonstrated a partial knowledge of what a catalogue contains. For example, 29.2% selected (a), "All the titles of the books available in the library" while 26.2% selected (a) and (d) but also added (c), "All the titles of articles found in the journals available in the library".

The second table (table 20b) above shows an unbelievable selection of option (c) by 27.7% of the librarians, which suggests erroneously that periodical articles are indexed in the catalogue. It should be noted that the catalogue is the search tool that enables library users to find documents available at their university, whether in print, audiovisual or electronic format.

Knowledge of databases, search engines, metasearch engines and library catalogues all relate to "*selecting search tools*" in the information research process.

Theme 5: Use of Results

Variable: Reading citations

Question 9: Which one of the following citations refers to a journal article?

Table 21: Use of Results

Options	Citations	Response Distribution	Percentage
a	Lawani, S.M. (2012). *Frontiers in library and information science: contributions to theory and practice*. Ibadan, Nigeria, Millennium Press.	3	4.6
b	**Ojedokun, A.A. (2005). The evolving sophistication of Internet abuses in Africa. *The International Information and Library Review (IILR)*, 37 (1): 11-17.**	**49**	**75.4**
c	Hartley, J.T. & D.A. Walsh. (2000). "Contemporary issues and new directions in adult development of learning and memory", in L.W. Poon (ed.), Aging in the 1980s: *Psychological issues*, Washington, D.C., American Psychological Association, pp. 239-252.	1	1.5
d	Maccoby, E.E. & J. Martin. (1983). "Socialization in the context of the family: Parent-child interaction", in P.H. Mussen (ed.), *Child psychology: Socialization, personality, and social development.* New York, Wiley, vol. 4, pp. 1-101.	8	12.3
e	Don't know	3	4.6
f	No response	1	1.5
Total		65	100

The objective of the question was to determine if librarians themselves are able to interpret a bibliographic reference and recognise the document type to which it corresponds. This knowledge is important because first, the way to query the catalogue to locate a particular document varies according to document type; and second, because the nature, specificity and currency of information varies according to publication type. As a result, the ability to identify a document type from a given citation is useful in assessing the relevance of a source for one's information needs. It is therefore important to be able to identify the document type corresponding to a citation.

A large percentage of the librarians (75.4%), (table 21) selected the right answer (b). Only about one-quarter of the librarians were unable to identify citation associated with a journal article. These ones will have serious difficulties instructing students on how to locate documents using a bibliography.

Variable: Bibliographies

Question 14: You have found a book that is right on your topic. Which section of the book will you consult to find other documents on the topic?

Table 22: Bibliographies

Options	Response Distribution	Percentage
a) The glossary	4	6.2
b) The index	15	23.1
c) The bibliography	25	38.5
d) The table of content	13	20.0
e) Other (please, specify)	-	-
f) Don't know	8	12.3
Total	**65**	**100**

This question was to find out if librarians know what a bibliography is. Knowledge of bibliography by librarians is important to enable them to properly instruct the students on the added value of the bibliographic references selected by the author. Such references enable them to find other documents on their topic, thus enhancing their awareness of existing knowledge.

The analysis of the results revealed that only 38.5% of the librarians (table 22) are familiar with the bibliography as a tool for finding other documents. However, 61.5% of the respondents lack the knowledge of the benefit of bibliography. This does mean that these librarians would have difficulty in understanding the references the book contains and, as a result, locating the documents cited. This is contrary to the result obtained in the previous question, which leads us to believe that those who are able to interpret a bibliographic reference may not necessarily understand the usefulness of a bibliography.

Knowledge of both reading citations and bibliographies relate to "*locating and retrieving documents*" in the information research process.

Variable: Evaluating Information (Internet)

Question 22: Among the characteristics that are used to evaluate the quality of an Internet site one finds:

[a] The date of publication is provided

[b] The author is known in the field

[c] Responsibility for the site is clearly indicated

[d] The site is rapidly accessible

[e] None of the above

[f] Don't know

Table 23a: Evaluating Information

Option					Response Distribution	Percentage
a					4	6.3
	b				4	6.3
		C			14	22.3
			d		6	9.5
				f	2	3.2
a	b				3	4.8
a		C			3	4.8
a	**b**	**C**			**13**	**20.6**
a	b	C	d		8	12.7
		C	d		2	3.2
a		C	d		1	1.5
a			d		2	3.2
a	b		d		1	1.5
Total					**65**	**100**

Table 23b: Evaluating Information Options

Answers Including Option	Percentage
A	53.9
B	44.4
C	65.1
D	31.6
F	3.2

The objective of this question was to find out if librarians have knowledge of the criteria commonly used in evaluating the quality of a website. Many researchers today, including students often look to the Internet for their information needs. But since the information on the web is not always evaluated or checked before it is posted, librarians' knowledge of the evaluation criteria is important to be able to instruct the students to always use these criteria to critically evaluate it.

Only 20.6% of the respondents (table 23a) chose what are considered to be the best answers (a), (b), and (c). It is worth noting that a higher percentage (65.1%) demonstrated partial knowledge in selecting one or two of the relevant criteria, with or without including the irrelevant criterion (d), or selecting all four options. This is an indication that the concept of evaluation does not appear to be well understood by librarians.

Variable: Ethical Use of Information

Question 23: You found magazine articles and Web pages presenting different views on a current issue. You want to use this information to write your paper. In which case(s) do you need to include a reference to the source of information?

[a] When I copy word for word a paragraph from a magazine article

[b] When I copy word for word a paragraph from a web page

[c] When I write in my own words what is being said in a magazine article

[d] When I write in my own words what is being said in a web page

[e] In none of the above cases

[f] Don't know

Table 24a: Use of Information

Option					Response distribution	Percentage
a					4	7.0
	b				8	14.0
		c			3	5.3
			d		2	3.5
				f	5	8.8
a	b				14	24.6
a			d		1	1.8
	b	c			1	1.8
	b		d		1	1.8
a	b	c			1	1.8
a	**b**	**c**	**d**		**13**	**22.8**
		c	d		3	5.3
a	b		d		1	1.8
Total					**65**	**100**

Table 24b: Use of Information Options

Answers Including Option	Percentage
a	59.8
b	68.6
c	37.0
d	33.5
f	8.8

The objective of this question was to find out if librarians know when to include a reference to the source of the information used. It is important to know that when repeating someone's words or opinions, mention should be made of the author of the original text so the reader may refer to the text. When the statement of an author is repeated word for word or it is paraphrased without documenting the source, it constitutes plagiarism.

Only 22.8% of the librarians (table 24a) chose the correct answers (a), (b), (c), and (d). The other 77.2% demonstrated only a partial knowledge of when to include bibliographic references or have no idea at all when to quote a source. The second table (table 24b) revealed that only about one-third of the librarians are aware of the need to quote sources when paraphrasing: only 37.0% of the respondents circled statement (c),"When I write in my own words what is being said in a magazine article", and 33.5% chose (d),"When I write in my own words what is being said in a Web page".

Citing sources is an important step in the information research process. In preparing a paper, a list of the works consulted or cited must be included.

Summary of Findings

Table 25 provides a summary of the analysis of results, by percentage of correct answers clearly showing areas of deficiencies.

Table 25: Results by Percentage of Correct Answers

Question	Variable	Percentage of Correct Answers
15	Search indexes	3.1
11	Library catalogues	13.8
22	Evaluation of information (Internet)	20.6
24	Scholarly journals	21.9
23	Ethical use of information	22.8
20	Boolean Operator “AND”	26.2
5	Databases	26.2
12	Significant words	30.8
8	Significant words	33.8
21	Library catalogues	33.8
18	Metasearch engines	35.4
13	Boolean Operator “OR”	36.9
14	Bibliographies	38.5
17	Significant words	41.5
6	Translation into keywords	44.6
16	Controlled Vocabulary	55.4
9	Reading citations	75.4
7	Encyclopaedias	76.9
10	Search engines	78.5
19	Periodicals	83.1

Results by Theme

A study of the results under 40% for 13 (in bold print) of the 20 questions revealed areas of deficiency (table 26).

Table 26: Summary of Results by Theme

Themes	Variables	Questions	Result	Problems Identified
Theme 1. Concept Identification	Significant words	8	**33.8**	Difficulty identifying significant words
	Significant words	12	**30.8**	
	Significant words	17	41.5	
Theme 2. Search Strategy	Translation in keywords	6	44.6	Lack of understanding of the Boolean logic (i.e. of operators "OR" and "AND"), and of how information is structured and indexed in a search tool.
	Boolean operator "OR"	13	**36.9**	
	Search indexes	15	**3.1**	
	Controlled vocabulary	16	55.4	
	Boolean operator "AND"	20	**26.2**	
Theme 3. Document types	Encyclopaedias	7	76.9	Lack of knowledge of the characteristics of scholarly journals.
	Periodicals	19	83.1	
	Scholarly journals	24	**21.9**	
Theme 4. Search tools	Databases	5	**26.2**	Lack familiarity with databases. They are unable to distinguish between library catalogues and bibliographic databases. They also have limited understanding of web search tools.
	Search engines	10	78.5	
	Library catalogues	11	**13.8**	
	Metasearch engines	18	**35.4**	
	Library catalogues	21	**33.8**	
Theme 5. Use of results	Reading citations	9	75.4	Lack knowledge of: the benefit of bibliography; when to include bibliographic references or when to quote a source, and the criteria for evaluating information from the Web..
	Bibliographies	14	**38.5**	
	Evaluation of information (Internet)	22	**20.6**	
	Ethical use of information	23	**22.8**	

Discussion of Findings

Except for their understanding of the role of natural language, reference citation, encyclopaedias, periodicals and search engines, weaknesses were noted in librarians' knowledge of each of the steps in the *Information Research Process*, from *Identifying the Concepts* to *Using the Results*. The weaknesses varied according to the variable examined and in proportion to the number of questions included in each of the steps.

The author notes that many of the librarians (70.8%) graduated in the 1990s when IT was introduced into Nigerian university libraries. The author further notes that about half of the respondents (49.2%) have had over six years experience in librarianship practice while sixty of the respondents (92.3%) had master's degree as their highest qualification. It is therefore surprising to find that in spite of the training received from library school and years of experience in librarianship practice, librarians

have difficulty in identifying significant words and the role of Boolean operators. It is even more startling that they are unable to recognise the characteristics of a scholarly journal and to distinguish between library catalogues and bibliographic databases; lack knowledge of the benefit of bibliography; when to include bibliographic references or quote a source and of the criteria for evaluating information from the web; and have limited understanding of web search tools. An earlier study by Ojedokun and Okafor (2011) on Information Technology (IT) skills (relevant to information literacy competency) of librarians in Southern Nigeria had also revealed that librarians were not familiar with subject gateways, specialised databases and some open access library databases.

While all the variables examined are quite germane, (as earlier explained in the result presentations), to possessing competence in information literacy, the above findings and the findings from this earlier study point to librarians' possession of poor information research skills and by extension information literacy skills. These no doubt will have negative impact on the ability of librarians to instruct users on information literacy skills. The practical implication is that library users, which include the students, will not be able to receive proper instruction in information literacy skills and will therefore not be information literate. This will affect their effectiveness, efficiency and productivity at work after graduation. The social implication is that their graduates and other library users will not be able to function effectively in today's information society.

Librarians' role in the teaching of information literacy to library users, especially students is not in doubt. It should however, be noted that the introduction of technology into teaching, changes in scholarly communication patterns, the increasing variety of media, more demanding students requiring services to be available as, when and where they want them, all require that librarians ensure, more than ever, that they are user-focused, user-friendly, and able to assist users to gain information literacy skills which will enable them to be self-sufficient. There is therefore the need to build users' confidence in the abilities required to accomplish this goal. This is particularly important if they are to gain respect from their colleagues in the faculty.

Conclusion

The goal of this study was to establish the validity of the library users/customers' negative perception of the information literacy competence of librarians. Findings from this study confirm the validity of the users/customers impression about the competence of librarians to instruct them in information literacy skills. As the findings revealed, librarians are clearly deficient in the essential skills required for a successful information research process.

We note that technology and knowledge about information resources (including print) and the information-seeking techniques associated with the Internet or electronic databases require time, practice and effort to build skills and expertise. But with the level of education and years of experience of respondents in librarianship practice, and for one responsible for instructing students in the information research process, the results are unexpected, and steps need to be taken to correct the deficiencies.

Librarians should not only be openers of doors and gateways to information; but should also be key enablers, able to empower users to become more self-sufficient in developing information gathering and evaluating skills which will assist others to be well resourced for changing life circumstances.

Recommendations

In the light of the outcome of this study, the recommendations below are worth considering for correcting the outcome of this study.

Training and re-training in information literacy among librarians should be encouraged. It is important that librarians are properly equipped for the delivery of instruction in information literacy. Workshops are a time-honoured method for continuing professional development of librarians. University librarians and the Nigerian Library Association (NLA) are encouraged to take the issue of continuing professional development of their staff/members seriously for effective services delivery.

Internet access for every librarian is recommended. The Internet can also be an excellent tool for librarians teaching information literacy. Its problems as an informational resource according to Klesch (2003) provide the perfect means for gaining information literacy skills. Its weaknesses according to this same author, can also be used to establish a

doorway to other information resources that are better for background information, quicker to use, or simply not available on the Internet.

As the study revealed, it has become necessary for Nigerian library schools to review their curricula to include the teaching of information literacy skills with particular emphasis on its practical component. The last of the comments by one of the respondents also attests to this need. This will go a long way in equipping the librarians with the skills to effectively instruct users in information literacy skills, especially for today's information society.

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Conceptualisation of Nurses as Information Intermediaries for Patients in Palliative Care

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Abstract

It is argued that notwithstanding the life expectation of patients in palliative care, they still grapple with a wide spectrum of uncertainties for which they require answers to bring relief from anxiety. Nurses, appreciative of their role to relief anxiety, are often the only persons with whom patients have regular contact that can assist them in finding answers. Although nursing staff are well trained in palliative care, they often experience frustration when they fail to access the right information that will provide their patients' information needs. Despite evidence of numerous successful information provision interventions by nursing staff, the literature continues to report unmet information needs and frustrations of patients and their families. As a solution, this paper offers an exploratory conceptualisation of nurses and palliative care which can serve as a framework for further investigations towards enhancing nursing staff's information intermediary capacity.

Keywords:
Information Behaviour, Information Actions, Information Interactions, Information Intermediaries, Nurses, Palliative Care, Patients

Introduction

Palliative care is associated with diagnosis with a life-threatening disease or more often, the last phases of life – dying and death. It is mostly associated with ending curative treatment, such as focusing on quality of life while dying, hospice care, and coping with terminal illness (Pastrana *et al*., 2008). It is, however, also associated by many with the mere diagnosis with a life-threatening disease (Fourie, 2008 citing the World Health Organisation; Pastrana *et al*., 2008; Stayer 2012, p. 351). Patients in palliative care find themselves in a new, unfamiliar environment. Some gradually move into palliative care as their prognosis, after diagnosis with a life-threatening disease, worsens. For others, death may follow in a few days or weeks after diagnosis. Sometimes, palliative care applies immediately if curative care does not offer a solution (Fourie, 2008). Depending on their awareness of the diagnosis and prognosis, patients may expect to die; others may be in denial, or moving between awareness, acceptance and denial (Glaser & Strauss, 2005). Patients experience much uncertainty and anxiety in trying to cope, making sense of what is happening to them, and in maintaining something of their former lives. Their information needs and behaviour have been reported as complex, diverse and heterogeneous (Clayton, Butow & Tattersall, 2005; Fourie, 2008). For example, they find themselves in a context (palliative care) where they are facing death.

In this unfamiliar environment, patients share much of their lives and needs with healthcare professionals such as nurses. They depend on them for physical care, and to be informed about the diagnosis, prognosis and purpose of palliation (Bilodeau & Degner, 1996). Their families and informal caregivers rely on healthcare professionals for information and support (Carter, 2001; Bee, Barnes, & Luker, 2009). Of all healthcare professionals, nurses seem the people closest to interact with, and exchange information. Nurses seem

to be in the best position to support patients in their efforts to cope with their diagnosis and with prognosis, to make sense of what is happening with them, to try to maintain as much quality of life as possible (McCaughan & McKenna, 2007), and to make decisions (Beaver *et al.*, 2006; Bilodeau & Degner, 1996). Patients often prefer human information resources, trust nurses and find them more accessible than doctors (Neumann *et al.*, 2011). Nurses are expected to offer emotional support (Drew & Fawcett, 2002), and are called on for holistic patient care. For palliative care, the provision of information to patients and families can include: "The human rights of the moribund include liberty, dignity, personal integrity, information, assistance, and relief from unnecessary suffering" (Echeverri & Acosta, 1996).

Under these circumstances, it seems as if there is a need for nurses to adopt an information-related role. Information actions and interactions can range from providing factually correct and appropriate information on issues that deal with self-care and pain management to discussing the disease with lovedones (Davies *et al.*, 2010; Matti *et al.*, 2010; Wilkes *et al.*, 2000). Nurses should be able to act as soundboards for patients, answering questions and helping them to make sense of the information they receive. They may even be required to answer questions on related matters such as euthanasia and living wills. Within palliative care, there seems to be a need for nurses to serve as a link between information related to palliative care, other healthcare professionals and the patient and family. Although nurses can be specialists in their own right, not all are trained in palliative care, the complexities and ethical concerns of full disclosure on diagnosis and prognosis, and finding a balance with maintaining hope (Curtis *et al.*, 2008; Osuna *et al.*, 1998; Turner *et al.*, 2011). Although providing emotional support is very important for nurses (Fourie, 2008), they are not trained to balance this with patients' information needs and information behaviour. Often they need to develop their own coping mechanisms to distance them from the plight of patients and coping with their own emotional experiences (Menzies, 1993).

Many information-related actions have been ascribed to nurses such as: information sharing, giving, provision, dissemination, responding, communicating, connecting, exchanging, educating (i.e. patient education) and even empowering (Davies *et al.*, 2010; Drew & Fawcett, 2002; Fields *et al.*, 2006; Hustey & Palmer, 2010; Schultz, 2002; Wilkes *et al.*, 2000). Reports on these aspects acknowledge the needs of patients for support with their expressed information needs. However, such reports seldom reveal evidence of insights gained from Information Behaviour (a sub-discipline of Information Science). In spite of the time and effort going into information-related interventions, numerous unmet information needs and information-related frustrations are reported by patients and families (Kristjanson *et al.*, 2004; McCaughan & McKenna, 2007; Neumann *et al.*, 2011). These point to inadequate understanding of: (1) the information behaviour of patients (and their families); (2) how healthcare professionals can support the fulfilment of patients' information needs; (3) and how healthcare professionals can facilitate patients' information behaviour.

From the above, it is evident that there is increase in the number of patients diagnosed with life-threatening diseases such as cancer (Jemal *et al.*, 2011), people requiring palliative care, as well as those preferring to die in their own homes (Bee, Barnes, & Luker, 2009; Melin-Johansson *et al.*, 2008) all echo their uncertainties on nursing staff. Yet, nurses' training, as well as professional literature, prepares them only partially for their information role. It seems thus timely to conceptualise a role for nurses as information intermediaries.

Statement of the Statement

From the introduction, it seems evident that: (1) Within the palliative care context, patients develop needs for information in addition to the available factual information related to the specific life-threatening disease and care-giving (i.e. palliation); (2) Healthcare professionals and especially nurses may be in a unique position to act as intermediaries between information and patients to provide in their information needs (recognised information needs, expressed information needs, and dormant information needs) and to facilitate their information behaviour; (3) Healthcare professionals would need to develop the capacity to act as information intermediaries, understanding the full spectrum and complexity of the information needs, information behaviour and information practices caused by a

patient's (deteriorating) health status; (4) Healthcare professionals (e.g. nurses) need to understand how their information actions and interactions such as information sharing or information transfer can either increase patients' anxiety and fear or relieve it. (The concepts "information behaviour" and "information practice" are explained in a later section.)

Scope and Purpose of the Paper

To address the stated problem, this paper will clarify key concepts such as information behaviour, information practice, palliative care, and intermediary, before briefly reviewing selected findings on the information needs and information behaviour of patients in palliative care with specific reference to the role of nurses. Reports on the information-related role of nurses in other contexts will also be acknowledged. The paper will touch on the need for nurses to understand the spectrum of information behaviour and information practices of patients, the spectrum of information- related actions in which they can support patients, and the ability to contextualise each patient's individual needs in terms of information and other support (e.g. emotional support) required.

Clarification of Key Concepts

A section on the clarification of concepts is essential to ensure that the meaning attached to concepts clear to the researcher(s), readers and (when applicable) also research participants. Too often an intuitive understanding of concepts is assumed. Saracevic (1975, p. 324) refers to the "y'know" approach where it is assumed that everybody knows the meaning of key concepts. It should be kept in mind that people's worldviews are formed by their understanding of something which in turn influences their decision-making and willingness to think about difficult issues such as death and dying (Daveson *et al*., 2011). As Pastrana *et al*. (2008, p. 222) put it: "The use of the language is not just the way of transmitting meaning, but it constitutes what we do and how we do it."

Information Behaviour

Information behaviour is "conceptualised as complex human information-related processes that are embedded within an individual's everyday social and life processes with evolutionary and developmental foundations" (Spink & Heinström, 2011, p. xvii). It "encompasses information seeking as well as the totality of other *unintentional* or *passive* behaviours (such as glimpsing or encountering information), as well as purposive behaviours that do not involve seeking, such as actively *avoiding* information" (Case, 2007, p.5). Information behaviour can include being unaware and ignoring information needs (Wilson, 1999). Recognising the difficulty of defining "information needs", Wilson (2005, p. 32, 35) suggests that the term should be ignored and replaced with "information seeking behaviour", since behaviour is observable while needs are internal mental states that cannot be seen. It may, however, be difficult to ignore the concept of needs in information behaviour or to replace it with a completely different term since needs are a reality in human activities. Information needs are closely linked to challenges that individuals (such as patients in palliative care) experience in all facets of their lives. Information behaviour manifests in the work, research, study and everyday-life world. It is influenced by cognitive, conative and affective factors (Hepworth, 2007, p.41).

Information Practice

"Information practice" has been suggested as alternative to "information behaviour". According to Savolainen (2008, p. 4) "... information practice emphasises the role of contextual factors that orient people's information seeking, use, and sharing as distinct from individualist and often decontextualised approaches". "Information practice" features in studies in healthcare context, information literacy and information use (e.g. writing assignments). According to Byström and Lloyd (2012), information practice "as a social practice"… "is composed of a range of activities, e.g. to produce information, to seek and acquire information, to place value and evaluate information, to identify and compose information into meaningful combinations, to distribute and share information, and, in general, to put information into use." It can also include deliberately withholding or failing to provide appropriate information (Byström & Lloyd, 2012).

Apart from researchers noting information

practice as an alternative to information behaviour, these two key concepts are mostly not well aligned. This also applies to other information activities and information interactions, such as information giving, information provision, information dissemination and information transfer. Although noting this gap, this paper will not attempt to address it.

Palliative Care

A lack of conceptual clarity on palliative care and differences in country and cultural specific interpretations are often noted (Bosma *et al*. 2006; Meghani, 2004; O'Connor *et al.*, 2010). The World Health Organisation's (WHO's) definition of palliative care is a definition widely cited as point of departure for research projects (Fourie, 2008; Pastrana *et al.*, 2008). It defines palliative care as "... an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual." The American Academy of Palliative Care (AAP) definition (as cited by Stayer 2012, p. 351) for palliative care for children is also worth noting: "Sensitivity to and respect for the child's and family's wishes; palliative care includes the control of pain and other symptoms and addresses the psychological, social, or spiritual problems of children (and their families) living with life-threatening or terminally ill conditions; the goal of palliative care is the achievement of the best quality of life for patients and their families, consistent with their values, regardless of the location of the patient."

From these two interpretations, the following seem important when considering palliative care as concept: (1) improvement of quality of life; (2) the need to include patients and their families in palliative care; (3) dealing and coping with the problem of a life-threatening disease; (4) facing a disease that may be terminal; (5) the need to address physical, psychosocial and spiritual problems; (6) sensitivity and respect for the wishes of patients and families; (7) need to provide care consistent with the values of the patients and families; (8) need to ensure that the location of care does not have an impact on the palliative care provided. The need to support patients and their families is also stressed by Bee, Barnes and Luker (2009), Finlay and Jones (1995) and Meghani (2004). Although palliative care is often associated with terminal and end-of-life care, any diagnosis with a life-threatening disease may imply entitlement to palliative care from the time of diagnosis onwards.

Intermediaries and Information Intermediaries

Intermediation in its broadest sense implies dialogue where information in the form of advice or counselling flows from one person to another (or many). The emphasis is on facilitation. Rogers (Rogers & Shoemaker 1971, p.229) refers to an intermediary as a "change agent", stating: "[He] is necessarily a marginal man with one foot in each of the two worlds." According to Jinkook and Cho (2005), an intermediary is a human or non-human party that assists people in processing information.

The collection, organisation and distribution of information can also be included. Although Maglio and Barrett (2000) are concerned with non-human intermediation (i.e. the use of software), their observation that intermediation concerns "meaningful transformation of information" is especially important. According to them, information flows from one computer to another. Although it will not be pursued at this stage, it is noted that such "flow" might perhaps be further investigated against Csikszentmihalyi's (1997) theory of flow. However, fledging this out will require substantial further reading, reflection and cross-disciplinary research.

Patients' Information Needs and Information Behaviour

Before conceptualising a role for nurses as information intermediaries for patients in palliative care, findings on the information needs and information behaviour of patients in palliative care are briefly reviewed. (Considering length restrictions for the paper, findings on families is not considered).

Information Needs

Information needs have been linked to gaps in knowledge, the need to make sense of a situation,

an anomalous state of knowledge, and dealing with uncertainty (Case, 2012, citing the work of researchers such as Dervin, and also Belkin, Oddy & Brooks). Patients have been reported to need factual information on the disease (e.g. physical symptoms, emotional symptoms, stages, prognosis, cure), treatment (effect and success rate, side-effects, and alternatives), where to get help, diet, psychosocial care, complementary care, management of disease relapse, fatigue, sexual activity and sexual well-being, issues of genetics and hereditary diseases, cancer risks, drug information, coping strategies, weight-management, cancer screening, cardiovascular health, and euthanasia (Curtis *et al*., 2008; Mahon & Williams, 2000; Mason, 2005; Ohlendorf, Marianne & Ryan, 2012; Piredda *et al*., 2007; Watts *et al*., 2004). Patients need information throughout the illness, from the time of diagnosis, during dying, as well as close to death; sometimes the need is for professional advice or emotional support in contrast to information (Bee, Barnes, & Luker, 2009; Zanchetta & Moura, 2006).

It is clear that information needs sometimes differ according to disease and age groups. Ishibashi (2001) reports on the needs of children and adolescents with cancer for information and social support and Hughes *et al*. (2000) on the information needs of elderly postsurgical cancer patients during the transition from hospital to home. Posma *et al*. (2009) report on older patients. Beaver *et al*. (2006) report on the information needs of women with breast cancer and Matti *et al*. (2010) on multiple sclerosis – to name only a few studies. In a study on breast health information needs of women from minority ethnic groups, Watts *et al*. (2004) report that their needs appear to have been an "add on", and that healthcare professionals lack understanding about cultural beliefs, values and knowledge, together with racial stereotyping and misconceptions about cancer in minority ethnic groups. Neumann *et al*. (2011) refer to subgroups of information needs. When leaving the hospital for home care, issues arise such as: postoperative self-care, symptom management, clarifying the illness experience, psychological responses, coordinating follow-up care, community resources, identifying events that require physician notification, and pain management (Hughes *et al*., 2000). Patients differ in the amount of information they want: some desire as much information as possible, while others want only the basics; information provided may be too advanced for their level of education or understanding; information may be in a language with which patients are not fully comfortable (Curtis *et al*., 2008; Rees & Bath, 2001).

Apart from factual information, patients desire information that will enable them to cope with their disease and treatment, and maintain quality of life. Information needs may differ according to the disease stage, e.g. newly diagnosed (Graydon *et al*., 1997) vs those close to end-of-life (Fourie, 2008; Zanchetta & Moura, 2006). Information is often aligned with primary needs such as social support (Ishibashi, 2001). Some researchers argue that information seekers should be given maximum information, and information avoiders should be given minimum information (Rees & Bath, 2001). According to Matti *et al*. (2010), it is important for nurses to understand the disease such as Parkinson's disease and understand the potential needs of patients. They must also understand why patients seek information. Rees and Bath (2001) report that women with breast cancer seek information to cope with breast cancer, to regain a sense of control, increase their feelings of confidence, and help facilitating the decision-making process. Their reasons for avoiding information include: escaping from worry, fear, feelings of negativity, and depression (Rees & Bath, 2001).

Nurses should be able to predict and prioritise information needs (Bilodeau & Degner, 1996). Many debates have been reported on the importance of keeping a balance between maintaining hope and the patients' desire for information (Curtis *et al*., 2008). To support patients, nurses need to understand the spectrum and diversity of patients' information needs (e.g. factual information vs information on copying). They also need to understand the impact of family relationships on information needs such as the needs of adolescent children or spouses of women diagnosed with breast cancer, or the wives of men who had a prostatectomy (Fitch & Abramson, 2007; Fitch & Allard, 2007; Kilpatrick *et al*., 1998; Kristjanson *et al*., 2004; Mason, 2005), or of the parents of children (Davies *et al*., 2010). Differences have also been noted between the information needs of patients and caregivers (Carter, 2001; Clayton, Butow, & Tattersall, 2005; Hasson *et al*., 2010; Nikoletti, *et al*., 2003).

Posma *et al*. (2009) note insufficient exploration of patients' personal situations and individual information needs. In a study on the information needs and understanding of 5-10-year old children with epilepsy, asthma or diabetes, Houston *et al*. (2000) report that the children with epilepsy had far more unanswered questions and felt excluded from discussions with doctors. They were more reluctant to tell their friends their diagnosis and felt stigmatised by their condition. Stigma is often also associated with HIV/AIDS and sometimes cancer where people are not prepared to discuss their disease.

A closer look at the nature of the different types of information needs identified above shows that patients' information needs are not only restricted to the type of life threatening disease from which he/she suffers, but also information about issues related to the implications for the patient within his/her current health status. Their information needs are complex, with many nuances, diversity, and antecedents (Johnson & Case, 2012), considering that the nurse who operates in a palliative care context should expect to regularly encounter these types of information needs and nuances among patients. It could be assumed that such regular encountering could be instrumental in encouraging nurses to be more proactive regarding where to find information that will support patients, and to accept a supporting information-related role.

Information Behaviour

The information needs of patients lead to different information actions that form part of their information behaviour. Nurses' awareness and perceptions of the information behaviour of patients will influence the information interactions they instigate – how they provide, give, share and disseminate information. The information behaviour of patients in palliative care is thus covered in the following paragraphs with specific reference to the role of nurses.

Patients have been frequently reported to prefer human contact when seeking information, with healthcare professionals, family members and friends as the most preferred sources; doctors and nurses are the most trusted sources (Neumann *et al*., 2011). Sometimes patients rely on others to search on their behalf (Abrahamson *et al*., 2008).

Similar to information needs, great diversity in information behaviour has been noted. Such differences depend on disease, age, context, culture and type of care, e.g. paediatric palliative care (Davies *et al*., 2010). Patients' information behaviour for various diseases has been studied; studies on breast cancer are especially prominent (Bilodeau & Degner, 1996; Fu *et al*., 2008; Nikoletti *et al*., 2003). Studies of information behaviour are very diverse. McCaughan and McKenna (2007) refer to "never-ending making sense" when discussing the information-seeking behaviour of newly diagnosed cancer patients. Mutch (2005) reports on young people in families where multiple sclerosis has been diagnosed; nurses need to be aware of the need to address myths on multiple sclerosis, and they should be willing to discuss the disease. Information can soothe anxiety but it can also increase anxiety.

Different processes such as dying and stages such as early in diagnosis or at end-of-life have been noted to impact on information behaviour (Bee, Barnes, & Luker, 2009; Gopal *et al*., 2005; McCaughan & McKenna, 2007). (This is also the case with information needs.) Information copying styles need to be considered (Nikoletti *et al*., 2003; Rees & Bath, 2001). Zanchetta and Moura (2006) report on self-determination and information seeking in end-stage cancer. According to them the following are important to understand the experience of being confronted with a terminal illness: expansion of awareness, life-facing knowledge contradictions, being open-minded and an active explorer of information sources, medical truth, and professional attitudes toward patients' information needs. It is evident that the information behaviour of patients in palliative care can be complex, and it reflects the perceptions of patients of the implications of the disease on their life styles. How they deal with their perception of their health status manifests in their information behaviour.

Knowledge of patients' information behaviour can better equip nurses to deal with situations and anticipate situations where patients need support. From the preceding review, there seems adequate proof that there is an underlying awareness among researchers that nurses are aware of to be their patients' information behaviour – in terms of their preference for specific information sources, personal beliefs about myths or medical truths and cultural differences.

Nurses are also aware of patients' needs and how their families and caregivers are affected by the implications of their health status, as well as professional attitudes towards patients' information needs. However, there is no evidence that nurses explicitly identify it as an area about which they should familiarise themselves to be better prepared in meeting patients' needs and facilitate their information behaviour – that is, to act as information intermediaries. Neither is there evidence that they acknowledge the complexity of information behaviour as portrayed in the Information Science literature (Case, 2012; Johnson & Case, 2012).

Seen from an Information Behaviour perspective the lack of understanding about cultural beliefs (Davies *et al*., 2010), the amount and level of sophistication of information required, when information is needed, and the language preference of patients are all indications of how important it is that nurses need to be familiar with the information behaviour patterns of patients (amongst many other issues) in order to be more successful in information interactions with patients.

Information-Related Support and Interaction between Nurses and Patients

From the preceding discussion on the information needs and information behaviour of patients in palliative care, it is evident that nurses are often exposed to patients in palliative care in need of information and how patients can respond to different levels of information. Insights gained on information behaviour of patients at the nurse/patient level might help nurses to improve how they meet patients' information needs with meaningful, relevant information, how they might facilitate patients' information behaviour (e.g. offering support in identifying information needs, seeking information, and using information) and also in preventing negative information behaviour such as seeking information from unreliable information sources, or information avoidance (Case, 2012).

To fulfil a role in this regard, nurses should be alert to the variety of information actions and interactions that may manifest in palliative care between themselves and patients and the situations where these can be instrumental (e.g. in reducing anxiety) – an emotional condition, or in helping patients to cope, or make sense of their illness or dying. Furthermore, nurses should be able to interpret findings on information needs and information behaviour in palliative care. They should also have adequate information skills to find, evaluate, select, manage, repackage, and communicate information (amongst other things). Concerns have been expressed about their information literacy and knowledge of diseases. Duncan and Lorraine (2012) are concerned about the information seeking skills of senior students and especially their lack of ability to identify vocabulary to search for information, while Irvin (1997) is concerned about nurses' limited knowledge of diseases such as HIV/AIDS. Currently, the professional training of nurses working with patients in palliative care and their literature do not adequately prepare them for information related support manifesting as information actions and information interactions (i.e. apart from training in patient education and health communication). In the paragraphs to follow, some of the information actions and interactions taking place in palliative care between nurses and patients are noted.

Information actions can be explicitly labelled as such or implied by the choice of words. Explicitly labelled information actions include information sharing, information exchange, information giving, information provision, information dissemination, information transfer, and information communication (Bilodeau & Degner, 1996; Drew & Fawcett, 2002; Schultz, 2002). Information actions between nurses and patients in palliative care can, however, be implied by words and phrases such as responding, connecting (serving as a link), empowering, answering (e.g. questions), informing, explaining, contextualising, arguing or defending (e.g. on issues of euthanasia), acting as soundboard, discussing, encouraging, motivating, calming, bridging, and re-ensuring. Information actions can be proactive (before patients express a need for information) or reactive (in response to questions and concerns). The same applies to information interactions. For both, an understanding of the information needs and information behaviour of patients in palliative care is essential.

Apart from interactions such as discussions, information interactions include information interventions. In addition to a role to care for patients,

some nurses need to take on roles for patient education (Curtis *et al*., 2008; Kilpatrick *et al*., 1998; Posma *et al*., 2009), and the planning and development of interventions such as telephone support, telephone help lines, information sessions for patients and their families, and information packages and booklets. Sometimes, these efforts are described as the empowerment of patients (Wilkes *et al*., 2000), e.g. to participate in decision-making.

Information actions and interactions can happen spontaneously, or as a result of pressure from patients (i.e. through questions). Davies *et al*. (2010) report on how information is shared about a child's daily life in the hospital, the families' daily life in the hospital, treatment, and end-of-life issues. Findings from studies on information needs and information behaviour can address some of the reported shortcomings of such actions and interactions. According to Carter (2001), information is sometimes provided in a way that is more harmful than helpful. Nurses often miss the need for holistic healthcare considering all facets of the disease, the patient's situation, the need for individualisation, and the need to incorporate caregivers (Carter, 2001). Information is also not always provided in a sensitive yet factually accurate manner (Carter, 2001), or with consideration of the patient's responsibility to his/her family (Kristjanson *et al*., 2004) as it is the case with women with breast cancer. Often, additional types of information are required to reduce anxiety and increase understanding, e.g. videos or multimedia programmes. Bilodeau and Degner (1996) as well as Nikoletti *et al*. (2003) note the need to align information needs with an understanding of patients' or their family members' desired roles in decision making, and their copying styles (i.e. "monitors" for information seekers and "blunters" for information avoiders) (Case, 2012).

Information actions and information interactions as such do not represent a role as information intermediary. Each forms only a small part of such a role. To fully conceptualise an information intermediary role for nurses, each information action and information interaction manifesting between nurses and patients in palliative care needs to be identified and carefully studied. It also needs to be aligned with findings, interpretations, and models from information behaviour. At present, little is known in this regard. Most models of information behaviour focus on information seeking and searching.

Wilson (1999) is one of few researchers that acknowledge information transfer as an information action forming part of information behaviour. Information actions are also too seldom addressed from an information behaviour point of view. An exception is Davies *et al*. (2010), reporting four patterns of information-sharing: no information, basic information, basic information plus implications, and basic information plus implications plus attention to parents' questions, concerns, and emotions (the latter happens in the minority of cases).

Information transfer is one of the information actions that hold much potential for a role as information intermediary – if fully understood and aligned with findings on information needs and information behaviour. In healthcare contexts, information transfer is discussed by Duffy *et al*. (2010), Madden *et al*. (1998), Hustey and Palmer (2010), and Keenan *et al*. (2006). Duffy *et al*. (2010) report a study on the impact of point of care documentation on the nurse-patient interaction. Such documentation reduces inefficiencies, decreases the probability of errors, promotes information transfer, and encourages nurses to be at the bedside. It can, however, also distract nurses' attention away from patients and compromise the nurse-patient interaction. Madden *et al*. (1998) report on an interface between nursing homes and emergency departments to improve transfer of information, and Hustey and Palmer (2010) on an Internet-based communication network for information transfer during patient transitions from a skilled nursing facility to an emergency department.

With concern for inadequate information transfer at shift changes, Keenan *et al*. (2006) report on a technological supported model for improving nursing handoffs. It focuses on the handoff as a focal point for not only information transfer but also reinforcing shared meaning and goals across shifts and units. Although useful, such research needs to be extended before it can fully reflect the potential role of nurses as information intermediaries. It should also raise awareness of the complexities of information transfer if it is intended to fulfil information needs and facilitate information behaviour. In the wider literature, many strengths of information

transfer have been stressed. Concerns have, however, also been expressed. Lee and Garvin (2003) criticise the one-way nature of accepted practices of information transmission. Much of the arguments on information transfer and information transmission is based on views originating from the field of sociology citing Freire's (Freire, 1970/1986) "banking concept" commenting that students (in an educational setting) become empty "containers" to be filled by knowledge of the teacher. Lee and Garvin (2003:451) warn that "Most health information transfer is characterised by this 'banking' approach".

According to Lee and Garvin (2003), there is strong resistance to the term transfer. There are, however, models such as the Interactive Communication Model of Havelock (Havelock 1986, p. 226) that can address some of the concerns, e.g. to ensure that there is no intention to "privilege expert over lay knowledge" or "transfer information as a monologue". This brief discussion of information transfer touches on its potential as an information action for which nurses can take responsibility in a role as information intermediaries. As noted, much more detail and understanding are required. Other explicitly labelled and implied information actions and interactions also need to be studied with care. A first step might be a content analysis of (1) which information actions and information interactions are reported between nurses and patients in palliative care, and (2) how these actions and interactions are reported with regard to addressing information needs and information behaviour.

Nurses as Information Intermediaries in Palliative Care

From an information behaviour point of view, a palliative care setting or situation can be viewed as a complex temporary context – temporary context as defined by Courtright (2007), where patients face existentialism. Here, nurses do not only take care of patients, but they also interact with patients. Such interaction needs to reflect empathy and support to alleviate anxiety among the affected patients. Findings from studies on the information needs and information behaviour of patients point to the importance of information and the inherent complexities of information behaviour and information actions. Nurses, more than other healthcare professionals, seem to be suited to take on a role as information intermediaries. Their link with patients seems to be much more direct and therefore stronger than between the patient and other healthcare professionals. The nature of such a role, however, needs to be carefully studied. The conceptualisation offered in this paper is a first step in this direction. A few of the issues that need to be explored are noted here. (This is not intended as a comprehensive list; merely a point of departure.) Before continuing with this, an operational definition for an information intermediary in a palliative care context is proposed below. This builds on the section concerning intermediation and information intermediation.

An information intermediary in palliative care (a complex, fluctuating, temporary context where patients face existentialism) draws on advanced information literacy, communication and healthcare skills to act in a responsible and appropriate manner to ensure that meaningful, relevant information (as supplement to physical and emotional care) reach and support patients living with a life-threatening disease (e.g. making sense, coping, maintaining hope, making decisions). In fulfilling this role, an information intermediary employs a spectrum of information-related actions such as information transfer, information sharing, information giving, and information exchange. Intermediation can take the form of advice and counselling, but can also culminate to formal information interactions such as patient education. An information intermediary employs dialogue and communication skills, as well as knowledge of diseases and healthcare to ensure the appropriate and effective flow of information between sources (be that a healthcare professional, doctor or Internet resource) and to address the influence of antecedent factors on the information behaviour of patients. An information intermediary facilitates all information-related activities of patients, ranging from awareness for a need for information, to help in the formulation and expression of information needs, as well as help with the seeking, evaluation, interpretation and especially the contextualisation of information with regard to a patient's individual situation. In palliative care, all information actions of an information intermediary reflect empathy and cultural sensitivity, and foster trust in his/her ability to act as information intermediary.

In preparing nurses in palliative care to take on such a role, we can start by considering the following:

- Scope, purpose and nature of information actions and information interactions reported between nurses and patients in palliative care and the terminology used to describe these.
- Ethical issues related to information actions and interactions in palliative care such as the right of patients to be fully informed (Osuna *et al.*, 1998).
- Need to maintain a balance in the use of information actions and information interactions and to help patients to maintain hope.
- Readiness to accept a role as information intermediary in addition to tasks of care and treatment. Nurses are already overworked, facing burnout and emotional trauma due to their work (Menzies, 1993; Fourie & Claasen-Veldsman, 2011).
- Requirements for successful and effective information actions and interactions such as good communication skills, adapting for individualisation, and empathy (Drew & Fawcett 2002; Turner *et al.*, 2011; Wilkes *et al.*, 2000).
- Depth and detail of information to provide and how to align this with patients' educational level, desire for information, readiness to receive information, etc.
- Awareness of and sensitivity to the impact of culture and ethnic differences in information interactions (Bilodeau & Degner, 1996; Gopal *et al.*, 2005).
- Recognition of the influence of antecedent factors and barriers in information interaction which can include educational levels, personal and interpersonal situations, available material and documentation, guidelines and policy, organisational structures, politics, resources and time, limited dialogue with patients, different priorities held by nursing staff, insufficient time to inform patients, and exploration of ways to address such barriers (Keatinge *et al.*, 2002; Piredda *et al.*, 2007; Mason, 2005).

Conclusion

Albeit the importance of information in a complex context such as palliative care, (including the close ties between patients and nurses, and the acceptance of nurses as information sources by patients), extensive research and reflection, is required before a role for nurses as information intermediaries can be fully pursued. Findings from studies on information needs and information behaviour in palliative care point to the need for information intermediaries. Who, better than nurses, can take on this role? The conceptualisation offered in this paper is, however, only a very small first step towards pursuing and establishing such a role for nurses. A stronger case needs to be made for nurses as surrogates for (or supplements to) formal library and information services. Regarding information behaviour, research has shown that "one size does not fit all" – that is, there is not a single solution in meeting information needs. It thus seems timely to investigate options for information provision to "fit different sizes of demand". Libraries and information services need to take up this challenge working from Information Behaviour as a sub-discipline to Information Science.

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An Assessment of the Changing Needs of Information Professionals in Zimbabwe

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Abstract

The study was an assessment of changing needs of information professionals in Zimbabwe. Results from this study were aimed at informing library and information science curricula of professional development initiatives of information professionals. The data for the study was collected using semi-structured interviews. During data analysis, participants were grouped according to qualifications, as well as experience. This was done to map the influence of work experience and qualifications on the needs of information professionals. Results from the study showed that the needs of information professionals are changing and that the current curricula in Zimbabwe are failing to cope with the changes.

Keywords
Information Professional, Zimbabwe, Librarians, Information Needs, Training Needs

Introduction

The use of ICT has transformed a modern library into an electronic library providing access to information from local and remote databases. New technologies have heralded not only new ways of handling information but have also introduced new formats. These changes have transformed the library education and obligated the professionals to prepare themselves for the coming era (Rahman et al., 2011). This change in the information landscape has brought about changes in the job descriptions and job specifications of the librarians, who are now required to deal with born digital information sources, as well as digital natives (users). According to Bearman (1984), a "… major change area is the challenge of learning to use many new tools to improve job performance" and this is attributed to the changes in technology that characterise the information landscape in an information/digital era.

As a result of these digital developments and changes, the information transfer chain has been evolving, thus ushering new means and ways of information generation, packaging, storage, management and dissemination. Consequently, there has been a change in the way librarians execute their duties but in the Zimbabwean context, a little has been done to contextualise these changes and their effects on the job descriptions and job specifications of librarians. Furthermore, a little has been done to assess the extent of these changes on their skills, knowledge and attitude sets. As a result, there is no proper framework that puts into context the changes that librarians and information scientists in Zimbabwe are experiencing.

There has also been a growing awareness of the importance of information in today's world. Moreover, the information profession is being seen as a profession similar to law and medicine. The business press is filled with articles about the need for skilled information workers and the growth of the industry (Bearman, 1984).This study sought to assess the extent to which information professionals are adapting to and adopting changes that are happening at a global level.

The use of ICTs has changed the information

landscape; consequently, the needs of information professionals are also changing (Tam & Robertson, 2002:369; and Spacey, Goulding & Murray, 2003:61). From the concept of custodian, LIS professionals are now engaged in different sectors of the economy as content developers, knowledge managers, cybrarians and so on. To cope with the situation, it has become imperative for LIS professionals to get continuous exposure to new technologies, regular professional updating and greater control over the information resources (Halder, 2009:2).

This research project sought to explore the changing needs of information professionals in Zimbabwe. The aim of the research was to determine the approaches to the changing needs of information professionals in the country. This was achieved through interviewing information professionals from different institutions. The information professionals targeted were selected from academic libraries and special libraries in the country. Interviews were used to collect data for the research. A stratified sampling approach was used in selecting respondents given the clear cut job classes that exist within the information profession in Zimbabwe.

Objectives

The objectives the study sought to address were to:

- identify changing needs of information professionals in Zimbabwe
- determine the perceptions of information professionals of LIS curricula
- inform curriculum development in Library Schools based on the results
- determine the strategies that information professionals are using to adapt to their changing needs

Overview of the Literature

With the advent of Web 2.0 and social media technologies, the expectations of library users are changing (Stephens and Collins, 2007). Users are seeking a variety of social, collaborative spaces and quiet workspaces. Gibbons (2007) notes that the new generation of library users is flexible and demands the same from libraries and librarians. To this effect, Halder (2009) is of the view that it is up to the information professionals to seize the opportunity and engage with such users through writing *blogs, tweeting,* and having a *Facebook* presence. This is in line with Danchak's (2012:4) advice that libraries and librarians need to be where the users spend most of their time. Such a shift in the characteristic and type of library clientele calls for the need to identify new professional skills and competences which librarians need in order to effectively function in this digital age.

In the world of academics in which the library serves, latest and right information is the key for personal and professional development (Ifijeh, 2010: 6). In one of her studies, Gutsche (2010:30) observed that an increasing number of positions in libraries is moving closer to the technical end of the scale and that consequently technology competencies are starting to comprise an "ever growing piece of the performance pie, impacting every job in the library". She contends that new competencies must be defined and that "everyone who works in a library must stay abreast with dynamic changes in the information environment and be ready to receive new knowledge and skills" (Gutsche, 2010: 31). Kavulya (2006) also indicates that LIS training in Kenya must address job requirements. Noh, Ahn & Choi (2012) highlight the need for change in library and information science curricula in response to changes in library and information centres. They state that studies advocating for curriculum change start from the logic that curricula should be changed constantly to produce future librarians who can adapt to changes in the external environment due to information technology development. It is from this school of thought that this study is based. The study therefore scanned changes in the information environment in a bid to inform curriculum development in library schools.

Ocholla and Bothma (2007), report that some LIS departments in South Africa have realigned and that new names have emerged from the 1980s onwards. They also point out that some LIS curricula have expanded to include courses such as computer troubleshooting skills, multimedia, media and publishing as well as information and communication technology

Nonthacumjane (2011) studied the essential competencies of an information professional working in a digital library environment, from the perspectives

of Norwegian and Thai LIS educators. The comparative study used online questionnaires, face-to-face interviews, online interviews and email interviews as data collection methods. The findings of this study revealed that the knowledge and skills that underpinned the work of information professionals in both countries encompassed analytical, creative and technical competencies. It was found that the principal areas of discipline knowledge required included an understanding of metadata, database development, database management systems and user needs. Communication, critical thinking, information literacy and teamwork were found to be the generic skills needed by information professionals in a digital library environment.

Orme (2008) also conducted a content analysis of 180 job advertisements collected between June 2006 and May 2007 from the library sectors in the United Kingdom. She categorised skills into generic, personal and professional. The findings indicated that generic skills are the most normally required. Professional skills and personal skills are the second and the third place respectively. The following categorisation of skills is provided: Generic: 'interpersonal/communication, general computing, team work'. Professional: 'professional related experience, customer service, chartered librarian, cataloguing, classification and Metadata'. Personal: 'enthusiasm, flexibility, self-motivation'. It is against such a background of findings that this study is vital as it will expose the expected skills and performance standards for the digital information professional.

Choi & Rasmussen (2009) studied the essential qualifications and skills of digital library positions involved in academic libraries. The study was a content analysis of job advertisements collected from the digital library positions posted in *College and Research Libraries News* from 1999 to 2007. The study findings indicated that knowledge and experience with metadata and the creation and management of digital information were highly required in the advertisements. Technological knowledge and management were most frequently mentioned as required qualifications. The most required area of technical knowledge related to contextual and trend analysis in the digital library environment includes current trends, practices, standards, technology in digital library practice. HTML coding, general computer skills and computer literacy, knowledge and an understanding of information technology, and mark-up languages such as SGML, XML, and Web development and design were mentioned as the frequently required knowledge and skills.

Chu (2006) concluded that technology alone does not represent all the changes that take place in the arena of LIS education. Other factors also contribute to the transformation of the LIS curriculum. For example, a user-centred approach to information systems design and services receives growing attention in the LIS curriculum. Roegge (2009) also concurs that LIS programs have traditionally been user-focused and also recognises that library schools need to be focused on information technology and that students should learn about software applications, online searching, web design and other tasks related to an online environment.

Research Methodology

In an endeavour to assess the changing needs of information professionals in Zimbabwe, the research involved university libraries in Zimbabwe which employ the bulk of information professionals. Only libraries that responded to the requests for interviews were used in the survey therefore the sample was self-selecting. Special libraries also formed part of the research sample.

A qualitative research methodology was adopted in this study. Qualitative research was chosen because it is said to be exploratory, which is the collection, analysis and interpretation of data by observing human behaviour (Roshan & Deeptee 2009). The focus of this research was on changing needs of information professionals which were seen as they involved an exploration of skills, knowledge and attitudes. A number of data collection methods were available to the qualitative researcher; among them are focus groups and interviews, questionnaires and case studies (Cassell & Symon 2004). For the purpose of this study, semi-structured interviews were used in the data collection process.

Purposive judgmental sampling was used in the selection of respondents in this research. The information professionals that were included are those that have attained at least a Bachelor's degree in Library and Information Studies/ Higher National

Diploma in Library and Information Science. This sampling method was used because it allowed the researchers to identify respondents who were in a position to give meaningful information for assessing the changing needs of information professionals in Zimbabwe. A total of 33 information professionals (14 with BSc. in Library and Information Science; 16 with MSc in Library and Information Science; and 3 with Higher National Diploma in Library and Information Science) from 10 institutions in Zimbabwe participated in the research.

The method of analysis used in this study was thematic content analysis (Burnard et al., 2008).The process involved analysing all the interview transcripts, identifying themes and categories that emerge from the data, and gathering together examples of those themes from the text. The data were collected from 11 March 2013 to 22 March 2013.

Results and Discussions

Background Information of Respondents

The background information of the respondents shows that the respondents had worked for between one and fifteen years. These were grouped into three categories, namely 0-5 years, 6-10 years, and 11-15 years. Of the 33 respondents that were interviewed, 13 have worked for 0-5 years as professional librarians; 17 have worked from 6 to 10 years as professional librarians and 3 have worked for between 11 and 15 years as professional librarians (See Figure 1).

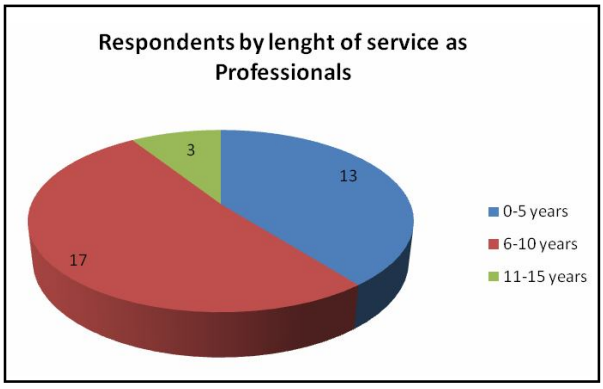

Figure 1: Respondents by Length of Service as Professionals

The data analysis of the respondents follows the structure of the interview schedule that was used to collect data from the institutions that were selected for the research. The respondents that were interviewed were referred to as Group A (BSc in Library and Information Science), Group B (MSc in Library and Information Science), and Group C (Diploma in Library and Information Science plus working experience). The analysis was done in the order in which the questions were asked during the interviews. Results are reported using the following categorisations:

- Changing needs
- Causes for the changes
- Training and training needs
- Curriculum perceptions
- Adaptation to change

Changing Needs

All the groups under study recorded changing needs in terms of roles and responsibilities. These changes were mainly lateral (changing from one position to the other at the same level, for example from Assistant Librarian responsible for Circulation Services to Assistant Librarian responsible for Special Collections) for Group A and C and vertical (for example, from Assistant Librarian to Sub Librarian) for Group B. The difference in changes can be attributed to different characteristics that typify each group. It was observed from the respondents' attributes that Group A and C were mainly made up of tactical managers (middle level managers) whilst Group B was made up of Strategic managers (top level managers). In these regards, the lateral changes were mainly due to a change in position whilst the vertical changes were due to changes in posts and organisations. But it has to be noted that some of the changes were similar across all the groups.

The nature of the changes involved in Group A respondents were mainly influenced by introduction of new products and services, library automation, information literacy skills training, as well as changes in procedures. In Group B, the changes were mainly influenced by policy changes, increased span of

control, as well as the transition from being tactical managers to being strategic managers. Group C respondents' roles and responsibilities were both lateral and vertical, being influenced by changes in processes and procedures.

Information professionals who fall in the category of 0-5 years stated that their roles and responsibilities changed and the changes were not documented. The nature of the changes that were recorded for this group were mainly ICT driven, as well as being influenced by changes in information formats where for most institution there has been transition from manual-based information platforms to automated electronic-based platforms.

Those who have worked for between 6 and 10 years as professionals expressed that their roles and responsibilities had changed as a result of institutional transition from the use of manual-based information platforms to electronic-based platforms. Roles and responsibilities for this group also included the assumption of managerial and administrative duties.

Respondents who had worked for between 11 and 15 years reported that a number of changes have taken place in the roles and responsibilities. The respondents pointed out that library processes and procedures have changed, meaning that they are now required to manage automated library management systems, manage electronic resources and teaching information literacy. All the respondents in this category reported that the changes that were taking place in their roles and responsibilities were not documented in their job description.

This is evidenced by the responses of most of the respondents in the research who pointed out that their roles and responsibilities were changing. The changing expectations of users and the ICT landscape have been cited as the major drivers for the changing needs of librarians. What is interesting, however, is that most of the changes that are happening to the roles and responsibilities of most information professionals who were interviewed are not documented in job descriptions. It seems employers are not keeping pace with the changes in the working environments of information professionals since they are doing little to ensure that the changes that are taking place are reflected in job descriptions. The results also show that most information professionals in Zimbabwe are flexible and are willing to go the 'extra mile' to satisfy their user needs even without the employers imposing the changes on them.

In terms of documentation of the changing roles of the information professionals, most of the respondents pointed out that most of the changes that are taking place are not documented in their job descriptions. Only a few interviewees in Group A pointed out that no changes had taken place in the past two years.

Causes for the Changes

All the groups reported that technological developments, new user needs and expectations, electronic publishing and library automation were the major drivers behind the changes. Groups A and B recorded staff shortages and a need for quality control and quality assurance as part of the causes to the changes that are happening in the information profession. Information explosion and overload, pursuit of global trends and best practices were noted as some of the contributors of change in Group A. Group B highlighted that change in institutional policy, vision and mission; adoption of new concepts introduced at workshops had caused some of the changes that were taking place in the information profession. The proliferation of other information resource centres, as well as information sources, has led to competition, which in turn leads to a change in operations, procedures and processes.

The 0-5 years group attributed the changes to differences in user expectations, automation, digitisation, staff shortage, changes in information dissemination platforms, competition from other information service providers, changes in curricula, increased electronic resources uptake, institutional growth, as well as the introduction of quality assurance and quality control on the Zimbabwe academic field.

In the 6-10 years category the respondents mentioned introduction of new mode of teaching such as distance learning and open based learning had resulted in changes in roles and responsibilities. Respondents in this group concurred that the growth of the institutions served by their libraries in terms of introduction of new academic programmes consequently led to a shift in the information products and services, thus shaping new roles and

responsibilities for respondents.

Respondents who have worked as professional librarians for between 11 and 15 years reported that institutional growth, changing user needs, emerging technologies, electronic resources and staff shortage are the reasons behind the changes in the roles and responsibilities that have been taking place in their various work places.

The changes that have been identified have been attributed to institutional growth, changing user needs, emerging technologies, electronic resources and staff shortage among other things.

Training Needs

All the three groups concurred that training was needed in order to keep up with the ever changing environment. As such, ICTs, web computing and database management were essential areas for training for all the groups. Group A and B noted the following as important areas for training; IL pedagogy, social media, digital libraries, marketing, and e-resources administration and management. Software engineering, public relations, intellectual property, technical services and computer networking were the areas that were identified as peculiar to Group A.

Indigenous knowledge systems, knowledge management, basic programming, open librarianship, library advocacy, monitoring and evaluation, library management systems, e-resources training, reference management, subject expertise, research writing skills, Open Access, cloud computing, embedded librarianship and metadata indexing were the training needs common with Group B with higher level qualifications. Group C suggested that they required refresher courses in areas such as automated cataloguing in order to keep up with developments in the field.

The training needs for information professionals who have been in practice for 0-5 years included:

- Computer skills
- Database administration and management
- Systems and web applications
- Digital libraries
- Library management
- Information Literacy pedagogy
- Research skills
- Intellectual property e.g. copyright
- Strategic management
- Funding research proposal writing
- Virtual research skills.

The training needs for information professionals who have practiced for 6-10 years are almost similar to the 0-5 years' group. However, there is a clear inclination towards management and administration training needs. Respondents expressed need for further training in administrative functions that have to do with human resource management and financial administration. Skills in scholarly communication are needed by this group, particularly writing, publishing and presentation skills.

Those who have worked as professional librarians for between 11 and 15 years reported that training was needed in the following areas:

- Administration of libraries
- Information Literacy pedagogy
- Web 2.0 services
- Databases
- Network technologies
- Writing and publishing research papers
- Cloud computing
- Digitisation.

Curriculum Perceptions and New Courses

All the groups revealed that the curriculum was inadequate, though relevant to some extent. The major reason for the inadequacy was the gap between taught courses and industrial practice. It was also noted that the courses were more theoretical than practical thereby making them irreconcilable with practice. To this effect, the respondents pointed out that "teaching approaches and course content did not match the requirements of industry." Only respondents from Group B were satisfied to a greater extent by the courses taught at MSc Library Science level though they felt that there was a need to reconcile curriculum and practice.

The respondents were given a chance to suggest new courses that they deemed to be relevant in response to the changes and changing needs. Public relations course was suggested by all groups as a new course that should be added to the library

and information science curriculum. This was cited because librarianship is a profession that deals with diverse populations and clientele bases. Information literacy skills was suggested by Groups A and B. This is mainly due to the demand for the skill by users, as well as in response to global trends and IL workshops. Group B and C suggested that 'project management' be introduced in the library and information science curricula as a new course. This course was suggested because the respondents felt that libraries are now involved in managing projects of various magnitudes.

Respondents in Group A suggested purchasing and supply, serials management', virtual research environments, Open Access, programming, inforpreneurship and knowledge management' as new courses that needed to be introduced in the library and information science curriculum. Group B suggested advanced human resources management, subject librarianship, reference management, resource description and access, virtual/digital libraries and Semantic Web. Group C suggested metadata indexing, software development and special needs librarianship as new courses that need to be introduced to LIS curricula in Zimbabwe. The suggestions were mainly based on the gaps that the professionals identified between curriculum and practice.

The 0-5 group felt that the library and information science curriculum was relevant but inadequate in addressing the requirements of the information industry. They made suggestions to some courses they strongly felt to be handy in bridging the gap between curriculum and practice. The courses they suggested included:

- Library budgeting and financing
- Strategic management
- Open Access
- Programming
- Virtual research environments
- Semantic web/web 2.0
- Java CSS
- Digital libraries
- Networking technologies
- Intellectual property
- Serials management
- Metadata indexing and metadata harvesting.

The suggestion behind these courses was mainly attributed to the digital environment, changing global trends, and changing user expectations. In these regards, the interviewees felt that there was a need for curriculum review that focused on the changes in industry as well as one that took a practical approach.

Like the 0-5 years group, the general view in the 6-10 years group on the library and information science curriculum and its ability to meet actual job demands is that there exists a gap between what is being taught and what the industry demands. The group noted that there was the need to have more depth in all information technology based courses. The curricula should prepare and produce a student who has an unquestionable competence in basic library procedures and operations. While the group appreciates the value of information technology, respondents stated the need for much depth in the teaching of courses to do with public relations, organisational communication and marketing of information products and services.

With regards to the perceptions of librarians towards LIS curriculum, those who had worked for between 11 and 15 years felt that while the curriculum that they were familiar with was relevant, they still felt that the curriculum was inadequate in addressing some of the emerging roles and responsibilities for information professionals due to changing user expectations and the changing ICT environment. This group of users therefore suggested the following courses to be introduced in LIS curricula:

- Project management
- Web applications
- Research skills
- Network technologies.

It has emerged that while the LIS curricula are believed to give information professionals a sound basis to be able to work; many of them believe that the curricula are inadequate for them to be able to fulfil their roles and responsibilities as expected. As a result, many courses have been suggested to be added to the LIS curricula by the information professionals who were interviewed.

What is interesting to note is that programming and software development which are disciplines that fall under Computer Science were also suggested

as courses that need to be introduced in LIS curricula. Most of the respondents who suggested that these courses be included expressed frustration at their IT departments. They were of the opinion that information professionals should have skills in programming and software development to avoid too much dependence on IT personnel who often have other priorities.

The suggestion of courses such as project management, public relations and purchasing and supply show the multi-disciplinary nature of library and information science. It implies that those who are involved in the development of LIS curricula should look beyond the conventional and seek ways of integrating aspects from other disciplines in order for them to produce professionals who are adequately prepared to deliver in their work environments.

Adaptation to Change

All groups of respondents reported that they had managed to adapt to the changes taking place because they had been able to research about developments in their fields to keep up to date with current practices. Groups A and B reported that workshops, online courses/short courses, and networking and collaboration with other institutions had helped them to adapt to changes that were taking place. Both Group B and C respondents pointed out that life-long learning skills imparted through information literacy training helped them to update their knowledge bases in line with new developments. Only Group A respondents pointed out that they adapted to change through upgrading their qualifications, embracing new technologies and being flexible. Group B respondents singled out experiential learning as one of the ways that they had been able to adapt to their changing needs in their roles.

Those with 0-5 years experience highlighted that they were adapting to change through self-upgrading, participation in professional bodies, networking, research, self-motivation, reviewing research and workshops.

Adaptation to change in the 6-10 years group is a matter of self-inspired initiatives where respondents merely study changing trends within their external environments and use networks, workshops and private research to gain deeper understanding into new phenomena in the library field. Some in this group have sought higher qualifications so as to adapt to the changes within their work environments, of note is the Master of Science degree in Library and Information Science.

Those who had worked as professionals for between 11 and 15 years highlighted that they had been able to adapt to the changes because they had taken short courses, attended workshops, and were involved in research on current trends.

Training workshops have been cited by many of the information professionals interviewed in this research as a major help in their adaptation to the changes that are taking place. A significant number of respondents also pointed out that research has also helped them. It is therefore necessary that LIS professionals continue to engage in research so as to keep abreast with current developments in their work environments. While many information professionals who participated in this research pointed out that they have been able to adapt to the changes, it is important that LIS schools in Zimbabwe consider including some of the courses that have been suggested in this research and continue to refresh their curricula on a yearly basis so as to remain relevant to the needs of LIS professionals.

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What is important to note is that it takes a lot of efforts from the individual to adapt to change. This is evidenced by the many respondents who reported that they have been doing a lot of research on their own in order to remain relevant in their roles and responsibilities.

Conclusion and Recommendations

In conclusion, it was noted from the interviewees' perceptions that change is inevitable over time. Therefore, there is a need to continuously upgrade and update one's knowledge base through training at various levels and platforms. In this regard, it was noted that workshops, mainly made possible through sponsorship from International Network for the availability of Scientific Publications (INASP), were an eye-opener and have been a major help to most information professionals in Zimbabwe in upgrading their knowledge and skills.

It is noteworthy that library and information science curricula should continue to evolve over time so as to bridge some gaps through the introduction of new courses as suggested by the interviewees. The most glaring gap that was prevalent in almost every response was that of inconsistencies and imbalances that existed between theory and practice. Most interviewees pointed to the fact that the curricula were mostly theoretical with limited application in industry. As a result, they felt that there was a need to bring about a balance, as well as reconcile curricula and practice.

The general perception of the curricula was that they were outdated, having too many gaps and not applicable in industry. To this end, the respondents suggested a number of courses that they felt were going to bridge the knowledge and skills gap. Most of the suggested courses centred on information and communication technologies and their application in the information industry. These gaps were mainly attributed to automation, changes in user needs and expectations, increasing use of electronic resources, as well as use digital applications in the creation, storage and dissemination of information.

The proliferation of the use of ICTs in libraries has led to a demand in the associated skills. These skill sets were highlighted in both the training needs and the new courses suggested for LIS curricula. This goes to show that the respondents highly value and regard these skills in the execution of their duties. The responses drawn from the interviews shows that it is apparent that they need skills and courses that are in tandem with the digital era we are living in. These knowledge and skills gaps were also reviewed in the light of the workshops and trainings they (interviewees) had been exposed to prior to the interview. It emerged that most of them had attended workshops conducted by INASP on information literacy, monitoring and evaluation of electronic usage, project management, and digital libraries. The suggestion of the introduction of courses such as programming, virtual research environments and software development is a testament to the influence that ICT has had on information professionals in Zimbabwe.

Change is inevitable as noted by the study: therefore, there is a need for continuous knowledge and skills upgrading for information professionals in Zimbabwe for them to remain relevant in the digital era, as well as to keep up with global trends. This can be done through workshops or a constant revamp of the curricula to incorporate new/suggested skills and knowledge sets. LIS curricula in Zimbabwe should be critically reviewed on a yearly basis, so as to keep pace with the changing needs of information professionals in Zimbabwe.

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