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EDITORIAL

We welcome you to this issue of the Library and Information Association of Zambia Journal volume 5 issues 1 and 2 of 2019. We are pleased to inform you that for a change an electronic copy of this issue is available on the Association website and can be downloaded free of charge.

In this issue, we have a number of articles. The article by Kaluba and Mulauzi presents results of a study which was conducted to investigate the information needs and information seeking behaviour of judges and lawyers at four superior courts of judiciary in Lusaka, Zambia. Specifically, the study investigated the information needs of lawyers and judges; their sources of information; the challenges they faced to access needed information.

The article by Nyirenda and Banda give highlights of the roles that academic libraries play towards the actualization of sustainable development goals (SDGs) and reviewed possible opportunities for better actualization. Further, within the context of SDGs, the paper addresses SDG number 4 that seeks to ensure inclusive and equitable quality education in promoting lifelong learning opportunities for all.

Lombe, Hamooya and Njobvu present results of a study which investigated researchers' perception on access regulations in the usage of archival materials at the National Archives of Zambia.

In the article entitled *The Role of Community Information Services in the Implementation of Sustainable Development Goal on Clean Water and Sanitation*, Banda, highlights the role of community information services in meeting the information needs of the local community so as to promote participation in improving water and sanitation in the implementation of sustainable development goal on clean water and sanitation.

In a paper presented by Mulauzi, it is explained how varied RM technologies can be employed to resolve different records management problems including the types of technology-based records management solutions, the benefits of technology-based records management solutions, key functions of records management software, basic criteria for evaluating and selecting a RM, and challenges of e-records management systems.

Banda, Makondo and Chewie present results of a study which examined the current state of weeding practices of print materials in libraries of higher learning institutions in Zambia.

Finally, Mwila, Mwanachingwala and Mkulama give a synopsis of results of the study which sought to investigate Information Literacy among students in higher learning intuitions in Lusaka, Zambia.

It is our hope therefore, that you will find these articles beneficial as you develop in your career.

Ephraim Banda
Editor-in-Chief

Information Needs and Information Seeking Behavior of Judges and Lawyers: A Study of the Judiciary Superior Courts in Lusaka, Zambia

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Abstract

Understanding the information needs and information seeking behaviour of users is imperative in developing effective information systems and services to meet their information needs. Lawyers and Judges heavily depend on appropriate and reliable evidence in the administration of sound justice. However, little is known about the information needs and information seeking behaviour of lawyers and judges in Africa, Zambia in particular. The purpose of this study was to investigate the information needs and information seeking behaviour of judges and lawyers at the four superior courts of judiciary in Lusaka, Zambia. Specifically, the study investigated the information needs of lawyers and judges; their sources of information; the challenges they faced to access needed information. A survey approach was adopted for this study and employed quantitative methods. A simple random sampling technique was used to select judges and lawyers. Forty-five legal practitioners that included 27 judges and 18 lawyers participated in the study. Data was analyzed using SPSS 23.0. The study revealed that judges and lawyers had varied information needs, particularly information on case preparation (67%), administration of justice (60%), modern trends in law (87%), statutes (71%), current awareness (69%), general knowledge (47%) and job presentation (76%). Respondents indicated that court libraries (98%), personal libraries (79%), online databases (76%), offline databases (76%) and colleagues in the profession (73%) were main sources of information they consulted to make decisions. However, judges and lawyers reported to encounter a number of problems in their quest for information which included difficult to find latest information (82%), information not readily available (69%), and lack of information diversity (67%), information not easily accessible (62%), and poor Internet connectivity (60%). The study recommended for well-stocked court libraries, with up-to-date varied forms of information and improved Internet connectivity. It was concluded that judges and lawyers' information needs should be effectively made available for them to make sound legal decisions.

Keywords: Information needs, information seeking behaviour, legal information, administration of justice, judges, lawyers, Zambia.

1.0 Introduction

It has been severally argued that in modern society, information availability is not a problem. The problem is accessibility (Chifwepa, 1998). Accessibility of information sources is a key theme in this information abundant era (Ugah, 2008). More often than not, resources may be available in the library and even identified bibliographically as relevant to one's subject of interest, but the user may not be able to lay hands on them. One may identify citations in indexes, but may not have access to the sources containing the relevant articles (Ugah, 2008). Similarly, advancements of the information era and the open data movement has resulted in exponential growth of legal documents published online (Opijnen and Santos, n.d). However, Opijnen and Santos (n.d) further argue that accessibility and searchability have not kept pace with this growth rate. An overload of information (particularly if of low-quality) carries the risk of undermining knowledge acquisition possibilities and even access to justice. Additionally, the qualitative complexities of legal search cannot easily be underestimated. Legal work is an intertwined combination of research, drafting, negotiation, counselling, managing and argumentation. It is an information-intensive job as everything that has to be undertaken, whether providing legal advice, representing a client in court, or drafting a legal document requires information. Otike and Matthews (2000) claims that lawyers are ranked second to the historians as the leading users of

information and that their constant reference to information is certainly the main reason for lawyers calling themselves special people or 'learned people'.

Different from a scientist, a lawyer has no laboratory equipment and no experiments to conduct but greatly depend on information produced in various forms to make sound decisions. Otike and Matthews (2000) further assert that of all the professions, law has the largest collection of books because a wellstocked reference law library is important to the lawyer, as well as to the judge in the administration of justice. Anything less than perfection is likely to negatively affect the outcome of a court decision or influence a legal argument. Information organization by information providers and system designers should therefore, solely be undertaken to facilitate retrieval of information by users. There are a lot frustrations felt by users who fail to find the information sources they want. In this regard, understanding of information needs and information seeking behaviour of legal professionals is imperative. It aids in the planning, implementation and operation of information system and services in their work settings (Otike and Matthews, 2000). Information seeking behaviour in this study was taken to mean the behaviour displayed by judges and lawyers when searching for existing legal resources to find information required for their work. The distinct features of legal information objects and the complicated tasks of legal professionals requires proper understanding in order for information providers and system designers to implement appropriate mechanisms to support information-seeking at every level of the value adding process.

Today, accessibility to and provision of legal information is one of the key elements in transition from a closed dictatorship to a democracy. A democratic nation relies on efficient and effective judicial system. The more accessible information sources are, the more likely they are to be used (Ugah, 2008). Readers tend to use information sources that require the least effort to access. Users may find information inaccessible due to a number of reasons among them poor reputation of the information system, lack of awareness of the source of information, distance, limited time, language barrier, lack of relevant content and limited connectivity particularly in the electronic environment (Mulauzi and Kendra, 2009). Any legal information system designed without sufficient knowledge of the users' needs is apt to fail. Knowledge of the information needs of lawyers and judges may aid information providers and system designers in providing targeted information services and designing appropriate information retrieval applications.

1.1 Statement of the Problem

There is a dearth of literature on the information needs and information seeking behaviour of legal personnel in Zambia, particularly lawyers and judges. Thus, a study on the information needs and information seeking behaviour of lawyers and judges is of evident importance. In spite of each court having a library in Zambia to provide legal knowledge and access to legal information, there is limited knowledge on the information needs, sources and challenges judges and lawyers encounter to access appropriate information. It was the intention of this study, therefore, to bridge this gap in knowledge. As argued by Tuhumwire and Okello-Obura (2010), the design of any formidable system of information access and use must be based on careful analysis of the target group's information sources and how to access them. Similarly, the acquisition of information resources is based on the knowledge of the needed information sources.

1.2 Objectives of the Study

The main objective of this study was to investigate the information needs and information seeking behaviour of judges and lawyers at judiciary superior courts in Lusaka, Zambia. This study had the following specific objectives:

- i) To determine the information needs of judges and lawyers.
- ii) To establish the information seeking behaviour of judges and lawyers.
- iii) To ascertain challenges faced by judges and lawyers in accessing information.

2.0 Research Design and Methodology

The study employed a survey research design which allowed collection of large amounts of data in a highly economical way. The target population comprised of judges and lawyers at Supreme Court, Constitution Court, Court of Appeal and High Court of Judiciary of Zambia in Lusaka, Zambia. Sixty structured questionnaires were distributed and forty-five (45) questionnaires were returned representing a seventy five percent (75%) response rate. Data was analyzed using SPSS 23.0.

3.0 Findings and Discussion

3.1 Background information

The study investigated the age, gender, education levels and work experience of the respondents who participated in the study (Table 1). In terms of age, the findings showed that 31% of the respondents were aged between 30 and 40 years while 36% of the respondents were aged between 41 and 45 years. Thirty-three percent were above 45 years. . Therefore, the majority of the respondents were aged 41 and years.

Additionally, the study revealed that 51% of the respondents who took part in the study were male while 49% were females. There was no much difference in the percentage participation between male and female in this study. However, some literature shows that there are more men than women in the legal fraternity due to a number of challenges including gender stereotypes, work/family conflict, and limited support to informal networks of mentoring, contacts, and client development (Rhode, 2001). While other literature argues that “no longer are women singularly represented in a sea of male lawyers. No longer are classes of law students merely, if at all, dotted with only the occasional female. Much to the contrary, the past two to three decades have been characterized by a pipeline to the legal profession filled with women” (Brenner, 2014).

Table 1: Demographic characteristics of respondents

Demographic characteristic		Frequency	Percentage
Age	Below 30 years	0	0
	30 to 40 years	14	31
	41 to 45 years	16	36
	Above 45 years	15	33
Gender	Male	23	51
	Female	22	49
Education level	Undergraduate degree	36	80
	Masters degree	9	20
	PhD degree	0	0
Work experience	Less than 5 years	17	38
	5 to 10 years	11	24
	11 to 15 years	13	29
	Above 15 years	4	9

On education levels of the respondents, the study found that 80% had undergraduate degree, 20% master degree and no respondent had a PhD qualification. It can then be concluded that there were more undergraduate degree holders that participated in this study. This could be attributed to the difficulty to pool through in legal education. For

instance, high failure rates have been recorded on several occasions at Zambia Institute of Advanced Legal Education (ZIALE). In 2015 for instance, 18 out of 206 students who sat for exams have been admitted to the bar while only 16 out of 360 students were being admitted to the bar in 2017. This somehow discourages people to pursue higher qualifications in this profession.

This could be attributed to the difficult in. The study results further revealed that among those that participated in the study, the majority (38%) had worked for less than five years, followed by 29% who had work experience of between five and ten years. 24% reported that they had work experience of 11 to 15 years while 9% had worked for more than fifteen years. It appears those who had worked for less than five years were more available for the study than the more experienced ones. The more experience tended to be too busy for the study.

3.2 Information needs of the respondents

Furthermore, the study sort to solicit information from respondents on their information needs. The findings revealed varied information needs that included information on case preparation (67%), administration of justice (60%), modern trends in law (87%), statutes (71%), current awareness (69%), general knowledge (47%) and job presentation (76%). The findings are depicted in table 2.

Table 2: Information needs of respondent

Kinds of information respondents needed	Frequency	Percent
Case Preparation	30	67
How justice is administered	27	60
Information to keep up to date with modern trends in law	39	87
Statutes	32	71
Current awareness	31	69
General knowledge	21	47
Information which would be of help to be consistence in the job presentation	34	76

The findings are congruent with the study by Khan, Bhatt and Khan (2011) were it was discovered that that majority of judges and lawyer’s information needs included those for case preparation, for improving their personal competencies, general knowledge or current awareness and such information which would help them be consistence in their job presentation. However, the findings slightly differ to a study by Tuhumwire and Okello-Obura (2010) who examined the legal information needs and access problems of lawyers in Uganda. Law reference, laws of other countries, law reports, update of court rules and judge cases were found to be the most needed information resources by advocates. Overall, it can be established that judges and lawyers have similar information needs particularly that which help them be consistence with job presentation.

3.3 Information Sources of Respondents

The results of the study showed that in relation to their varied information needs, respondents used different sources

(table 3) to gather needed information. Particularly, they consulted court libraries (98%), personal libraries (79%), online databases (76%), offline databases (76%), decided cases (98%), other legal libraries (7%) and colleagues in the profession (73%) in order to make sound decisions.

Table 3: Sources of Information

Sources of information	Frequency	Percent
Court libraries	44	98
Personal library housed in homes and offices/chambers	35	79
Decided cases from judicial records at the library and judge’s chambers	44	98
Online databases from www.zamlii.zm	34	76
Other legal libraries eg ZIALE, Zambia Law Development commission, Ministry of Justice	3	7
Colleagues in the law profession	33	73
Offline data bases (KAS Legal) installed on the library computers and personal computers	34	76

The findings are similar to the study done by Clinch (2000) on legal information where it was discovered that there are distinct information sources available in the legal discipline, which differs from those available in others discipline. Similarly, a wide variety of sources are used by legal practitioners, an indication that one source is not enough to function effectively on the job. Similarly, different legal professionals seek information using different methods. According to Thanuskodi (2009), they engaged different tactics such as consulting previous court judgments and rulings, consulting colleagues in the professions, consulting library staff to retrieve the information they need. Furthermore, their information seeking process is driven by the nature of work at hand in, age, experience as well as awareness of sources.

3.4 Challenges respondents faced

Respondents reported that they encounter a number of problems in their quest for information (table 4) which included difficult to find latest information (82%), information not readily available (69%), lack of information diversity (67%), information not easily accessible (62%) and poor internet connectivity (60%).

Table 4: Challenges faced in seeking information

Challenges faced in accessing information	Frequency	Percent
Difficult to find information	37	82
Information not readily available	31	69
Lack of information diversity	30	67
Poor internet connectivity	27	60

The findings are in agreement with a study by Otike and Matthews (2000) on information seeking behaviour and needs of judges and lawyers where it was revealed that judges and lawyers just like any other user, experience considerable problems in satisfying their information needs. Among them is the currency of information. Legal practitioners, work in an information-rich environment which is in constant flux, with ongoing additions to statutes and other sources for legal. The rate at which the information is updated by law making bodies, many legal institutions fail to copy hence using unrevised information and this has a negative impact on the provision of justice. The findings are also in total agreement with a study by Thanuskodi (2009) where it was revealed that there was a challenge in accessing amended latest information to help in the accomplishment of in the legal fraternity. Therefore, dealing with outdated information sources were a concern for the judges and lawyers as it delayed the passing of judgments in the courts of law. Judges would spend a considerable time looking for updated information. Kumar (2004) carried out a research of whose purpose was to study the problems faced by judges and lawyers in accessing information in the judiciary of India. The study established that the major problems faced by judges and lawyers were the lack of appropriate information resources especially to those located outside the main cities. It further established that some courts had a challenge in purchasing current and updated law books because of inadequate funding.

Information not being readily available was ranked as the second biggest challenge faced by the respondents. The time of the user in the library must always be given first priority as such it is important to save the time of the reader by making all the information in the library within reach and readily available. The findings are similar to a study by Otike and Matthews (2000) where it was revealed that in most cases a judge or lawyer spends a considerable amount of time looking for information due to lack of search skills to access legal information. Sometimes the problems are with the information providers. Some law libraries do not provide an adequate information service because of knowledge levels of library staff. The study observed that libraries provide services on three levels: passive, reactive and assertive (proactive). A passive collection lies in wait for the chance user; a reactive library is happy to answer requests. A proactive library is one that takes time to know its primary clientele, anticipates the needs of the users and consults with them regarding the information material. Unfortunately, the majority of information providers are passive or reactive. The study concluded by suggesting that legal information providers need to be both reactive and proactive in information provision if information needs of judges and lawyers are to be met at the point of need. Information must be available whenever and wherever it is needed.

Lack of diversity in terms of information was ranked as the third biggest challenge faced by judges and lawyers. In a modern society information must be stored in print and non – print media. Information on non – print media or digital format can usually be accessed by many people at the same time as long as the gadgets to access information are available. The findings are similar to a study by Devadason and Lingman (1997) whose study on information

needs of legal professionals revealed that the information work carried out by Judges and lawyers can be complex, often involving finding and working with a wealth of a diversity of information. This wealth of legal information concentrates around different types of documents for instance, law reports/legal cases, legislation, commentary articles, forms and precedents etc. and these must be in both hard and soft copies. Unfortunately, most court libraries do not have a comprehensive law collection in various formats.

Problems of poor Internet connectivity especially in most Zambian institution are prominent. Internet connectivity involves huge connection costs and connectivity depends on infrastructure including equipment, electricity and transportation. These are unaffordable to many developing regions, including some government institutions (Mulauzi and Kendra, 2009).

4.0 Conclusion

The findings of this study revealed that respondents aged 41 and years were the majority that participated in the study. Slightly more males than females participated in the study. There were more undergraduate degree holders that participated in this study and the less experienced were more available for the study than those with many years of experience in the job. Varied information needs of the respondents that included information on case preparation, administration of justice, modern trends in law, statutes, current awareness, general knowledge and job presentation were revealed by the study. Respondents, according to the results of the study looked up to court libraries, personal libraries, online databases, offline databases, decided cases, other legal libraries and colleagues in the profession to fulfil their information needs. However, it was reported by the respondents that they encountered a number of problems in their quest for information including difficult to find latest information, information not readily available, lack of information diversity, information not easily accessible and poor internet connectivity.

5.0 Recommendations

The study made the following recommendations:

1. Court libraries should be stocked with adequate current materials on diverse legal topics by the Judiciary.
2. Internet connectivity should be improved by the Judiciary so that judges and lawyers can access information in electronic environment easily.

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Attaining Sustainable Development Goals: The Role Of Academic Libraries In Higher Learning Institutions

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Abstract

The need to improve society continues to prompt the formulation and adoption of policies and strategies by nations and international organizations. One such strategy is the Sustainable Development Goals (SDGs) adopted by the United Nations in 2015 which aims at consolidating the success of the Millennium Development Goals (MDGs). The Sustainable Development Goals advocate that all learners should have the knowledge and skills needed to promote sustainable development. Sustainable Development Goals (SDGs) can be achieved through teaching, research and innovation. In this regard, information literacy, literature search, access and the use of scholarly research databases offers quality academic resources which contribute greatly to teaching, research and innovation. This paper therefore attempts to highlight the roles that academic libraries play towards the actualization of sustainable developmental goals (SDGs) and to review possible opportunities for better actualization. Further, within the context of SDGs, the paper addresses SDG number 4 that seeks to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. The analysis is based on review of previous literature to seek practical avenues that academic libraries in developing countries such as Zambia can employ in increasing and or improving access to information. It is hoped that the findings of this paper will help in ensuring that there is equitable quality education through the utmost access and utilization of scholarly research databases for teaching, learning, research and innovation and consequently contributing to the post-2015 development agenda. This paper will also highlight the challenges militating against libraries towards achieving sustainable development goals as well as outline recommendations.

Keywords: SDGs; Academic Libraries; Higher learning Institutions; Information Literacy; Life Long Learning; Zambia

1.1 Background

The term Sustainable Development Goals (SDGs) of the 2030 agenda for sustainable development is a new concept that was adopted by world leaders at the 2015 historic UN summit (Nicholas & Perpetual 2015). The 17 Goals are aimed at building on the successes of the Millennium Development Goals (MDGs), while including new areas such as climate change, economic inequality, innovation, sustainable consumption, ensure inclusive and equitable quality education, among other priorities. The goals are interconnected such that the successes that would be registered on one goal would have a positive spiral effect on achieving other goals. Specifically, it is argued that SDGs are a new and universal set of action oriented goals that are embedding sustainability as a universal agenda. Thus, such an approach will promote a universally shared global vision of progress towards a safe and sustainable space for all human beings both in developed and developing world contexts.

Furthermore, it is argued that SDGs present an opportunity to the world to shift the world focus to a more inclusive, sustainable and resilient developmental framework and social development (Osborn, 2015). Moreover, compared to MDGs, SDGs personify integration through diverse stakeholder participation. The new agenda perceives various

stakeholders such as educators, researchers, policy makers, health personnel, politicians, information managers, religious organisations and non-governmental organisations as proactive players in achieving sustainable development. Therefore, developed and developing countries are rapidly adopting the agenda and incorporating its goals in their contextual developmental efforts (Aida Opoku-Mensah, 2016).

Arising from the above, it must be noted that the success of any society, country or institution greatly depends on the adequacy of its library collections, infrastructure and dissemination policies. These libraries play an important role of not only stocking various information resources to be used by their clients but they also impart knowledge, research skills and critical information skills to the user community through information literacy, literature search, access and the use of scholarly research databases.

Attainment of SDGs in the 21st century demands the use of ICTs and access to information. Information professionals consult information for research and discovery, farmers need information to connect to new markets, entrepreneurs need information to find capital to start business, and students require information for the acquisition of vocational skills. Similarly, health workers require up-to-date information as they attend to patients. With the increasing need of information and the availability of appropriate information technology the diverse needs of every individual can be achieved and attended to once there is free access to information, which libraries can resolve through the use of Information and Communication Technology (ICT) (IFLA, 2015).

In view of the foregoing, academic libraries are the bedrock for the development of any nation and serve as an institution that store and preserves the information of the people and disseminate the information needed at an appropriate time. Hence, there is need to establish the role of academic libraries in the attainment of Sustainable Development Goals (SDGs) in Zambia.

2.1 Sustainable development: A conceptual overview

Sustainable development has been defined as the process of transformation of a country's economic, social, political, educational, religious and cultural value towards improvement in human dignity and the general well-being of its citizens (Osborn & Ullah, 2015). Sustainable Development Goals (SDGs) is a global decision aimed at making the world a better place to live. Sustainable development is a programme that is developed to meet the needs of the present generation and also those of the future generation. According to Nicholas & Perpetual (2015), Sustainable development is the overall change and improvement in any given society as related to individual progress. Sustainable development covers a wide range of interrelated issues in the areas of environmental, economic, social, and political spheres, all within the limits of the world's natural resources to ensure that all people enjoy peace and prosperity by the year 2030. Furthermore, sustainable development refers to the development that provides a better quality of life for both the present and future generations (Shah, 2012). Sustainable development goals were chosen from a global consultation processing in 2015 and the 17 goals were built on the success of the MDG of the year 2000-2015.

2.3 Academic libraries and sustainable development

Libraries play an important role in achieving the Sustainable Development Goals. Globally, a library is considered as a centre of research and a place of information empowerment whose critical role cannot be over emphasized. Libraries and Information Centres are institutions that are responsible for the selection, ordering and acquisition of information materials both in print and electronic formats. Nicholas and Perpetual (2015) pointed the library as an information centre that acquires, process, organize, store, retrieve and disseminate information to users. Adesoji (2007) posits that the culture of continuous learning and reading is intertwined with libraries, which instils the culture of reading in students. The critical role of information in any nation cannot be ignored because libraries are seen as the custodians of knowledge and the most reliable information centre that deals with the acquisition, organization, dissemination and preservation of information all for actualizing sustainable development. It is this information that individuals, organisations and nations the world over use for national development.

In view of the aforementioned, the roles of academic libraries in achieving sustainable development goals can be clearly seen through their traditional roles in higher learning institutions. For instance, Copperbelt university library avails

internet access to the user community at no or low cost to ensure that the university community accesses peer reviewed information for teaching, research and consultancy.

Additionally, libraries sometimes may act as a hub for people without access to Internet to physically access and use diverse array of both print and electronic information. Furthermore, the emergence of the concept of internationalization of education has prompted universities to adapt to international standards in order to develop a competitive advantage in providing education. The library is one area that many organisations such as universities are targeting in attaining international recognition. Specifically, the Copperbelt University (CBU) and University of Zambia have embarked on various initiatives aimed at improving operations of their libraries. In 2012 CBU library embarked on various initiatives to improve service delivery such as creating an institutional repository using D-space. Creating an institutional repository was necessitated by the need to have an online library-user interface for information in digital format. Also, the repository was seen as an opportunity for the library to provide services even to students on distance learning programmes (Copperbelt University Library Annual Report, 2012). Similarly, UNZA has an institutional repository in order to archive and make available to the research community the university's intellectual output (Bimbe, 2018).

Furthermore, to ensure that quality education is achieved, the Copperbelt University library also embarked on offering information literacy skills to students. The rationale for Information Literacy is to ensure that students become critical in the way they exploit information resources whilst at the same time cultivating a culture of lifelong learning as opposed to reading for certification alone.

More so, through the Zambia Libraries Consortium (ZALICO), CBU library has set up an electronic resources platform called RemoteX. The platform offers electronic literatures and can be accessed remotely outside the confines of the university. This enables library patrons to access various peer reviewed literature which is readily available online. Thus, with pervasive Internet connectivity through devices such as laptops, Ipads, smartphones and other gadgets, modern communities may use similar platforms to virtually access relevant electronic information in academic libraries. The academic library through Remotex is in a way promoting equitable quality education in as far as the attainment of sustainable development goals in this period of Covid 19 pandemic is concerned. This proactive response regarding digital accessibility is indicative of the likelihood that the future of libraries and its services are inclusive to the broadest of their communities (Wentz and Bertot, 2019).

In addition to the foregoing, the Copperbelt University library has undertaken other projects in contribution to the attainment of SDGs. For instance, in its 2014-2018 strategic plan, the Copperbelt University sought to expand its academic space through "growth of scholars, scholarship and publications" as an overall goal (CBU strategic plan 2014-2018). One of the key activities was to subscribe to at least three (3) essential research databases such as Elsevier to enable researcher's access up to date information. Elsevier is a Dutch publishing and analytics company specializing in scientific, technical and medical content. Elsevier publishes more than 470,000 articles annually in 2,500 journals. Its archives contain over 16million documents and 30,000 electronic books (Bradley, 2016). During the period that the university subscribed to Elsevier database, it was observed that demand for access and the use of scholarly research databases via Elsevier had increased.

It is evidently clear from the aforementioned that academic libraries have become viable and visible in the 21st century. Thus, libraries play an important role in the attainment of Sustainable Development Goals. Globally, the library is considered as a nerve centre of research and a place of information empowerment whose role can never be over emphasized because the public benefit immensely from it. Libraries have embarked on several initiatives and innovative models in providing access to diverse information to its patrons as analyzed in the paper. Although Academic Libraries have evolved and emerged as information service providers, they are faced with numerous challenges discussed below.

2.4 Challenges facing Academic Libraries towards the Attainment of SDGs

While significant successes have been made in developed countries with regards to the attainment of sustainable de-

velopment goals (SDGs) by academic libraries, Academic Libraries in developing countries and in particular Zambia, are faced with numerous challenges. These challenges inhibit effective and efficient provision of quality library and information resources and poses a barrier for academic libraries to positively contribute to achieving SDGs. Among the many challenges are, inadequate funding, poor infrastructure, inadequate facilities, and poorly trained information professionals.

i) Inadequate Funding –Many libraries in Zambia are failing to run properly mainly due to poor funding. The academic library is one of the most affected because of reduced government funding to their parent institutions. Hence, libraries are failing to meet the barest minimum obligations of serving their clientele. This has impacted negatively and ultimately resulting in failing to attain sustainable development goals. For example, academic libraries in higher learning institutions are struggling to pay for subscriptions to some scholarly research databases such as Elsevier.

ii) Inadequate Staff- This is another crucial challenge facing the library and information centres. Most libraries do not have experienced and well-trained staff to run the system (Apotiade, 2002). Because of this, the achievement of the goals could be slowed down.

iii) Inadequate Facilities- This has also become another hindrance factor that affects libraries and information centres. Inadequate facilities have limited the provision information services by libraries and librarians for a sustainable development. Therefore, there is need for the provision of contemporary facilities to meet the growing demands of millennials in the 21st century.

v) Bandwidth Constraints-In order to be able to encourage universal accessibility and effective use of ICTs, it is critical for universities to invest in acquiring the necessary bandwidth (Adams, 2016). Most developed countries have invested rapidly in acquiring necessary bandwidth in achieving greater capabilities to utilize and benefit from ICTs. However, adequate or necessary bandwidth is the scarcest ICT resource in African. A survey by Shaffer (2018) showed that almost 60% of African countries have bandwidth that is less than that of a typical institution in the developed world.

2.5 Conclusion

Academic Libraries in higher learning institutions are essential tools as they play an important role to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. If sustainable development goals in Zambia are to be attained, citizens need to be well informed and this can be done through the provision of high quality information services. For information to be of high quality, it has to be accurate, timely, relevant and packaged in the right format to the user. Once this is adhered to, the nation will ultimately, will translate into meeting the SDGs account the development indicators raised in the sustainable development goals (SDGs), hosting local forums where people can discuss challenges with regards to the attainment of sustainable development goals . If the nation can give serious attention on academic libraries in higher learning institutions, to some extent the nation will be able to overcome some of the challenges militating against information provision and will be among the top countries' economies in the world by the year 2030

Recommendations

- Government should ensure that academic libraries are fully integrated into the scheme of activities at both the local and national level. For instance, efforts should be made to ensure that libraries and information centers are integrated fully into the mainstream government activities at the various levels at state and local government. Doing this would ensure government funding and support in creating frameworks to promote public access to information via academic libraries
- Academic Libraries in higher learning institutions should regularly organize seminars, workshops; symposia that will serve as educational fora where citizens irrespective of gender, age, and profession can acquire new information.
- The government and the parent institution should support academic libraries financially in order to mitigate the challenges of inadequate infrastructure and facilities, poor network distribution. Adequate funding would also help facilitating in the publishing of research findings conducted by researchers.
- There is need for adequate and professionally qualified staff so that there is information service provision which would contribute to national development in the social political and economic spheres of the nation. It is also noteworthy to state that as modern librarians or information managers,

librarians should have requisite skills, positive attitude, motivation and self-efficacy to undertake such initiatives. However, the success of these initiatives to a large extent depends on embracing change by the respective library management.

- Academic libraries should engage in effective lobbying and advocacy programmes. Heads of libraries should endeavour to engage in proactive and modern organizational and business culture to become strategic in their planning, management, implementation and delivery of information services. Some of these strategies might include adopting aggressive marketing and public relations strategies that will for instance engage NGOs and other organizations that promote access to information. Librarians should acquire lobbying and advocacy skills at all costs to ensure that they contribute to the reality of the SDGs.
- In light of the ever shrinking library budgets, academic libraries should also consider embracing open access resources in order to compensate for the commercial resources which are unaffordable for many libraries.

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An Investigation of the Researchers' Perception on Access Regulations in the Usage of Archival Materials: A Case Study of the National Archives of Zambia

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Abstract

The aim of the study was to investigate researchers' perception on access regulations in the usage of archival materials at the National Archives of Zambia. The objectives of the research were: to determine the educational levels of researchers that patronize National Archives of Zambia; to determine the extent to which archival materials were used; to investigate researchers' perception towards access regulations in the usage of archival materials; and to determine which of the regulations researchers consider to be hampering their research and need to be reviewed. At the time of the research, there were one hundred and sixteen (116) paid up researchers. In this regard, 116 were picked as the total target population. In this vein, sample size comprised fifty (50) researchers. The type of sampling that was done was convenience sampling as researchers were given questionnaires as they walked into the search room. In relation to the findings, it was discovered that majority of these researchers were undergraduates. It was also revealed that the majority of the researchers used archival materials once per week representing Concerning education's contribution towards research, it was revealed that there is a relationship that exists between the level of education and the use of archival materials as the study further revealed that most of the researchers find that education enhances understanding of primary information and provides expert knowledge that makes research easy. On the perception of access regulations in the usage of archival materials it was concluded that researchers thought that access regulations help protect rare and fragile archival materials as they also prevent theft of archival materials and safeguard the integrity of archival materials. Despite this perception, it was noted that researchers thought that access regulations were cumbersome to researchers as it was felt that access regulations restrict usage of public archives. In this vein researchers were of the view that regulations such as payment of users charges, restriction of three documents per user per time and that Government officials should get clearance from their respective institutions to carry out research should be reviewed. In this vein, it was concluded that The National Archives of Zambia should not relent in improving on what has been seen as a conflict between the researchers and the archival staff but should endeavour to safeguard archival materials as this is their primary duty as archivists. In this regard, it was recommended that there was need to educate researchers who utilize archival institutions on why rules and regulations were put in place and the fact that some of the conditions under the access regulations should be reviewed in order to enhance research.

Key words: Access Regulations; Archival materials; National Archives of Zambia; Perception

1.0 Introduction

Records and archives are key components in the national development of any given nation. Be it in private or public institutions, they document essential actions, evidence, decisions and thoughts. They constitute the memory of the institution or government's activities and are part of the national heritage. Ellis (1993, p.2) submits that archives are "documents made or received and accumulated by a person or organization in the course of the conduct of affairs and preserved because of their continuing value". Cook (1999, p.122) also defines archives as "those records that are

worthy of permanent retention because of their enduring value as evidence or for research". He further points out that they provide a reliable and authentic knowledge base, enabling the past to be reconstructed and understood. Without archives, the past would remain largely unknown. By documenting the significant decisions, transactions and events of political, social and economic life, archives serve as the essential link in the chain of human history.

The importance of archives was not only in their function as reliable, legal evidences but also because they preserve the institutions experiences, spirit, inspirations and vision for the future generation. It is in this vein that Mukula (1981) submits that archives provide information to determine legal and political cases and establishing genealogies, settling succession disputes of chiefs, settling land and boundary disputes. Archival sources have also been used often when planning developmental projects. It should be further noted that archives are part of our cultural heritage (Ellis 1993). They keep recorded information which is universally recognized and accepted as they are unique and irreplaceable heritage. They have significant relationships with other forms of evidence of the past and present human activity.

For these archives to be useful, they need to be used and for them to be used, they have to be accessed. The question of access to archives is one of the most important aspects of archives administration as archival institutions should facilitate the orderly arrangement of archival materials for easy accessibility and retrieval for use (Pen and Pennix, 1994). The term 'access' has been defined as the "availability of records and archives for consultation a result of legal authorization and existence of finding aids" (ICA, 2012: 12). In the past, public archival institutions were credited with the dual role of preserving and making accessible the public archives in their custody, access being regarded as a secondary function (Jenkinson, 1937). Today, access to information generally seems to have been acknowledged as a critical element of participatory democracy (Adams, 2006) as evidenced in the glamour for Freedom of information all over the world. However, in the provision of access to archival materials, Archival institutions put in place regulations that guides on how these materials should be accessed. According to Abiola (2009), regulations are put in place to guide researchers and to regulate their conduct in the search room. These regulations are designed to safeguard the interest of the researchers and the public for which archival materials are held in trust. One of the institutions that provide access with regulations to archival information is the National Archives of Zambia.

1.2 Background about the National Archives of Zambia

Mukula (1981) points out that the origins of National Archives of Zambia can be traced back to 1935 when the Archives of Southern Rhodesia (Zimbabwe) were inaugurated. Towards the end of the World War II, proposals were made to extend the service to include Zambia and Malawi for security, accessibility and economic reasons. The joint archives were called Central African Archives with the headquarters in Zimbabwe. In Zambia, Livingstone depot was opened in 1947 but was temporarily closed and records transferred to Salisbury (Harare), Zimbabwe. The depot was reopened in Lusaka, Zambia in 1956 and the old building was occupied in 1963. After the dissolution of the Federation of Rhodesia and Nyasaland and consequently Northern Rhodesia attaining independence in 1964, , the Northern Rhodesia Archives then ceased to be a branch of the Central African Archives and was renamed the National Archives of Zambia.

The National Archives of Zambia Act Cap 175 of 1995, under part IV deals with the selection and preservation of public records and their transfer to National Archives and the circumstances under which records that have not been transferred to the National Archives may be destroyed. Part IV of the Act also states at which stage of the records life span members of the public may have access to the records. It also gives authority to the director of the National Archives to inspect public archives and the circumstances under which such inspection can be carried out. The National Archives of Zambia has also Provincial Records Centres.

1.3 Types of records found in the National Archives of Zambia

To understand the types of records available at the National Archives of Zambia, it is important to highlight the historical development of the country in terms of administration in order to know what records are available for research. Zambia was a colony of Great Britain The colonization process started with the British South Africa Company (BSAC). The BSAC was granted a charter in 1891 by the British Government that led to the formation of North-Eastern Rhodesia in South Central Africa. Graham and Halwiindi (1970) submit that the office of the Administrator

was created under the North-Eastern Rhodesia Order in Council of 1900 which formally placed the North-Eastern Rhodesia under the BSAC administration. This led to the establishment of the Civil Service under the Civil Service of North-Eastern Rhodesia Rules and Regulations by Government Notice no.1 of 1901. North-Western Rhodesia was also formed and administered from 1891.

The North-Western Rhodesia Order Council was passed in 1899 which formally established the administration and gave statutory rights to the company. The BSAC amalgamated North-Western Rhodesia to form Northern Rhodesia in 1911. These are archives of the administrations of North-Eastern Rhodesia (1891-1911), North-Western Rhodesia (1891-1911) and Northern Rhodesia (1911-1924). The Colonial Office took over the administration of Northern Rhodesia and introduced an indirect rule. During the same period of BSAC rule many missionaries of different denominations came from England, Scotland, Wales, Ireland, France, America, Italy, Holland, South Africa and elsewhere and set up mission station in various parts of the country where they established schools and medical institutions.

After that came the Crown colony records which had an administrative structure consisting of a Governor, Chief Secretary, Secretary for Native Affairs, Directors of various departments including Provincial Commissioners who created many records for administrative purpose.

These series of records are called Secretariat records and they are mostly used by researchers who appreciate the value the records have in assisting in undertaking their research. The finding Aids for these are: SEC 1- (Vol. 1 1924-1933, Vol. II 1933-1965), SEC 2- (1924-1965) Native Affairs only and SEC 3- (1924-19 1965) which were created as the administrators managed the affairs of the territories. Besides the Secretariat records are reports of various commissions of enquiries like the disturbances on the Copperbelt Commissions of enquiry of 1935, 1940, 1956 and 1963. The information contained in the National Archives of Zambia is derived from official documents generated by various administrators before and after independence, beginning with the British South African Company (BSAC) administration in the 1870s, colonial administration and the post-independence period to date. Annual and Tour Reports were written by District Commissioners and other local administrators on the basis of extensive field trips in their respective areas. The socio-economic information they contain on, for instance labour migration and population, chiefs, taxation, local skills, development constraints are generally unavailable elsewhere. These are the most valuable and unique documents called the District Notebooks which started in 1935. They provide an easy entry point into local developments all over the country. They are a source of historical, political, administrative, ethnographical and anthropological information. These were kept at the district administrative stations (bomas) during the colonial period. The Guide to the Public Archives in Zambia Vol. 1, covering the years 1895-1940 is also available.

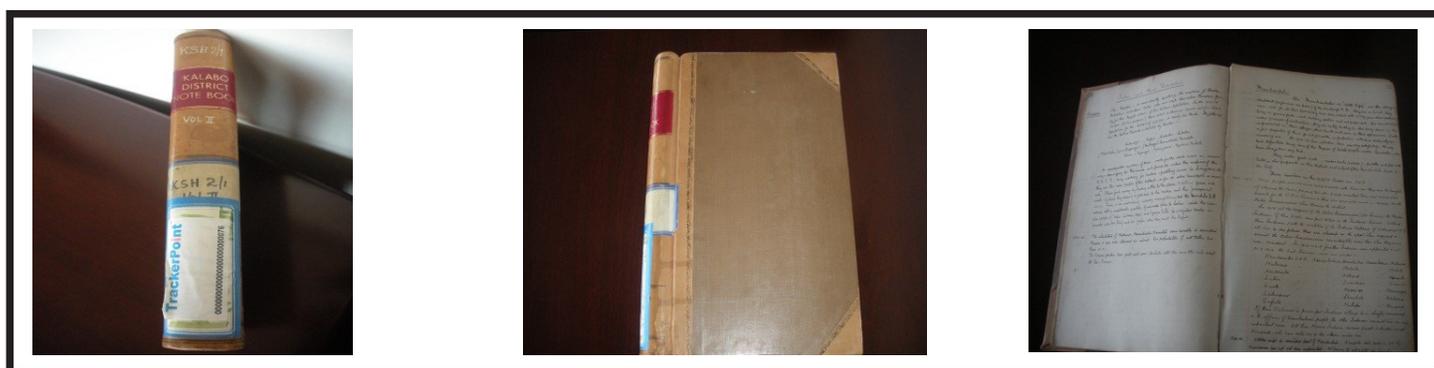


Figure 1: Sample of District Notebook

Immediately after independence, more ministries and departments were formed which meant the creation of more records like annual reports, government publications, newspapers, Zambian published books, journals, photographs and maps whose collection continues to increase in the National Archives of Zambia for research. There are also private papers of some individuals who were colonial Administrators like John Bissett, William Vernon Brelsford, Frederick Vernon Bruce-Miller, Edward Arden Copeman, Norman Spencer Knight and Charles William George Stuart. Other

private papers kept in the archives are for politicians like Bautis Frank Kapulu, Reuben Chitandika Kamanga, Peter Wilfred Matoka, Andrew Bwalya Mutemba, Robinson Mwaakwe Nabulyato, Harry Mwaanga Nkumbula, Andrew S. Sardanis, Alex Kaunda Shapi, Wittington K. Sikalumbi, John Malama Sokoni and Simon Ber Zukas who contributed to pre and post independence Zambia's political journey. Records of missionaries like Frederick Stanley Arnot and Walter Fisher. Records of settlers included Paddy Bruce-Miller, Elisbeth Margaret Maclaren, Major Boyd Alexander Cuninghame, Charles A. Fisher, Henry Rangeley, John Edward Stephenson, and Hugh Felix Walker. There are also other collections of personal papers for Lt Col. Sir Gore-Brown who was the most illustrious European settler in colonial Zambia took up farming in Chinsali where he developed the famous Shiwa Ng'andu Estate and Thomas Walter Savory who was employed as a Surveyor in Northern Rhodesia by the British South Africa Company. (Hinfelaar and Macola, 2004). Others are records for organizations, churches, maps, photographs, stamps, films and sound recordings. The collection also includes a comprehensive legal deposit library comprising all locally published books and periodicals which are widely used by researchers.

The National Archives of Zambia has an audio-visual collection which has video, sound recordings and films on a variety of subjects ranging from political and sociological issues to economic, educational, health and cultural issues. The collections were sourced from public media organizations such as the Southern African Broadcasting Services, Zambia National Broadcasting Corporation and the Zambian Information Services. The collection is used to educate visitor groups such as students who visit the National Archives to familiarize themselves with the work and holdings of the institution.

The philatelic and currency collection at the National Archives of Zambia has an important educational resource. The collection comprises postage stamps from the colonial to the post-independence period acquired from the Zambia Postal Services.

The currency collection consists of coins and notes used before and after independence. These are deposited by the Bank of Zambia. The currency and philatelic collection represent different aspects of Zambian life and events. In this regard, the postage stamps deposited by the Director-General of Postal Service in 1981 covers a wide range of issues such as World Forestry Day-Speed pod, World Telecommunication, health and traditional musical instruments. These collections are displayed during exhibitions to educate and enlighten the public on Zambia's past culture, events and life. Some of the collections are permanently displayed in the Archives Gallery to educate the visiting public on the postal and currency history of Zambia. These are the materials that researchers need to access.

However, access to archival materials comes with regulations. Over the years, the National Archives of Zambia has had regulations on the use of archival materials. The National Archives of Zambia Act, Cap 175 of the Laws of Zambia, and 1995 edition is used as a regulatory tool and the Readers Note to regulate researchers in the use of materials in the search room.

According to the Act, which is stipulated in the Reader's Note, for records in closed period of twenty (20) years, they are a private property of offices that created them. While the records in open period, the records are open to the public for research after they have been closed for over twenty (20) years and are not restricted but one must have a valid ticket to use them. A ticket is valid for the length of time the researcher has applied for and renewals are made when the ticket expires. Government officers doing research on behalf of government are allowed to have access to archival materials on production of an introductory letter from their institutions. Photocopying services is also offered at a reasonable fee within the National Archives of Zambia offices.

It should be noted that readers are required to adhere to the conditions which are as follows:

1. Silence must be observed in the reading room at all times.
2. Readers must use only pencils;
3. Each reader is only allowed three documents at a time and after reading them, they must be handed back to the search room invigilator.
4. Requests for documents must be made on form NA 17A provided by the invigilator.

5. Readers must not tear papers/ pages from any research materials. This is a very serious offence.
6. Readers are not allowed access to the repository.
7. Use of other devices (camera's, scanners, and photocopiers) is not allowed unless with approval by authorized staff.
8. No food is allowed in the search room.
9. No caps are allowed in the search room.
10. Readers are required to leave their bags at the security check point.
11. All government employees doing research on behalf of government should come with introductory letters from their respective ministries/departments.
12. Readers will be denied search room facilities if there is a reason to believe that their actions are contrary to the rules governing the use of the public archives of Zambia.

Furthermore, access to public archives in these provisions is only made available on the payment of such fees as prescribed by the regulations made under this Act and when to inspect or obtain extracts from public archives in the National Archives of Zambia.

It should be noted that security of archival materials is of paramount importance in any archival institution. In this regard, researchers are educated on the need of these regulations and their importance in the management of archival materials.

1.4 Statement of the problem

Despite the National Archives of Zambia staff explanation to researchers on the importance of access regulations, researchers feel that access regulations in the archives is a repugnant and a hindrance to their research work. Others have specifically claimed that they do not have a lot of time to do research and have requested to make copies of the whole file, book or requested to have digital copies of these materials which is against archival principles. Ultimately, access regulations have become a constant source of conflict between researchers on one hand and archivists on the other hand as some of their requests were not granted to avoid violation of rules and regulations. These regulations are meant to help monitor movement of records by users, protect and preserve fragile documents from further tear and wear. In this regard, there are consequences if these regulations are not adhered to. There is a risk of losing the documents through damage, theft and rearrangement. The risk of making photocopies on materials that are fragile will have an adverse effect on the documents and it is against archival preservation principles. The researchers do not want to adhere to the access regulations making documents to go missing or being misplaced which creates problems and also contributing to the documents being fragile due to mishandling when making photocopies as the documents are being exposed to wrong environment and through faulty equipment which will scratch and damage the documents. These regulations are not meant to hinder the usage of materials but are necessary to protect public and private interests. The study therefore, sought investigate the perception of researchers' on access regulation pertaining to the usage of archival materials in the National Archives of Zambia.

1.5 Objectives

The general objective was to investigate researchers' perception on access regulations in the usage of archival materials in the National Archives of Zambia. The following were the specific objectives;

- I. To determine the educational levels of researchers that patronize the National Archives of Zambia;
- II. To determine the extent to which archival materials are used;
- III. To investigate researchers' perception towards access regulations in the usage of archival materials and
- IV. To determine which of the regulations researchers consider to be hampering their research and need to be reviewed.

The following were the research questions;

- I. What are the educational levels of researchers that access the services of the National Archives of Zambia?
- II. How often do researchers access archival materials?
- III. Are access regulations promoting the use of archival research?

IV. Which regulations do researchers think should be reviewed?

2.0 Literature Review

This research was based on the modern archival theory is grounded on the principle of wider public use because it is the main justification for archives to the users' as it offers reliable information on history, culture and collective memory. According to Roberts (1987), the Modern Archival Theory is based on the essential nature of archives being bound up in their value as historical source and that archivists save what is historically valuable and that knowledge should be built in these documents by acting upon them in methodical ways to protect them for future reference, extend memory and actions to make them enduring so that they are accessed by those who need them. Providing access to the information that is in the archives is central to the delivery of the archival services. It is only when these records are used that archives can best demonstrate their usefulness to the public. However, rules and regulations are paramount in the use of archival materials as they are the main building block for any researcher to have access to archival materials such as conditions under which services will be provided. Access to archival should not be denied to anybody but meet their needs if they are available according to the conditions that are available within the legal framework of the institution. This should, however, be done in accordance with each particular country's access regulations. In this regard, the literature review had the following themes; educational levels of researchers, usage of archival materials, and perception of researchers towards access regulations and perceived regulations that hampers research.

2.1 Educational levels of researchers

The importance of education in research especially in the use of archival materials by researchers is cardinal for any research to be undertaken. The importance of education in the use of archival materials is that some form of knowledge makes it easy for researchers to understand search room rules and regulations, as well as the use of basic search tools. In this regard, Ernisse (2002) conducted study on levels of education at the Archives de France and revealed that most of the researchers were undergraduate students and concluded that there was a relationship that exists between the level of education and the usage of archival materials. This means that those with higher knowledge levels were expected to understand the value attached to archival materials. On the other hand, Tobby (1996) in his studies of archival legislation concluded that researchers were not very often drawn by educational levels and requirements in order to undertake research but by an inner feeling dictated by a research problem that required the use of archival materials. The need to resort to archival materials instead comes in because of a discrepancy between the researcher's already available information and a gap cap that fails to solve the problem. As a result researchers focus on the need to solve a research problem without being aware of the education being used unconsciously that is dictating their effective use of archival materials.

2.2 Usage of archival materials

The archival materials promote academic research of a historical nature. These sources of information were important raw materials for historical investigations because they were accumulated as natural product of originating offices or activities. Primary sources of information contribute to the compilation of academic works such as doctoral dissertations, thesis, academic essays and paper presentations.

Mainga (1973), for example in her works on the Bulozhi under the Luyana Kings: Political evolution and state formation in the Pre-Colonial Zambia, used District Note Books for Bulozhi, Batoka, Kasempa, Kalomo, Gweembe, Livingstone and Namwala in her work to reconstruct the main features of the Makololo state and its impact on the Bulozhi in the middle of the nineteenth Century. In writing of a book; Reactions to Colonialism: A Prelude to the Politics of Independence in the Northern Zambia, 1893-1939, Meebelo (1971), consulted archival sources in the form of the B.S.A Company's correspondences, Native Welfare Association documents and district notebooks of Albercon (Mbala), Broken Hill (Kabwe), Kasama, Ndola and Livingstone, Chinsali and Isoka. Roberts (1973) acknowledged that having used archival documents from the National Archives in the years 1964-1965 to write "A History of the Bemba". Among the documents used were the North-Eastern Rhodesia Records, District Note Books for Kasama, Mporokoso, Mpika and District Commissioner's diaries.

Archival information is useful in the verification of historical facts of a traditional nature. Archives are viewed as be-

ing part of our cultural heritage and that they have significant relationships with other forms of the past and present human activities. In this line, traditional rulers are frequent users of the National Archives of Zambia in search of information that relates to genealogy, boundary and succession disputes. Traditional rulers have found them useful as they contain the only written records of their own succession. The National Archives of Zambia Register (2012) indicates that Chief Chipepo of Southern Province used the archives as evidence over a boundary dispute in his chiefdom. Individuals and chiefs who face succession disputes use the archives to trace the procedures and lines of succession.

Lastly, Gibson (2000) conducted a study on access and utilization of archival materials in which twelve (12) archival institutions from twelve (12) different countries were studied. The study paid special attention to the research value of archival institutions. A sample of 750 researchers from each country was sampled giving a total sample of nine thousand (9000) from all the twelve (12) countries. The findings of the study indicated that six thousand and thirty (6030) of the respondents representing 67% use archival materials to high extent in their research, writing research papers, studying for examinations or if and when referred to by their lecturers. Hence to a high extent these studies revealed a high utilization of archival institutions and their services in fostering.

2.3 Perception of researchers towards access regulations

Administering access to archival materials involves establishing procedures which will ensure that legislative requirements are upheld and that the records are protected from theft, damage and rearrangement (Ellis, 1993). It is important to note that access regulations to archival materials vary from country to country and one archival institution to another. This also depends on the nature, purpose and legal requirements that uphold the interest the particular nation as well as the nature of records held.

Regulating access to the use of archival materials and careful administrative planning are necessary preludes to assisting researchers to locate information about the archives and to offer effective services to the researchers who wish to use original archival materials. Archival institutions provide access to records and archives which are a research resource. Researchers have the right to research and use archival materials. This access should however, be clearly defined and in the best way possible, follow the best models for the kind of legislation. Many governments around the world have implemented access to information legislation. Such legislation is critical to the establishment of accountable and transparent operations.

These access regulations help in preservation of archival materials but the perception of researchers towards access regulations varies. Cooper (1994) in his studies on information literacy and the role of archives in promoting research conducted a study in which (One thousand, five hundred (1500) participants were sampled in Zimbabwe and South Africa to assess the regulations that were put in place to protect archives and their impact on research. The studies found that the majority of the researchers (72.2%) were in favour of the regulation requiring researchers to submit their notes to the reference archivist or any search room staff for scrutiny if requested to do so while 27.8% of the researchers frowned this regulation.

Furthermore, researchers were, however, divided on the regulation forbidding researchers from using records for purpose other than for which their applications were originally granted, as 50% were against. Interviews conducted, however, revealed that the preponderance of opinion is that the regulation is unnecessary.

Researchers were also unanimous in their support of the regulation forbidding the use of archives in places other than the search room or any other provided for the purpose. They, however, considered unacceptable and repugnant the regulation requiring university students and other stakeholders to provide recommendation from their professors/schools or departments, the regulation requiring prospective users of archives to give sufficient notice in writing of their intention to conduct research in the archives.

2.4 Perceived regulations that hampers research

Archival institutions have rules and regulations that users should abide by for them to have access to these archival materials. However, some researchers feels that some regulations hamper research. For example, Blais (1995) asserted that

user charges for researchers in archival institutions were bringing about a lack of compatibility with principles of access to information. He further argued that initiation of user fees as a measure to offset cost increases or decreases in funding, making researchers penalized for the price of the services over which they have no direct control. Most researchers' perception is that archival institutions being public institutions must provide access to information without cost. In a major study of user charges conducted in the (Southern Africa... (SADC) countries by the Rand Corporation (1996), researchers found that user charges deterred individuals from utilizing archival institutions and researchers opted to use internet services as opposed to using archival materials. These findings are similar to a study done by Kemoni (2002) in Kenya who investigated the utilization of archival information by the University of Nairobi researchers. It was discovered that access regulations like the payment of the prescribed fees for members of the public to have access to the public archives was a major hindrance to research.

3.0 Research methodology

This study used a case study methodology as it looked at a particular organization within a practical situation of how researchers perceive access regulations in the usage of archival materials. Yin (1984) refers to case study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context. Case studies are complex because they generally involve multiple sources of data. The advantages of the case study method are its applicability to real life, contemporary, human situations and its public accessibility. The case study research was based on both qualitative and quantitative research as a great deal can be learnt from the phenomena Kombo and Tromp (2006). Qualitative method answered questions about what, how or why, while Cooper and Schindler (2001) submit that quantitative method involves measurement in terms of quantities or numbers. According to Shuttleworth (2008) qualitative research can generate meaningful results with a small sample group as a way to reinforce and evaluate findings of a larger scale.

The study was carried out at the National Archives of Zambia Headquarters situated in Ridgeway area in Lusaka. At the time of the research, there were one hundred and sixteen (116) paid up researchers. In this regard, 116 were picked as the total target population. In this vein, sample size comprised fifty (50) researchers were picked. The type of sampling that was done was convenience sampling as were given questionnaires as they walked into the search room and were talked to as well. This was done during working hours between 09:00 hours and 16:30 hours. The research was done in the months of December, 2014, January, February and March, 2015. The main method of collecting data technique in this study was self-administered questionnaires from fifty (50) researchers as well as oral interviews from five (5) researchers. The questionnaires contained both open-ended and closed ended questions. The questionnaires were collected by the front desk officers from National Archives of Zambia. Their questions were structured in a manner that amplified the statement of the problem, research objectives as well as providing the research questions. Data was analyzed using Statistical Package for Social Sciences (SPSS) in order to see how results related to the research objectives were investigated.

4.0 Presentation and discussion of finding

4.1 Profile of respondents

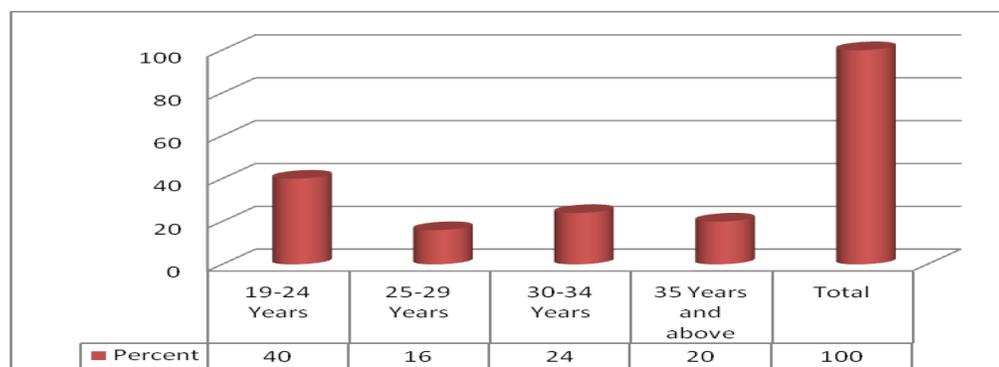


Figure 4: Age group of respondents

In the study, 40% of the researchers were in the age group between nineteen (19) and twenty four (24) years, 16% were in the age range between twenty five (25) and twenty nine (29) years, 24% were in the age range between thirty (30) and thirty four (34) years while 20% were in the age range of thirty five (35) years and above. According to the findings of this study, it was revealed that most of the researchers were between the ages Nineteen to twenty four (19-24) years while the least were those above thirty five (35) years of age. A similar study conducted by Ermisse (2002) at the Archives de France revealed that both the young and old researchers use archives although the older ones use them more. This was attributed to the fact that most of the people under the age thirty (30) years were engaged in activities that does not require much research as they were still at secondary schools and colleges. These findings were different from the findings of this study as most of the researchers were those between the ages 19-24 and are undergraduate students. The reason could be that the population of Zambia has more youths who are undertaking tertiary education which requires research than those who are older and have achieved their educational fulfilment.

4.2 Level of Education

On the level of education of the respondents, results indicated that most of the researchers being Undergraduates representing 92% while 8% were Post Graduates.

Table 1: Importance of education in fostering archival research	Percentage
Creates a basic understanding of research tools	8
Enhances understanding of research tools	20
Provides expert knowledge that makes research easy	30
Enhances understanding of primary information	42
TOTAL	100

When determining the researchers' perception on the importance of education in fostering archival research the findings in table 1 shows that 42% of the researchers thought that education enhances understanding of primary information, 30% thought that education provides expert knowledge that makes research easy, 20% thought that education enhances understanding of research tools while 8% thought that education creates a basic understanding of research tools. This generally implies that education is a factor that enhances archival research. These findings are similar to Kohengkal (2009) who discovered in high school students in Japan thought that education was crucial in research as it created skills, values, beliefs and habits that make research on archival materials easy to conduct. In his study, 57% of the respondents said that education as an important tool that enhances understanding of research tools. Similarly, Lipachak (2002) in his research on impact of education in research, a case of third world countries revealed that education provides the wheels upon which research can rest on as it simplifies an understanding on accessing research facilities. Young (2007) in his studies investigated the role of literacy in guiding users to the right information in libraries and archives found that 48% of the users of Archives and Libraries needed some level of education to broaden their understanding of the search room so as to reduce time wasting in accessing materials. In this vein, studies research conducted by Cox (1983) also reveal that education reduces time wasting in accessing archival materials and that it was cost effective for one with a good level of education to conduct research as understanding of search tools and location of vital information that is known by Archivists to aid the continued self-study, re-evaluation and progress. This is made possible by an accurate understanding of search tools and interpreting them or what the searcher needs correctly to archival staff for easy retrieval hence fostering quick access and reduction on time wasting in accessing research materials. This means that education creates a certain understanding of the research environment that makes users of

archival materials depend on self help in finding the information crucial to their research. Lack of understanding of research guides creates delays in accessing research materials. Moreover, education makes communication in terms of inquiring for information easier.

Table 2: Level of education in relation to importance of archival materials in to research	Importance of education in archival research					Total
	Enhances Understanding of primary information	Provides Expert Knowledge necessary for research	Enhances understanding of research tools	Creates basic understanding of search tools		
Level of Education	Postgraduate	50	25	25	0	100
	Undergraduate	41	30	19	9	100

The relationships between the level of education to importance of archival materials in relation to research results shown in table 2 indicate that 50% postgraduates and 41% undergraduates thought that education enhances understanding of primary information in research of archival materials, 25% postgraduates and 30% undergraduates thought that the level of education provides expert knowledge that makes research easy, 25% of the postgraduates and 19% of the undergraduates revealed that it enhances understanding of research tools and 9% of the undergraduates having thought education in relation to importance of archival materials creating a basic understanding of research tools with no postgraduate.

4.3 Usage of archival materials

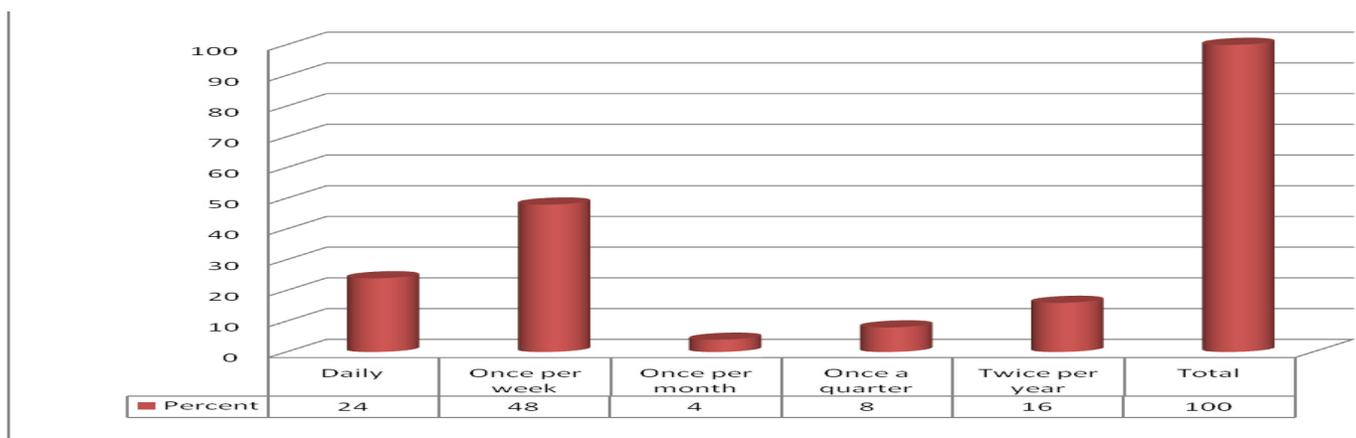


Figure 2: The usage of archival materials

The findings on the usage of archival materials in figure 2 shows that 48% used archival materials once per week, 24% of the researchers used archival materials daily, 16% used archival materials twice per year, 8% used archival materials once a quarter and. The least users were those that used the materials once per month represented by 4%. In this regard, it can be noted that archival materials promote academic research of a historical nature. These sources of information are important raw materials for historical investigations because they are accumulated as natural product of originating offices or activities. Primary sources of information contribute to the compilation of academic works such as doctoral dissertations, thesis, academic essays and paper presentations. In this vein, Gibson (2000) conducted a study on access and utilization of archival materials in which twelve (12) archival institutions from twelve (12) different countries were studied. The study paid special attention to the research value of archival institutions. A sample of seven hundred and fifty (750) researchers from each country was sampled giving a total sample of nine thousand (9000) from all the twelve (12) countries. The findings of the study indicated that six thousand and thirty (6030) of the respondents representing 67% use archival materials to large extent in their research, writing research papers, studying for examinations or if and when referred to by their lecturers. Hence to a large extent these studies revealed a high utilization of archival institutions and their services in fostering research.

4.3 Researchers' perception towards access regulations in the usage of archival

When determining the importance of access regulations in the usage of archival materials, results in Table 3 above shows that 28% of the researchers thought that access regulations help protect rare and fragile archival materials, 20% of the researchers thought that access regulations prevent theft of archival materials, 18% of the researchers thought that access regulations are important in safeguarding the integrity of archival materials, 12% of the researchers thought that access regulations enables one to know the specific user of a particular material 10% of the researchers thought that access regulations are important in promoting respect of archival staff, 8% of the researchers thought that access regulations ensure usage of archival materials is restricted from unnecessary usage and 4% of the researchers thought that access regulations ensure cleanliness of archival materials.

Table 3: The perceptions' of researchers towards access regulations in the usage of archives

	Percentage
Access regulations ensures cleanliness of archival materials	4
Access regulations ensures usage of archival materials is restricted from unnecessary usage	8
Access regulations promotes respect of archival staff	10
Access regulations enables one to know the specific user of a particular material	12
Access regulations safeguard integrity of archival resources,	18
Prevent theft	20
Access regulations protect rare and fragile archival materials	28
TOTAL	100

These findings are in line with Ellis (1993) who suggested that administering access to archival materials involves establishing procedures which will ensure that legislative requirement are upheld and that records are protected from theft, damage and re-arrangement. In this regard Ourgay (1991) in his research on the use of archives in Ethiopia, found that 66% of the researchers viewed access regulations as a tool used to protect rare and fragile materials and it was the duty of the archival staff and the government to put in place legislation and mechanisms that would ensure length and lifespan of records for future generations to use them as well. This is in line with the findings of the study which revealed that most of the researchers (28%) believed access regulations were useful in protecting rare and fragile archival materials. It can thus be argued that access regulations are upheld in order to protect these archives as they are

usually unique.

On the other hand, in a study done by David (1995) with regard to how access regulations are perceived in archival institutions in South America, it was found out that 79% of the researchers using archives and public libraries actually perceived access regulations as not very necessary in facilitating research but that they were a mere tool to give more authority to archival materials. In this same line, Yahya (1979), in his studies on the problems in the archival institutions faced by archival staff in Africa, it was discovered that 51% of the respondents believed that access regulations to archival information were not based on good taste to protect rare and fragile materials but that they were perpetuated by oppressive regimes and governments in Africa who had a culture of restricting information outflows to protect their oppressive governments. Additionally, the study revealed that access regulations as seen as hampering the usage of archival materials as 58% of the researchers agree to the regulations as being cumbersome to their research and 30% thinking that access regulations restrict their usage of public archives. A study by Abiola (2009) at the National Archives of Nigeria equally discovered that most of the searchers were aware of access regulations that governed search activities but considered them as repugnant in their research. This finding is similar to a study conducted by Arkhiyyan (1999) where it was revealed that 67% of the researchers viewed access regulations as a mechanism aimed at restricting usage of archival. However, Buckland (1991) argues that most of the researchers (44%) of the users of archives and archival institutions believe that access regulations do not restrict usage of public archives but instead they ensure proper access to archival facilities and services.

Total		18	10	28	12	20	4	8	100
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Table 3 : Level of education as a descriptive function of perceptions towards access regulations in the use of archival materials.

In discovering the relationship between level of educational of researchers at The National Archives of Zambia and how they perceived access regulations in the use of archival materials, results showed that 50% postgraduates and 15% undergraduates thought that access regulations safeguard integrity of archival resources, In relation access regulations promoting respect of archival staff, there were no postgraduates who indicated that this was an issue while 11% undergraduates thought that it helps. On the protection of rare and fragile materials, there were no postgraduates who thought that this was an issue while 30% undergraduates considered that. On the need to know the specific user of a particular material, there were no postgraduates who consider this while 13% undergraduates thought it was important. In relation to access regulations to prevent theft, 50% postgraduates with 17% undergraduates thought that this was necessary. In relation to access regulations on ensuring that there was cleanliness of archival materials, there were no postgraduates who thought that this was necessary while 4% undergraduates thought it as good. Lastly on the restriction of archival materials unnecessarily, there were also no postgraduates who thought this was an issue of concern, but 9% of the undergraduate respondents thought that this was an issue.

Table 4: Level of education and perceptions' towards access regulations

4.4 Access regulations that hamper use of archival materials

In this research, it was necessary to find out if researchers thought that access regulations hamper research. Results in Table 5 below revealed that 58% of the researchers thought that access regulations were cumbersome to researchers, 30% thought that access regulations restrict usage of public archives while 12% thought that access regulations do not hamper research.

	Percentage
Access regulations do not hamper research	12
Access regulations restrict usage of public archives	30
Access regulations are cumbersome to researchers	58
TOTAL	100

Table 5: Access regulations hamper use of archival materials

In discovering the relationship between age and the issue of access regulations hampering research, results in Table 6 below shows that for the researchers aged between 30-34 representing 70% indicated that access regulations are cumbersome to them, with the least being those aged between 25-29 representing 44%. Those aged 19-24 and 30-34 representing 20% each respectively indicated that access regulations do not hamper research with those above 35 years old being the least representing 8% and those aged 25-29 years old representing 44% revealed that access regulations restrict usage of public archives with the least being those aged 30-34 years. It should be noted that irrespective of whatever the researchers are saying, access regulations are for all ages as long as they are utilizing the archival institutions and as submitted by Ellis (1993), administering access to archival materials involves establishing procedures which will ensure that legislative requirements are upheld in order to protect the records.

	Age	Access regulations hamper use of archival materials			Total
		Access regulations are cumbersome to researchers	Access regulations do not hamper research	Access regulations restrict usage of public archives	
	19- 24 Years	60	20	20	100
	25- 29 Years	44	11	44	100
	30- 34 Years	70	20	10	100
	35 Years and above	58	8	35	100

Table 6: Descriptive of age as a function of access regulations

In terms of finding out the relations between the level of education as a function to access regulations that hamper the use of archival materials, results in table 7 shows that for the researchers who were undergraduates representing 59% and 50% postgraduates indicated that access regulations are cumbersome to them and 13% undergraduates with no postgraduates indicating that access regulations do not hamper research, while 50% postgraduates and 28% undergraduates indicated that access regulations restrict usage of public archives.

		Access regulations hamper use of archival materials			Total
		Access regulations are cumbersome to researchers	Access regulations do not hamper research	Access regulations restrict usage of public archives	
Level of Education	Postgraduate	50	0	50	100
	Undergraduate	59	13	28	100

Table 7: Descriptive of level of education as a function of access regulation

4.5 Regulations which researchers think should be reviewed

	Percent
No food allowed in the search rooms	4
No caps allowed in the search rooms	4
Reader not allowed to access the repository	4
Only pencils allowed in research room	6
Readers to leave bags at security check point	6
Use of other devices not allowed	8
Readers to be denied access if actions are contrary to rules governing the use	10
All Government employees doing research to have introductory letters	14
Payment of readers research fees	20
Each reader only allowed three documents at a time	24
TOTAL	100

Table 8: Regulations which need to be reviewed

Regulations are put in place to protect archives and ensure that right procedures and processes are in place to govern the use of archives. However, despite the good intentions in trying to prolong the lifespan of archives, certain access regulations are viewed by researchers as bent on hampering the use of archival materials and thus showed be reviewed. In this regard, the findings in Table 8 of this research showed that 24% of the researchers thought that restricting them to use a certain number of documents at a time per request for the information they requested for was not ideal. This revealed that the enforcement of these regulations usually brings about constant conflict between the archives staff and the researchers who fail to understand why such regulations are put in place and advocated for the review of these regulations in order to meet their needs. 20% of the researchers thought payment of research fees may impact negatively as some researchers may not meet this requirement but urgently require archival information. This finding is similar to a study conducted in SADC countries by Rand Corporation (1996) who found out that user charges deterred individuals from utilizing archival institutions and researchers opted to use internet services as opposed to using archival materials. In this vein, Badgley (1979) asserted that user charges for researchers in archival institutions were bringing about a lack of compatibility with principles of access to information.

Furthermore 14% of the researchers thought that the requirement which involves asking government officials to be recommended by their respective Heads of Department is not a good idea and should be reviewed in the sense that some Heads of Departments may not be interested in the various researches being undertaken and therefore, may be reluctant to be recommended and advocated for a review of these regulations. It was also discovered that 10% of the researchers were not in agreement with the regulations on denying them access if their actions were contrary to rules governing the use as they considered them to be hampering their research and recommended that they be reviewed as well.

Despite the above views, security of archives is of paramount importance in any archival institutions. This probably explains why notable early Archivists regarded the safeguarding of archives as the primary duty of Archivist (Jenkinson, 1937; Schellenberg, 1965) .Eternal vigilance is, therefore, the key to the survival of archives. It is therefore, necessary to put certain measures in place to safeguard the archives and this, precisely, is what some of these regulations seek to achieve.

Regulations that should be reviewed to facilitate research	Level of Education		Total
	Postgraduate	Undergraduate	
Government official to be recommended by Head of Department	17	83	100
Each reader is allowed only three documents at a time	0	100	100
Readers are not allowed to access the repository	0	100	100
Use of other devices e.g. cameras not allowed	0	100	100
Government employees to come with introductory letters	0	100	100
Payment of research fees	0	100	100
Pencils only in the search room	0	100	100
No food allowed in the search room	0	100	100
No caps allowed in the search room	100	0	100
No bags in the search room	50	50	100
denied access if institution sees fit	0	100	100

Table 9: Level of education as a function in relation to regulations that need to be reviewed

When using cross tabulation aimed at showing level of education as a function of regulations that need to be reviewed results in Table 9 shows that 83% undergraduates indicted that Government official to be recommended by Head of Department with 100% indicating each reader is allowed only three documents at a time, readers are not allowed to access the repository, use of other devices e.g. cameras not allowed, Government employees to come with introductory letters, payment of research fees, pencils only in the search room, no food allowed in the search room, no caps allowed in the search room, no bags in the search room and denied access if institution sees fit while the postgraduates were the least on all the regulations that needed to be reviewed.

5. Conclusion

Archives are unique and rare materials which require regulations to protect and guide their access. Hence the people who use archival materials should have a certain level of education to appreciate the value of these materials. Concerning education's contribution towards research, it was revealed that there was a relationship that exists between the level of education and the use of archival materials as the study further revealed that most of the researchers find that education enhances understanding of primary information and provides expert knowledge that makes research easy. Additionally, researchers believed that education enhances understanding of research tools as it creates a basic understanding of research tools. It was also discovered that most researchers used archival materials at least once a week, while a few used these materials either daily or once per month. On the perception of access regulations in the usage of archival materials the conclusion was that researchers thought that access regulations help protect rare and fragile archival materials as they also prevent theft of archival materials and safeguard the integrity of archival materials. Despite this perception, it was noted that researchers thought that access regulations were cumbersome to researchers as it was felt that access regulations restrict usage of public archives. In this vein researchers were of the view that regulations such as payment of users charges, restriction of three documents per user per time and that Government officials should get clearance from their respective institutions to carry out research should be reviewed. Despite this thought for the review of access regulations, it should be noted that regulations are put in place to protect archives and ensure that right procedures and processes are in place. In this vein, The National Archives of Zambia should not relent in improving on what has been seen as a conflict between the researchers and the archival staff but should strike a balance which will ensure that archives were protected but at the same time regulations should not stifle access to archives.. In this regard, the following recommendations have been put forward;

1. There was need to promote archival activities in order to know the extent to which archival materials were often used and what value they had to researchers.
2. There was need to educate researchers who utilize archival institutions on why rules and regulations were put in place and at the same time revisit some regulations that can be improved to promote access without necessarily endangering archives.

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The Role of Community Information Services in the Implementation of Sustainable Development Goal on Clean Water and Sanitation

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Abstract

Access to clean water and proper sanitation has been a concern of government and stakeholders in the water sector locally and globally that effort is being made at policy and operational level to ensure the successful implementation of sustainable development goal number six on clean water and sanitation. However, for this implementation to become a reality, the role of information services cannot be underestimated as they form a pillar for the functional participation of the community in achieving this goal. Taking into consideration the different categories of information needs, community information services play an important role in ensuring the provision of information on water and sanitation is collected, repackaged and disseminated in appropriate formats to the community. The need for effective community information services is especially critical in rural and peri-urban areas, as they particularly; tend to include concentrations of communities affected by poverty, unemployment, substandard housing, and below average educational standards. The purpose of this paper is to highlight the role of community information services in meeting the information needs of the local community so as to promote participation in improving water and sanitation in the implementation of sustainable development goal on clean water and sanitation. The paper concludes by highlighting some initiatives from other developing countries in providing community information services in areas where infrastructure development is limited.

Keywords: Community information services, water, sanitation and Sustainable Development Goals, seventh National development plan

1.0 Introduction

Water permeates all aspects of life on earth (WWAP, 2016) as it is essential for the survival and sustenance of human, animal and plant life. Safe drinking water and sanitation are basic human rights. Access to fresh water, in sufficient quantity and quality, is also a prerequisite to achieving many dimensions of sustainable development, including health, food security and poverty reduction. Recognizing the importance of water and sanitation to human survival, the United Nations (UN) in 2010 through Resolution 64/292 affirmed access to clean water and basic sanitation as a human right (United Nations, 2014).

In 2012 the United Nations further formulated 17 Sustainable Development Goals (SDGs) as a blueprint to achieving a better and more sustainable future for all, due to the importance of water and sanitation in human development, one of the SDGs focuses specifically at ensuring the availability and sustainable management of water and sanitation. Sustainable development goal number six was developed in response to a significant need to improve global health and quality of life from water related death and diseases. Thus, governments and stockholders in the water sector locally and globally are making efforts at both policy and operational levels to ensure the successful implementation of SDG number six (United Nations, 2019).

However, for this implementation to be a success, the provision of information services to the communities on the importance of safe water and sanitation cannot be underestimated. Information plays a key role in ensuring the education and functional participation of individuals and the community in all water and sanitation related matters. Therefore, community information services are required to play an information provisional role by collecting, repackaging and disseminating information in appropriate formats suitable for different categories of people more especially the disadvantaged.

1.1 Sustainable Development Goals

Born out of the United Nations conference on sustainable development in 2012, Sustainable Development Goals also known in short as SDGs are a blueprint to achieving a better and more sustainable future for all. They are a call for action by all poor, rich and middle-income countries to promote prosperity while protecting the planet. They address the global challenges faced today, including those related to poverty, inequality, climate, environmental degradation, prosperity, peace and justice by 2030. They reaffirm international commitment to end poverty permanently, everywhere with an ambitious plan in making sure no one is left behind. More importantly, they involve everyone to build a more sustainable, safer, more prosperous planet for all humanity (UNDP, 2019).

1.2 Sustainable Development Goal Number Six

Sustainable development goal number six aims at ensuring universal access to safe and affordable drinking water for all by 2030. According to the United Nations, (2019) this goal requires investment in adequate infrastructure, providing sanitation facilities, and encouraging hygiene at all levels. Furthermore, international cooperation is also needed to encourage water efficiency and support treatment technologies in developing countries. To meet this goal by 2030, a set of six targets were developed with one of them being: "Support and strengthen the participation of local communities in improving water and sanitation management". The emphasis of this paper will be on the implantation of this target which focuses on the need for community participation.

2.0 Research Objectives

The study's main objective was to highlight the role of community information services in the implementation of sustainable development goal on clean water and sanitation. In doing so, the study sought to:

1. Determine the alignment of Zambia's seventh national development plan to Sustainable Development Goal number six
2. Identify the information gap in access to information on water and sanitation in low cost households in Zambia
3. To establish community information services initiatives in other developing countries

3.0 Research Methodology

This study was qualitative in design and employed content analysis method in which literature on community information services and sustainable development goals and the seventh national development plan from the Internet was downloaded and analyzed. In this regard, data from Zambia countries was collected and analyzed as a case study.

4.0 Findings and Discussion

4.1 Alignment of the Seventh National Development Plan with SDG Number 6

The efforts of the Zambian Government in meeting the SDGs are well reflected in the Seventh National Development Plan (7NDP), which represents the Government's first concerted efforts to move away from sectoral based planning towards an integrated and multi sectoral approach which embeds and encapsulates SDGs and their indicators (UNDP, 2019).

The alignment of SDGs to the 7NDP was reviewed by the United Nations Development Program report which indicated that the 7NDP was well aligned with the SDGs particularly the SDG goal number six as Development outcome number three focused on improved access to water supply and sanitation. The report further indicated that the SDG number six was fully aligned by over 60%.

The 7NDP includes strategies that are focused on achieving SDG number six, these strategies include; Enhancing the provision of adequate safe water and sanitation, Improved availability of water and sanitation infrastructure, Enhance research in water supply and sanitation services, Promotion of alternative financing for water and sanitation, and the Enhancement of the provision of adequate solid waste management services (7NDP, 2018).

4.2 The status of access to water and sanitation in Zambia

According to the 7NDP, the proportion of households accessing improved sources of drinking water increased from 63 percent in 2010 to 67.7 percent in 2015. Households in urban areas had more access to improved sources of drinking water at 89.2 percent compared to 51.6 percent of households in rural areas in 2015. On the other hand, in 2015 only 40 percent of households in Zambia had access to improved sources of sanitation. Additionally, 27 percent of people in urban areas and 85 percent in rural areas had no access to improved sources of sanitation.

The Government has shown commitment in the need to increase levels of access to clean and safe water and sanitation services for people in both rural and urban areas. The 2019 budget reflects this with an increase in the budgetary allocation to the water sector from K564, 508, 860 in 2018 translating into 0.8% of the total budget to K1, 984,759,408 representing 2.3% of the total budget (Nation Budget, 2019).

4.3 Water and Sanitation Information Needs for Communities

Efforts at the global and national level in ensuring access to water and sanitation must be supported by the community they are intended, for them to be successful. According to SDG six target number 6b community participation is key in the attainment of this goal as it encourages the involvement of the local community. However, for this participation to be functional and effective, access to information plays a critical role. Information on proper use of toilets, shallow wells, dangers of pit latrines near water sources and hand washing practices and causes of contaminated water resources is required.

Table 1: Areas of information need on water and sanitation

Water and sanitation sphere	Information need
Waterborne diseases	Unsafe water and poor sanitation as sources of waterborne diseases such as cholera, typhoid and dysentery.
Low cost treatment methods	Low cost treatment methods to achieve better water quality.
Water and sanitation service provision	Water sources and costs attached. alternative financing for water and sanitation services
Water contamination	Contamination of drinking water occurs at different times and points in its Management. Unhygienic behaviors (like open defecation) and its linkages with contamination of drinking water sources.
vandalism of water infrastructure	Dangers of illegal connections, vandalism and their penalties as contained in the water act.
Community engagement	Community ownership and collective efforts in the upkeep, maintenance and cleanliness of drinking water source is essential.
Gender equality	Gender equality issues in the water supply and sanitation sector and water supply as a human right.
Sanitation management partners	National water supply and sanitation council and water resource management authority.
Maintenance of infrastructure	Maintenance of water facilities for sustained supply.

4.3.1 Need for community information services

Satpathy (2016), opines that due to the dynamic nature of communities today social systems are undergoing vast changes which have led to the development of information generations and information technology, these have clearly divided society into two groups the 'have' and the 'have not'. The 'have not' group has led to the formation of a section called the 'disadvantaged' and the people under this group are not in a position to help themselves. In this context, there is high need for community information services (CIS) to help these people. Therefore, CIS is required to make the people of a community informed about the changes around them and the need to improve their standard of living in all aspects.

Information services are especially critical in peri urban and rural areas, since these, particularly; tend to include concentrations of communities affected by poverty, unemployment, substandard housing, and below average educational standard were cases of poor sanitation and waterborne diseases are usually recorded.

4.4 The Concept of Community Information Services

Access to information is so essential that it has become part of every human being. All human beings have information needs, either individual or collective as a community for survival and growth. Information is that basic need of life, which helps in the proper fulfilment of other needs such as food, shelter, access to safe water and hygiene among other needs, that without information, survival and development of any community is limited. Therefore, information services constitute a very important element for community development. Hence, it is the basic responsibility of any welfare government to provide information services to its citizens(Satpathy, 2006).

Community Information Service is considered to be that information service usually provided by the public library required by members of the public (or those acting on their behalf) to make effective use of the resources potentially available to them in the communities in which they live(Library Association, 1980).The service concentrates on the needs of those who do not have ready access to other sources of assistance and on the most important problems that people have to face, particularly those in lower socio-economic groups to act either individually or collectively on their problems (Majumder,2016).

Like all other information services, community information services are provided in an organized structure consisting of five steps; that is Collection of information from the reliable sources, Organization of the collected information for easy dissemination, Storage of the information in local or online servers for easy access and the Dissemination of this information to the community using different methods such as Community Information Portal (Online Mode), Strong community outreach and the provision of Information in local languages.

In an ideal situation Community information services are usually provided by public libraries as they are closer to the local community and seek to promote and enable access to information regardless of people's age, race, gender, religion, nationality or language and level of education.

4.5 Role of Community Information Services in Improving Access to Clean Water and Sanitation

4.5.1 Providing access to information

Community information services are focused on providing access to information mostly to those individuals in the community that are disadvantaged, this service will ensure that information relating to safe water and sanitation is provided over a sustained period suitable for the community. In this regard community information services may not only serve as information access points but also as reference points where the community may provide feedback on developments relating to water and the performance of some policy programs and activities.

4.5.2 Providing Referral Services

Apart from providing the actual information, Community information services also perform a role of referral services where members of the community are referred or directed to other sources of information and assistance such as secondary publications, information units, professional organizations, research institutions and specialists or experts. Such

services do not provide the documents or information required by the user but given directions to where assistance is available (Patel, 2015), in this case community members can be referred to the National Water Supply Sanitation Council for information relating to water and sanitation services provided by a utility company or to the Water Resources Management Authority on matters relating to underground water and borehole drilling.

4.5.3 Information sharing

According to a research carried by Osumanu (2010), on community involvement in urban water and sanitation provision: The missing link in partnerships for improved service delivery in Ghana, he recommends information sharing as a starting point for community involvement and participation. Information helps communities to understand issues and bring their commitment to the partnership process. Community information services supports information sharing activities by conducting community forum meetings where information is provided in the most suitable means while encouraging community members to also share information they have on water and sanitation with other members of the community hence information sharing.

4.5.4 Influencing behavioral change

Behavioral change is a complex process and goes well with empowering individuals with correct information. Therefore community information services support community learning and change of attitudes. Behavioural change and attitudes towards access to clean water and sanitation is important in realising the SDG number six. In a research conducted by Mukanda, C (2014), on Poor Water Supply and Sanitation in Chanda a Shanty Compound in Lusaka, she recommends that education given to the community should focus on attitudinal changes towards water treatment and building of toilets.

4.6 Examples of Community Information Services in Other Countries

Despite the impact of community information services in meeting the information needs of the community, community information service still remain a challenge in developing countries due to a number of factors such as lack of infrastructure, limited financing and poor infrastructure for existing community and public libraries (Islam and Mezbah-ul-Islam, 2018). However countries such as Botswana and South Africa have made progress in providing community information services using their wider network of public libraries. Never the less some initiatives for the provision of CIS have been witnessed in east Africa and India.

4.6.1 'Maarifa' knowledge centers

A nongovernmental organisation called Arid Lands Information Network (ALIN) present in Kenya, Uganda, and Tanzania in 2007 initiated a network of 12 'Maarifa', or publicly accessible knowledge centers. The Maarifa centres are fabricated shipping containers equipped with computers and internet access where communities access information services. The centres are information hubs where local knowledge is documented by communities with the support of field officers and shared widely.

Maarifa centers serve about 1.5 million people annually in the most remote regions, serving as public libraries by providing access to information via this library network to promote sustainable family farming, stressing its capacity to address hunger, poverty, environmental degradation and climate change (CGIAR Research Program on Climate Change, Agriculture and Food Security, 2019).

4.6.2 Library Cum Information Centres

In India, community information services in areas without public libraries are provided by Library Cum Information Centres. The Cum information centres were an Initiative by Vivekananda Sevakendra -O- Sishu Uddyan. The project was first piloted In west Bengal with 2,771 non-government public libraries providing community information service to the local communities according to their own ways, set up for the underprivileged to support Education activities and vocational training (Majumder, 2016).

5.0 Conclusion

The impact of community information services in the implementation of sustainable development goal on clean water and sanitation, lays in the ability of the service in providing relevant and timely information to disadvantage communities. This service provides a key foundation for the Participation of local communities in water and sanitation management programs. Although community information services remain a challenge in some developing counties like Zambia due to lack of infrastructure and operational framework challenges, they are an important service in the attainment of SDG number six, hence initiatives such as the 'Maarifa' (knowledge) centres can be adopted by players in the water sector as a means of providing information services to low income and unplanned communities which are predominantly affected by diarrheal diseases.

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Application of Information and Communication Technologies in Records Management

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Abstract

Modern technologies have become the foundation for process improvement and increased accuracy, effectiveness and efficiency in most organizations today. Records Management (RM) is one area in which the use of technology has become inevitable. Rapidly growing technological that can be used to effectively manage organizations records have been on the rise. This paper reviewed literature on application of Information and Communication Technologies (ICTs) in the management of records. It highlights the importance of records and records management including consequences that may arise for poorly managing records in an organization. Traditional RM practices and its associated benefits and challenges have been explored. The paper explains how varied RM technologies can be employed to different records problems including the types of technology-based records management solutions, the benefits of technology-based records management solutions, key functions of records management software, basic criteria for evaluating and selecting a RM, and challenges of e-records management systems. The paper concludes that while organisations and records managers in particular are encouraged to take advantage of technology-based records management solutions to effectively and efficiently manage their records, electronic records systems should not be introduced without the essential processes and controls for the capture, long-term safeguarding and accessibility of electronic records that should safeguard the integrity of records relating to quality, comprehensiveness, accuracy, adequacy, completeness and authenticity. There is need to ensure that e-records systems provide trusted information that is relevant, reliable, accurate, complete and useable.

Keywords: Records management software, Electronic Records Management, record formats, digitization, e-records, e-filing, record life cycle, Records Management.

1.0 Introduction

Records and information are vital resources in any organisation. They are the life-blood of every organisation. Making of key decisions by an organisation all depend on retrieval and availability of records required on time. It is important to note that not all documents are records. A record is a document consciously retained as evidence of an action. The United Kingdom National Archives defines a record as a specific piece of information produced or received comprising content, structure and context, sufficient to act as evidence of an activity, and support informed decision-making. It consist of three features including content (what the record says); structure (the appearance and arrangement of the content e.g. styles, fonts, page and para breaks, links, graphs, language); and context (background information which enhances understanding of the technical and business environments to which the records relate e.g. software, business activity, creating agency, programme). Records come in different forms and media. The forms and media in which records exist include: paper e.g. correspondence, maps, posters, minutes, reports, memoranda; micrographics (microfilm, microfiche or (microforms); photographs, including prints, negatives, transparencies and x-ray films; sound recordings (disks, or audio tapes, cassettes) (audiovisual records); video recordings (video tapes, CDs (audiovisual records); electronic text or images (e-mail, Web pages/ Web-based records and publications, online databases; and three-dimensional models, scientific specimens or other objects; or combinations of any of the above formats in an electronic form (multimedia).

Records support numerous activities in an organisation. They enable us to organise, plan, entitle, verify, explain, enable, track, notify, protect, recommend, mandate, authorise, guide, authenticate, empower, terminate, comply, communicate and control. Records contain information and data from which decisions are made, plans developed and control exercised. Records help an organisation to pursue its policies; meet its objectives; fulfil legal and other obligations; show how well it used its resources; answer questions from senior officers, ministers and Parliament; and deal with court cases, reviews, audits, investigations and enquiries. Mulauzi, Wamundila and Hamooya (2013) are of the view that it is difficult to attain development without records and archives. They clearly point out that "it is

only by looking at our past that we can understand our present and be able to plan for...future development...[they] support...efficiency, transparency, accountability and good governance. Essential government decisions and activities including fundamental rights and obligations are documented in records...”

Any organisation requires four basic resources to operate efficiently and effectively. They need finance; records and information; people (personnel, customers, clients); and property (building, equipment, materials, procedures). Out of these four resources, it is information which provides the competitive edge to an organization because it is the most indispensable. Information is more important because it links all the other organizational resources. Whereas the other three resources can be easily replaced (as shown by the great mobility of modern labour force, easily availability of sources of finances from a variety of financial institutions and the replaceability of buildings and machinery), information cannot be readily created, replaced or reconstructed once it is lost. There are six inherent characteristics of information as a resource according to Grillon (1994):

- (i) Information is expandable: Individuals and organisations at large depend on information to make informed actions.
- (ii) Information is compressible: It is possible to concentrate, integrate, and summarize information for easier handling.
- (iii) Information is substitutable: Information can and does replace land, labour, and capital. It is the use of computers and telecommunications that aids in this phenomenon.
- (iv) Information is transportable: Information can be tapped into just about anywhere; this has led to the idea of being remote as much more difficult to achieve since people and information can be taken to the remotest of places.
- (v) Information is diffusive: Information has the ability to leak. This leakage allows us to have more, and more of us have it.
- (vi) Information is shareable: No exchange transaction of information can take place, only sharing transactions, and this leads to an entire sharing environment.

Thus, experience has proved that for any activity such as planning, decision making and production to have a realistic chance of successful execution, it requires accurate, relevant and complete information. None of the managerial and organizational activities can be effectively undertaken without an input of information or records. Records are the known tools for the demonstration of transparency and accountability, consistency and effectiveness as well as for manifestation of corruption and other irregularities in an organisation. According Mulauzi, Wamundila and Hamooya (2013) they provide the ultimate proof or evidence of the activities being undertaken. Without records, activities become susceptible to frauds, forgeries, money laundering, tax evasion, negligence and deception...which can impair the whole system. Records allow for validation of documents including payments; form part of the cultural heritage of a nation and facilitate informed decision making. Where decision-making is questionable, records and archives of the decision making process will allow aggrieved parties to challenge the decision, seek review and, where appropriate, obtain redress (Mulauzi, Wamundila and Hamooya, 2013). In their study on the role of records and archives in resolving chieftom wrangles, Mulauzi et al (2014) established that traditional rulers and their subjects consulted records to confirm boundaries and inheritance or resolve wrangles, trace the genealogy, procedures and lines of succession and that conflicts in society or between and among different societies are based on deficiency of information. According to Mulauzi et al (2014), records were found to be useful to traditional rulers and their subjects as they contained the only written records of their own succession.

1.1 Importance of Implementing Proper Records Management Systems

It is a desirable practice therefore, that records of an organisation must to be managed appropriately and effectively just like any other organizational resource or asset. Records management, therefore, entail systematic control of all the different sorts of records from their creation, through their use, to their permanent preservation or destruction. Records management aims to make available the right record, to the right person, at the right time (and at the least possible cost). Mulauzi, Hamooya and Munsanje-Mwale (2015) aver that “RM brings about a lot of saving in terms of (i) time and effort that staff would spend to retrieve the records (ii) space for storage of records and (iii) money for salaries, for buying storage equipment for redundant records and for duplicating records.”

RM enable an organization to meet operational, legal and regulatory requirements. It enables institutions to retain records of important historical, administrative, fiscal, and legal value and ensure that non-essential records are discarded according to established guidelines and legislation. The study by Mulauzi, Hamooya and Munsanje-Mwale (2015) revealed that without records management programme in place: "... we destroy vital records unknowingly or just keep whatever information we receive...but with a proper records management programme, we can safeguard vital records or we can be guided on what to keep and for how long that information should be kept." Proper records management according to Mulauzi, Hamooya and Munsanje-Mwale (2015) helps to identify and protect vital records. It protects vital records from premature destruction and also prevents excessive retention of records which cause difficulties in retrieving them. Considered a key component of operational efficiency, record management adds more value to organization's information assets.

Though the consequences may not be the same for every organization, there can be severe penalties for not having proper records management systems in place. In some instances, such as with government grants or at government agencies, there might be financial penalties or possible requirements to return grant funds. In other situations, the penalty might be fines, criminal charges, or imprisonment. Organisations should avoid situations where audits and other investigations of records discover irregularities in their record keeping, falsified documents, and improper destruction of documents. In addition, it is important to keep in mind that it could be illegal to destroy records during an open court case or investigation, even if the destruction is in line with company policy. The legal tenet of spoliation comes into play in these cases. Spoliation of evidence implies the intentional, reckless, or negligent withholding, hiding, altering, fabricating, or destroying of evidence relevant to a legal proceeding.

Information and Communication Technologies (ICTs) have become the foundation for process improvement and increased accuracy and efficiency in most organizations today. The management of any form of activity, in this modern era cannot be possible without the use of ICTs. RM is one area in which the use of technology is indispensable. There are rapidly growing opportunities afforded by modern technology to support RM in organizations. Organizations have at their disposal a remarkable range of technologies that can be used to manage their records efficiently and effectively.

2.0 Traditional Records Management Practices

Before the advent of computers and Internet that have fuelled the Information Communication Technology (ICT) systems worldwide, RM was done manually in terms of acquirement, handing out, storage and broadcasting of information from creation up to stage of archiving (International Records Management Trust, 2015). According to Mulauzi et al (2012) traditional records management practices are based on the concept of the records life cycle. The record life cycle concept has 3 biological ages which are considered as the equivalent of the 3 phases of the life of records: active phase (creation, distribution and use), semi-active phase (maintenance and storage) and non-active phase (disposition). The life of a record begins at active phase when they are conceived. At this stage they are in current files and are kept in the offices which created them. Two major actors were involved at conception and creation of a record: the person(s) who composed and drafted the record (letter, report, memorandum, etc.) and the person(s) who produced the document (normally typed by a secretary, stenographer, typist, etc.). The production of multiple copies required extra effort and time on the part of the person producing the record (through carbon copying, stencilling, etc.). Normally the record was produced in only one format (Mulauzi et al, 2012).

According to Mulauzi et al (2012), a record is created for a purpose in an organisation: to support an activity taking place in the organization. Therefore, after conception and creation, a record is used to support the activities of the organisation. Semi-active storage involves the transfer, maintenance and storage of records that infrequently used. Thus, after the record has ceased to be actively used, it is infrequently used and is known as semi-active record. Such records were transferred to low cost areas for storage such as records centres to save expensive office space and equipment, and to prevent the pre-mature destruction of records before their disposal date. The storage cycle required a lot of resources. These included; various record handlers including the creators and users of records, the producers of records (secretarial staff) and the keepers of records (records managers, filing clerks); involved a lot of records management processes and procedures such as filing and un-filing routines, classification, indexing, etc.; and required a lot of space,

equipment and storage media, and stationery to house. Non-active phase is the final phase in the life of any record. This is the phase where, the fate of a record is determined through a process of evaluating a record's value after it has ceased to be actively used. This procedure in the traditional records management system ensured that records of permanent value (i.e. archives) were properly identified, transferred and cared for in an archival institution.

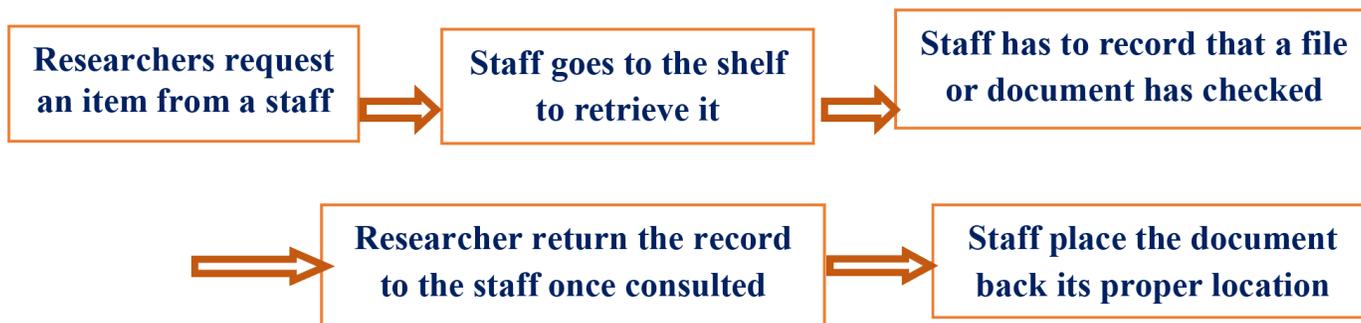
2.1 Advantages of Traditional Records Management Systems

The good about manual system is that it is less complex, and cheap to institute making it easier for untrained people to access and manipulate data (Hamel, 2018). Hamel claims that anyone can look through alphabetized filing cabinets to find a file. It does not solely require only authorized personnel to access the records on the shelves, if the records personnel is not there, an alternative can be made as long as one knows the index number unlike on the computer where a password is required. Manual system does not require back up to secure records and alteration is not common (Kenneth and Laudon 2012). Traditional file organization has security advantages over electronic filing. Electronic files are usually accessible on a network thereby making it possible for an unauthorized person to gain access to electronic data over the Internet through hacking methods. Paper records may be designated in one place and access to the records can be restricted to authorized persons. Thus, many organisations still argue that they cannot do away with paper records as they contain for example a unique legal force, such as an executed lease agreement. Additionally, paper records management system is considered to have security advantages and the file approach is less complex than electronic systems. Thus, the expense of keeping paper files would be well accepted by many companies if the records would be found and retrieved quickly when needed.

2.2 Challenges Associated with Traditional Records Management Practices

Despite the advantages of paper records over electronic records, there are five (5) main problems experienced in records management with paper records (Garland, 2019). These include: too much paper; inability to find the information needed when you need; lack of storage and working space; loss of track of files; and poor conditions of records (Table 1). To start with, paper documents go missing regularly and in some cases, misfiled or even lost forever. IRMT (2015) confirms that one of the challenges faced in the manual system was loss of records and a lot of misplacement of information. According to Joseph (n.d.) misfiled documents can be difficult to find when they are needed the most. The loss of records, misfiling or misplacement may be due to too much paper and insufficient information about the documents to locate them efficiently among other reasons. Hamel (2018) also adds that records can get out of order in traditional filing systems if someone accidentally puts a file in the wrong place, or takes a file out of a cabinet and forgets to put it back and this can lead to lost files or the creation of additional copies of files. This problem may have serious repercussions on the efficiency and effectiveness of an organisation. For instance, Mulauzi, Hamooya and Munsanje-Mwale (2015) observed that in the pension industry, misplacement or loss of records including the slow speed at which needed records are retrieved from their storage results in beneficiaries not being given feedback on time about their benefits. Some pensioners end up being depressed while others pass on without getting their benefits and survivors at times do not know how to go about claiming the benefits. Hence, benefits ended up in wrong hands because people often capitalized on the system. Contrary to manual filing, electronic filing systems allow users to quickly check whether information already exists somewhere in the system, which helps avoid problems like redundant files and data loss (Hamel, 2018).

In addition, paper records fades way, get discoloured and brittle after some time. Joseph (n.d.) affirms this by stating that "over time, paper documents can become smudged, faded or damaged, making the information hard to decipher. With handwritten documents, poor penmanship can also render the information illegible, and when an individual who added an illegible written entry to a file leaves the organization, nobody may be able to 'translate' the information." Further, lack of storage and working space is another problem with paper systems. Storage facilities which would otherwise have been used for other purposes is taken up to store large heaps of information under traditional records management practices. This results in inadequate working space in offices. Timely accessibility of information also prove to be a challenge in manual systems. It cost a lot effort, time and money to access information when dealing with paper records. For example, the time records staff require to serve a client when dealing with paper records is a great deal as evident from the following activities:



Accessibility is problematic with paper records at times due to lack of sufficient security to ensure they will be where they are supposed to be when needed most. Thus, users often are unable to find the information when they need it. Additionally, information has to move from one office to another and this can cause loss of track of files. Problems of accessibility may result in delay to make decisions. According to Hamel (2018), electronic databases allow for almost instantaneous access to information. Faster data access time can increase the productivity of decision makers such as managers, analysts, accountants and other workers who use data on a regular basis. It is important to note that paper is fragile and needs care when handling it. Similarly, paper documents can be destroyed by fire, floods or other weather conditions and when such an occurrence takes place, they can be difficult to replace. On the other hand, Hamel (2018) argue that electronic data can also be damaged by software security problems like computer viruses, but electronic data is easy to backup in multiple locations, reducing the potential for permanent data loss. Another concern when dealing with a traditional file system according to Hamel (2018) is that it does not allow users to easily edit files or send information to others. Hamel (2018) states that “paper files often cannot be edited directly, forcing users to make new copies to update old files. To distribute data on paper files, users must mail, fax or scan the data. Databases allow users to edit information fields directly, and because information is stored digitally, it is already in a form that can be easily transmitted.”

3.0 Use of ICTs in Records Management

There are rapidly growing opportunities afforded by modern technology to support RM in organizations. While paper records will continue to exist, and be generated for the conceivable future, technological systems are needed to assist organisations to manage their records effectively. ICTs offer unprecedented capacities and potentials in administration and management of various kinds of records in an organisation. A number of activities such as records creation, distribution and storage can be done using technological devices such as computers thereby playing a crucial role in RM. It is for this reason that globally, the importance of ICTs in organizations can be best demonstrated by the amount of investment organizations put in on these technologies with worldwide spending reaching up to \$1.18 trillion in 2019, an increase of 17.9% over 2018 (Help Net Security, 2019).

Organisations round the world are making significant investments in information technologies and services that enable the digital transformation of their records management systems and services (Help Net Security, 2019). In other words, organisations and governments have now turned to information technologies as a “solution” to their records management problems because of their potential to address key records management problems such as communication barriers, storage constraints and time constraints to retrieve the records. There is a paradigm shift in the way information is created, gathered, distributed, used, communicated, stored and retrieved with ICTs. For instance, they have become a critical element for records creation. ICTs such as computers, recorders and cameras make easy the process of creating records. According to Mulauzi et al (2012), today, a record can be easily conceived and created by its initiator on the computer terminal and records can be produced effortlessly in multiple copies with very little extra cost. Mulauzi et al (2012) further stated that documents created using ICTs can be output in a variety of formats such as paper, microform, or electronic from just one source document and these extra outputs can be achieved cheaply and with little extra effort.

The use of ICTs to store organizational records constitute an important aspect of effective RM. Advanced computer storage technology and sophisticated retrieval techniques such as query languages, multimedia databases and database management systems can be effective tools in enhancing the storage of organizational records. These tools increase the speed at which records can be accessed. Moreover, ICTs are versatile tools that can perform literally any records management task. According to Flavia-Blanco (2011), multitasking is one of the major advantages of information technologies as they can solve many RM problems within few seconds. For instance, a record initiator can create, use, distribute, store and retrieve a record on a single computer work-station, thereby eliminating the huge army of secretarial and record keeping staff and the associated requisite records management space, equipment and stationery. Unlike bulky paper records that need a considerable amount of space for storage, ICTs offer opportunities for compact storage through electronic and digital storage devices and information can be stored information on a number of sources such as flash drives and Google drive. Space issue and equipment is not a problem. Ralph and Reynolds (2008) support this by stating that ICTs provide new capabilities for organisations to handle large amounts of information that they would not do previously. They argue that large amounts of business records can be stored in computer systems instead of depending on handwritten scripts or recording information manually. Information is also easy to handle as one does not require plenty of physical space such as records centers to store it. With electronic storage devices, information can be retrieved at any time by multiple users at the same time. For example, a manager of a company can send an email which can be read within that same period by all the people concerned. This has led to efficiency and an increased output, which has made many companies more profitable.

ICTs also enhance retrieval systems and online search facilities. ICTs provide better and quicker records retrieval services to the users. Laudon and Laudon (2012) opined that many people no longer queue for services to access their records such as water bills, rates, and revenue authority tax. People may work from home or anywhere as long as they have a computer or any other appropriate gadgets that can connect to the internet such as smart phones and tablets that can be used to retrieve information. Furthermore, it saves time and energy, as well as creating space in the office since all documents are automated. Records cannot be easily damaged as handling is not physical. It's also possible to provide the desired information selectively to the user (i.e., a user can be given the actual information that they desire other than being given a bulky file of paper records from where they have to laboriously search for the information they want). Additionally, ICTs can process raw data into usable information at little extra cost in terms of money and effort. As stated by Ralph and Reynolds (2008), ICTs enables many people to communicate information better in a cheaper and faster way. For example, a message which took weeks or even months to be delivered to the recipient because of the mode of delivery such as a messenger, can now be delivered with the click of a button on the computer. In this way, information is passed on quickly and is also stored on modern technological devices for future reference if there is need to do so.

Imaging technologies can be used to convert paper documents to digital (computer-readable) form to resolve the problem of poor conditions of records when left in paper form. This process is called digitization. Digitization or migration of records involves converting paper records into digital records through the use of scanning technology. It is the process of converting analogy information into digital format. It involves making collections of historical materials available online in a local area network or in internet. What can be digitized? Paper documents, photographs, sound recordings, and motion pictures are all records that can be digitised. Most organisations opt to digitise records to safeguard and ensure the preservation of the most valuable and perishable components of the collections. Another reason is to make records more accessible and make information available for future reference by researchers and interested parties. Digitisation assists in promoting the collections and visibility of the institutions. It is also faster to retrieve information.

Many users can access the same information at the same time in digital form. Digitisation also improves the quality of that access. For example, materials from different collections located thousands of miles apart can be viewed side by side in a researcher's living room. There is wide availability of information and loss of the original materials is prevented. Further, digital versions of documents can be manipulated to aid a researcher in ways that the original object cannot. For instance, DeGracia (2009) reported about the digitization of a 1791 architectural plan of the District of

Columbia, which was badly faded, discoloured, and brittle that it resembled a potato chip. It could not be used by researchers and yielded little detailed information to the unaided eye. However, its digital counterpart can be enhanced in size, sharpness, and colour so that users can decipher the details of the map and understand the planning of the nation's capital. Through benefits like these, digitization enhances access, in addition to increasing it. Also, through digitisation, researchers are given new search and browsing options that enable them to find information with greater speed and accuracy. E.g. when dealing with hard-copy written material, the only way to locate specific information within the document is to read through the text. The hardware needed include computer (desktop or Note book), scanner and networking hardware such cables switches, routers and Computer Server. While the software include server based records management systems such as D- space , Alfresco and InfoRouter, where the scanned records will be classified, indexed and filed or stored. Also needed are the scanner drivers that will allow computers to communicate with the scanners during the scanning of records and the servers operating software such as Windows 2008 or Ubuntu (Linux) to be installed on the server.

3.1 A summary of the Benefits of Technology-Based Records Management

According to Municipal Research and Services Center (MRSC) (2019: 9), there are a variety of ways that technology-based records management solutions can benefit organisations including:

- Greater efficiency: Electronic records management systems can dramatically improve efficiency by enabling speed and reliability that is impossible with manual processes.
- Lower staff costs: Increased efficiency in records searching, retrieval, redaction, and disposition tasks translates into reduced staff time requirements and lower staff-related costs.
- Lower records storage costs: Replacing paper records with digital records reduces the need for on and off-site records storage space and associated costs.
- Reduced potential for litigation and penalties: Speedier, more comprehensive and accurate responses to public records requests can help to reduce exposure to potentially expensive litigation costs and penalties.
- Improved customer service: Efficiency improvements make it easier and faster to retrieve information and records, which reduces wait times and improves customer service.
- Greater transparency: Public facing web portals, where available, make it easier for citizens to access information about their local government, increasing transparency and trust.
- Improved regulatory compliance: Compliance with retention schedules can be automated so that incoming documents can be easily classified, stored, and scheduled for eventual disposition in accordance with relevant state or organisational records regulations.
- Benefits of cloud-based solutions: Many records management vendors offer their solutions via the cloud, accessible through an Internet browser. There are several benefits of cloud deployment, including faster implementation, more secure document backup and recovery, reduced costs, less impact on IT staff, and easier software updates and security patches.
- Enhanced records security: Records with sensitive information can be protected and restricted to those who are authorized to have access.
- Better backup and disaster recovery: Conversion of paper records to digital formats reduces the risk of loss due to physical deterioration or damage due to environmental factors and accidents.
- Cloud-based storage provides more secure document backup and recovery.

3.2 Records management software applications

According to MRSC (2019), several types of records management software applications have evolved over time in response to growth in the use of new technology-based business and communication systems. In effect, there are so numerous now that it is easy to become overwhelmed by the myriad types of software available and the various terms used to describe them and their functions. MRSC (2019) categorized records management software into three major categories:

- (i) Custom Software: Developed in-house, not typically an off-the-shelf solution, to meet unique records management needs
- (ii) Specialty Software: Off-the-shelf software that performs specific records management tasks, often focusing

on specific types of content and records. These include:

- Document Management: Function as electronic filing cabinets including document storage, retrieval and imaging capabilities and work together with document scanners that convert paper documents into digital versions.
- Email Records Management: Provide convenient management of email including archiving in a separate repository to facilitate quick search and retrieval, retention scheduling, and public records requests.
- Social Media Archiving and Storage: Used to capture, store and retrieve social media posts in their native formats, from multiple platforms, using a single interface.
- Web Content Archiving and Storage: Key recordkeeping requirements for these tools include collecting website metadata, preserving content in original file formats, and retaining materials for records requests and retention.
- Records Request Management: Allows agencies to manage public records request submission and fulfilment processes for both web-based and paper records requests. Web-based fulfilment uses public facing online portals for fast, efficient tracking and delivery.

The benefits of Specialty off-the-shelf software solutions over custom developed software, include immediate availability, lower cost, proven reliability based on extensive developer and user testing, and the availability of vendor-provided technical support and training in the form of phone support, user manuals, and online tutorials.

- (iii) Multi-Function Software: Variously known as Content Management Applications, Records Management Applications or Enterprise Content Management Systems depending on the range of records management functions and features they support, multi-function software combines a range of capabilities and services into more full-featured records management systems or packages designed to meet a wider variety of records management needs.
- Content Management Applications: Deal with more than just the scanned documents of earlier applications. They are used to create and manage many more types of digital content related to the growing use of web-based communication technologies. For example, in addition to being used for data contained in structured documents like PDFs, Word files, or Excel files, content management software can also be used to manage unstructured data from sources like webpages, images, audio, and video. Due to their ability to handle multiple document types and formats, we include content management applications in the “multi-function” group.
 - Records Management Applications: Specialized “Records Management Applications” integrate special records retention and destruction tools into document management systems that provide the ability to identify and schedule different types of records for automatic destruction or archiving in conformance with required retention schedules. These systems still require individual users to make decisions about which documents qualify as records and to assign applicable retention periods, so appropriate training is critical for successful implementation. Records management applications are included in the “multi-function” group primarily because of the added records retention and scheduling functionality.
 - Enterprise Content Management Applications: These fall under full-featured multi-function systems because they combine a comprehensive range of records management functions such as workflow, imaging, Web and social media content management, and records management, to provide “cradle to grave” processing of all record types across an entire enterprise within a single application. Depending on your current and future needs, this type of software may reduce the need to purchase additional software to manage diverse types of content.

3.3 Key Software Functions

Records management software has been developed to provide a number of key functions to facilitate the capture, archiving, storage, search, retrieval, redaction, tracking, reporting, management, and sharing of a wide variety of public record types. These are the key functions that constitute the vital moving parts of many records management software applications. They may be offered in specialty software applications or embedded in more robust multi-function systems:

- Archiving and Storage: Electronic records should be archived when they have long-term retention needs in

order to fulfill legal, business and regulatory requirements. A digital archive is a repository that stores collections of digital records to preserve and provide long-term access to the information. Digital archiving and preservation ensure the authenticity and protection of electronic records. Document storage allows users to collect a variety of electronic documents (e.g., PDFs, images and other media) and index them with folder hierarchies, metadata or tags.

- **Search and Retrieval:** Robust search and retrieval tools that allow users to combine powerful Boolean searches, metadata searches, and full text searches are essential for an effective electronic records management system. A system should make it easy to search document information and text to quickly locate what you need. Ideally, this should be done from a single search platform.
- **Redaction Tools:** Many public records requests include records that contain private and confidential information which must first be redacted before they can be released. Software tools that can quickly search for and redact confidential information can greatly reduce the time required to do this work and improve customer service. Redaction tools also have the ability to redact what can be seen and heard in video files like those produced by police body cameras.
- **Reporting:** Reporting provides visibility into access, actions, and history of all records and documents stored within the application. A few standard reporting capabilities include disposition reports, data activity reports, workflow metrics reports, and security logs. Reporting tools should be able to report on each action, including when and by whom it was performed.
- **Workflow Management:** Workflow management tools replace the traditional manual paper flow within an organization with automated, rules-based processes. Workflow management software “knows” all your internal administrative procedures and steps, and can automatically determine whether or not the process is ready for the next step. Workflow software typically integrates with other applications like document management software, databases, and email to provide continuity between separate systems.
- **Public Facing Portal:** Public facing open-data portals allow governments to provide or send records online, eliminating the need to make paper copies or use portable storage devices. Portals that include request management tools facilitate processes for receiving and responding to public records requests, including request tracking, report generation, and direct access to view and download records. Portals may also allow requesters to search and review previous records requests and previous agency responses, which can eliminate duplicate requests.

3.4 Evaluating and Selecting Records Management Software

The following basic steps can be used in organisations to evaluate and select RM software:

- (i) **Organize a software evaluation team:** It should include IT staff, legal staff, records officer, and any departmental records custodians. IT staff will be responsible for assessing the technical aspects of hardware and software tools as well as how they will be integrated into your existing IT infrastructure, any changes or upgrades that might be needed, and the requirements for initial start-up and ongoing maintenance and operation. Records Officers are the custodians of records and so can give valuable information about the types, formats, and numbers of records in the organization as well as where they can be found, and the nature and frequency of records requests. They are also the ones who will most likely be using the technology tools that are selected through this process. Agency legal staff will help ensure compliance with all applicable records regulations and procurement requirements regardless of which technology tools are selected.
- (ii) **Analyze current and future needs:** It is significant to start with a clear understanding of your organisation’s current RM needs and requirements. Here, you go in more detail to provide information on the following: types and quantities of records produced and managed in your organisation; the problems you want the systems to solve; the technology tools currently in use; details of records you want the software to capture and manage; records requests you receive annually; existing problems with your workflow or RM system; How legal requirements pertaining to records affect your choices;
- (iii) **Develop a list of project requirements and goals:** Based on your analysis of current needs and requirements, develop a list of project requirements and goals and a profile of the specific types of software functions and features that will be the most helpful for your organization. List what you expect the software to do; make a plan on how you will

use the software and whether you will need the system to interface with other applications. Prioritize those functions and features so you will have a better idea of those that will be essential and those that may be nice to have but not essential in case budget constraints limit your choices.

(iv) Develop an evaluation criteria: The following will be basic criteria may be helpful as you assess and compare the software applications you are interested in:

(iv) Develop an evaluation criteria: The following will be basic criteria may be helpful as you assess and compare the software applications you are interested in:

- User-Friendly Interface: The software should be simple for employees to use. If it is too difficult, you will not get complete buy-in from the staff, which will make the system less effective

- Compatibility with current IT environment and any anticipated changes to that environment

- Integration– with the business (e.g., Office applications) and communications (e.g., email) software you already use.

- Search Functionality: ability to locate all relevant records; offer a variety of options e.g. keyword and full-text searches for quickly finding files.

- Legal requirements: Will the product allow you to meet legal requirements such as record retention compliance, timely records request responses, etc.? Can it be readily updated as legal requirements change?

- Help Features: How robust are the software's help features? Do they include online tutorials, clear error messages, and procedural prompts?

- Vendor Support: Ask vendors to provide you with information on what is included in their packages, such as the level of support (installation, training, and/or maintenance) and the cost of that support. Will these options be available by phone or on-site?

- Reporting Tools: The software must be able to produce reports on system activities and the status of objects within its control for management, tracking, statistical, and general purposes.

- Customization: You should be able to modify the “out of the box” solution at little or no additional cost, to better fit your firm's unique operating environment.

- Security and Access Controls: This function controls which users have access to which information. The software should have the ability to assign rights and restrictions on the use or management of particular records. A few common security features include user access authentication, password encryption, audit reports, and notifications of unusual activity.

- Metadata: Look for software solutions that can readily capture, store and produce all relevant metadata.

(v) Gather product information: gathering more detailed information about the various software products that are available on the market. A review of available technical literature also plays an important role in evaluating software products. This information can be found in product brochures, technical specifications, white papers written by vendors and/or third parties, and, of course, the vendor's own product website.

(vi) Contact other local government agencies: Contact friends in other organisations to learn about the types of RM software they are using and why. This will give you a better sense of what may work for your organisation and, potentially, what you may want to avoid.

(vii) Score products against your evaluation criteria: Score according to how well they are able to meet each of the evaluation criteria established in previous steps. Totals for each product can then be computed and compared.

(viii) Test before you buy: You should test software products to the greatest extent possible before you buy them. Check if the software and its functionalities operate as advertised. If possible find out more from other organisations using a similar software you are interested in. Take advantage of any free software trial periods the vendor may be offering.

(ix) Understand software costs: The overall costs of records management software will depend on a number of factors, including how widely it will be rolled out within your organization, the level of optional functionality selected, the level of configuration or customization that will be required, the extent of initial data migration, and the level of integration with existing IT systems. It is also essential to understand the vendor's licensing requirements and cost structure. Software vendors may have one-time annual license fees or alternatively, they might offer monthly subscription fees. Maintenance costs are additional and are usually based on a percentage of software and license costs.

- (x) Review procurement procedures: When acquiring software services, local governments need to comply with their applicable procurement requirements. Understand the legal requirements based on type of organisation and type of contract.

Table 1: Example RM Problems and Technological Solutions that can be applied

RM Problem	Technological solutions
Too much paper	<p><i>Better filing equipment</i> e.g. compact (movable) shelving, open shelving, lateral files and specialized folders, powered filing cabinets, special filing cabinets for specialized media or oversized documents may allow you to fit more documents into existing space.</p> <p><i>Media Conversion</i> Conversion of the existing paper to microform or optical images. This allows you to maintain the largest volume of documents in the least space. But, conversion is expensive, and you need to be sure you have studied the records so that you:</p> <ul style="list-style-type: none"> ✓ Only convert the documents you need, and ✓ Have an approach to indexing those documents that allow you to retrieve them efficiently. <p><i>Microfilm</i> is a good medium to choose if you need to convert records which have a permanent retention.</p>
Inability to find the information needed when you need it (e.g. Have no sufficient information about the documents to locate them efficiently, or have no sufficient security to ensure they will be where they are supposed to be when needed.	<p><i>Automated Document tracking system</i> e.g.</p> <ul style="list-style-type: none"> ✓ Bar coding systems provide an excellent means of tracking documents once procedures are in place. ✓ RM Software – storage, retrieval, control, track or index records, etc ✓ ERM system able to generate system-wide reports on user logins, audit activity, document modifications, etc. <p><i>Document indexing</i> allow for document retrieval in multiple ways <i>Document distribution technologies</i> e.g. e-mail, Internet sites offer increased access to information <i>Special Purpose Programs</i> used to automate one or more phases of records lifecycle to simplify records management tasks e.g. can automate a form. <i>Workflow software</i> for automating business processes so as to capture electronic information or documents and pass it on from individual to another for action. <i>Imaging technology</i> used to convert paper documents to digitized (computer readable) form. An imaging system allows for electronic capture, storage and retrieval of documents. <i>Electronic document management</i> system is software you can use to store and retrieve electronic documents. <i>Records management application (RMA)</i> is software which can manage records throughout their lifecycle. It can be used to categorize and locate records as well as dispose of the electronic records maintained in its repository when they are due to be destroyed according to an approved records schedule.</p>
Lack of storage and working space	<i>Better filing equipment</i> e.g. compact (movable) shelving, open shelving, lateral files and specialized folders, powered filing cabinets, special filing cabinets for specialized media or oversized documents may allow you to fit more documents into existing space.
Loss of track of files	Use of Automated Document tracking system
Poor conditions of records	Digitization using imaging technologies to convert paper documents to digital (computer-readable) form.

Adapted from U.S. Department of Transportation, Federal Aviation Administration (2014)

3.5 Challenges of E-Records Management Systems

Different from paper records systems where the fate of a record is determined at the disposal stage by evaluating its value after it has ceased to be actively used, ICTs have taken a record's whole life cycle into the hands of the initiator(s) and producer(s) of records. A lot of records are lost at the creation stage due to the relatively easy record creation and disposal cycle. Records of enduring value are hardly retained as it is very easy to issue a command to a computer to erase a file or to press a button on a tape or video recorder to contents at the creation stage. Once lost, such records are almost impossible to recover (Mulauzi et al, 2012). Another challenge for many records managers is to know whether existing or planned Technology systems are technically capable of supporting RM requirements and protecting the information base on which organization depends on such as; quality, comprehensive, accurate, adequate, complete and meaningful, authentic, unique, authority, an altered and compliance of a record. Additionally, e-records are not accessed when there is no power; they are expensive to maintain as they require adequate investment in software to overcome technological obsolescence. Because the e-system is not permanent like manual system, it requires upgrade most of the time. Staffs need to also undergo expensive training. Yet, insufficient funding remains a crippling problem in most records offices and many organisations fail to meet overhead running costs such as making new purchases and maintenance.

One other problem relates to security and privacy of sensitive and critical data or information of great value to government, organisations, and individuals held in an electronic media. In spite of having password controls and audit trails, these controls are widely circumvented. Hacking computer databases by breaking access codes has become common. In addition, electronic records are always virtual documents that exist under software control. As such electronic data can also be damaged by software security problems like computer viruses. While paper files can often be lost in fires and floods, electronic data is can be backed-up in multiple locations, reducing the potential for permanent data loss. Further, according to Mulauzi et al (2012), compelling challenges brought by ICTs on records management relate to legality, reliability, authenticity, and originality of documentation held on such newer ICT-based media. Experts in technology and particularly in the legal and policy sector are struggling to determine how to handle the new world that is permeated by digital information that can be easily modified and whose authenticity, legality, originality, and reliability are increasingly difficult to determine (Mulauzi et al, 2012). E-records can be duplicated easily. Therefore, copies and originals look alike and it is difficult to find out the authentic original. They can also be modified without trace e.g. changing entries in a database. This raises questions of their authenticity and originality. And their legal and evidential values are consequently brought into question.

Additionally, Mulauzi et al (2012) observed that e-records storage media has a shorter lifespan than paper. While a paper record is said to last as long as 200 years, electronic media is said to start deteriorating after the first 5 years. As such making electronic information available for longer periods is problematic. The other problem relates to version control. The constantly changing arena of ICTs has also posed a great challenge to developing countries like Zambia that find it difficult to keep up with regular upgrades in both software and hardware. This leads to situations where organisations are left with older versions of important software that become difficult to use due to compatibility problems (Mulauzi et al, 2012). Additionally, there are no policies and procedures in most countries on how to deal with electronic records creation, accessibility and disposal. In fact, Mulauzi et al (2012) informed that there is lack of ICT legislation and/or the lack of adequate integration of the legislation with national archival legislation. The absence of policies and procedures to provide guidance to creators and users of e-records poses risks that also cannot be ignored. Other challenges faced by records managers in reference to capturing and preservation of e-records include: absence of organisational plans for managing records; low awareness of the role of records management in support of organisational efficiency and accountability and absence of stewardship and coordination in handling records among others.

4.0 Way Forward

In order to enhance their firm, many organizations tend to invest and emphasize in too much technology. BenMoussa (2009) points out that "technology alone won't make a person with expertise share it with others. Technology alone won't get an employee who is uninterested in seeking knowledge to hop onto a keyboard and start searching

or browsing. The mere presence of technology will not create a learning organization, a meritocracy, or a knowledge-creating company.” However, this approach may not have the desirable result if the firm’s employees are not able to use these systems. Therefore, it is imperative that many that to be successful in resolving records management problems, companies must prepare to invest in their employees in order to enhance their visions, capabilities, and experiences for the universal working environment. In fact, effective management of both paper and electronic systems requires the four important aspects such as the people to manage the system, information that the organization uses for business, infrastructure and money to procure the required resources for the new system.

Records managers must ensure that records management applications software are secure, reliable, permanent, and comprehensive, and they must comply with rules and regulations. When using any kind of electronic system, it’s important to note that simply scanning an existing paper document might not be sufficient to make it a record. Some software systems require a person to declare something a record, so the system can properly manage it. Each record must have a unique identifier to work with some systems. Look for something that is easy to use and has the necessary security to protect files. Some systems include document management systems (DMS) within the scope of records management. Also, look for something that guarantees an enforceable chain of custody, so you can see what a record said, how the content within it evolved, and who was involved with any changes. That kind of system can prevent unauthorized access and changes. Electronic records management systems need to be able to adapt and grow as technology changes. Formats change, and the documents and records saved in a particular format might also need to change. For example, floppy discs were the best technology available in the mid-1990s. Now, hardly anyone has a drive to read those discs. Records management occurs in the long term, not the short term.

It is also important to note that electronic records systems should not be introduced without the essential processes and controls for the capture, long-term safeguarding and accessibility of electronic records that should protect the integrity of a record pertaining to quality, comprehensiveness, accuracy, adequacy, completeness and authenticity. Before an organizations can transit to e-records or integrated records systems, there is need to ensure that e-records systems provide trusted information that is reliable, complete, unaltered and useable. These solutions should be integrated in e-records systems during their planning and design, rather than be added on during or after implementation because they serve both to document the policies, transactions and activities of organizations and to provide a trusted source of information to support decision-making and accountability. In order to ensure compliance with e-records management requirements, organization entities need to ensure that procedures are implemented that achieve the following security goals: ensure that only authorized personnel have access to electronic records; backup and recovery of records to protect against information loss; personnel are trained in how to safeguard sensitive or classified electronic records; minimized risk of unauthorized alteration or erasure of electronic records; ensure that electronic records security is included in computer systems security plans; and there must be adequate finance and competent personnel to manage the IT infrastructure.

5.0 Conclusion

This paper has endeavoured to explain how technology-based RM systems may be a solution to many RM problems encountered in organisations. Some of the advantages include the following: they serve time, easy to access, create storage space and can be accessed everywhere as long as there is internet and the necessary gargets. The disadvantages are that, they are expensive to institute, they need trained staff to manage it, they cannot be accessed when there is no internet or power or the gargets to use such as smart phones or computers. Additionally, they need backups and they are also prone to security attacks. This document has also looked at the advantages of manual RM processes including the fact that it’s cheap to manage, and it can be accessed even without power, internet, computers or smart phones. It’s not easy to alter a records. The disadvantages are that they cannot be accessed elsewhere apart from where they are kept, they are time and space consuming. Since the world is fast embracing ICTs in virtually every aspect of life, it is important that even institutions involved in RM such as libraries and archives also invest in ICTs in order to enjoy the benefits that come with their use.

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A Survey of Weeding Practices of Print Materials in Libraries of Higher Learning Institutions in Zambia

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Abstract

The significance of weeding in libraries of higher learning institutions and especially in university libraries cannot be overemphasized. Weeding is defined as a periodic and continual evaluation of library's resources with the goal of removing obsolete, damaged and rarely used books. Its purpose is to keep collections current and relevant to users. Although librarians understand the importance of weeding, they are hesitant to weed as they should owing to various factors such as poor funding for library materials. The purpose of this study was to examine the current state of weeding practices of print materials in libraries of higher learning institutions in Zambia. Data was collected using questionnaires. Quantitative data was analysed using Statistical Packages for Social Sciences (SPSS version 23.0) while qualitative data was analysed using thematic techniques. The study establishes that though majority libraries purported to have been weeding in line with collection development policies, some libraries were not and did not have collection development policies. Therefore, there was need for libraries of higher learning institutions which were not weeding to develop collection development policies which could guide and compel them to weed thereby making collections relevant and attractive to users.

Key words: Weeding practices, Weeding, Higher Learning Institutions, Academic libraries, Zambia

1.0 Introduction

The 21st century has seen a growing number of electronic resources being acquired in academic libraries, thus, increasingly users are now relying more on online resources as compared to print resources. Ruschoff (2012) notes that, the print circulation has been declining over the years with the libraries acquiring the majority of new content in electronic format. This is supported by Borin and Yi (2008) who stresses that, with the development of Information Communication Technologies (ICTs), library information resources are passing through a transition phase: from print-only model to hybrid model. Accordingly, with the advancement of ICTs and the availability of a large number of documents in electronic format, traditional collections are gradually being replaced by e-documents (Babu, 2015). Therefore, while many academic libraries are focusing on acquiring and managing electronic resources, print collections are drowning into obsolete and unwanted materials. Consequently, the changing format of library information resources from paper-based to electronic based creates a need for librarians to weed their print collections to create space for the newer and updated materials.

1.1 Academic Libraries in Zambia

Academic libraries are libraries that are attached to academic institutions of learning. These libraries exist to support the teaching and research needs of scholars and researchers of the institutions with which they are affiliated (Adeniran, 2011). Academic libraries assume the responsibility of providing access to sources of information from which teaching and learning can develop. These libraries may vary depending on the institution they serve, for example academic libraries that are attached to colleges are called college libraries, and those attached to universities are called university

libraries. Although these libraries may vary depending on the institutions they serve, their common goal is to support teaching, learning and research needs of the users.

In the Zambian context, there are various academic libraries that are attached to public and private institutions of learning. For instance college libraries include, Evelyn Hone College, National Institute of Public Administration (NIPA) which were both established in 1963, Natural Resources Development College (NRDC) established in 1965, Fairview College of Education established in 2002 and many more (Higher Education Authority, 2019). In the context of university libraries, there is the University of Zambia which was established in 1966 and was officially opened in August, 1969 (The University of Zambia, 2019)), the Copperbelt university which was opened in 1987, Zambia Centre for Accountancy Studies (ZCAS) established in 1989 followed by other libraries which were established in the late 2000. These include, Cavendish University established in 2004, University of Lusaka established in 2007, Justo Mwale and Lusaka Apex Medical universities which were both established in 2008, DMI St. Eugene university established in 2012, Harvest university established in 2014 to mention but a few (Higher Education Authority, 2019). The mission and vision of these academic libraries go in line with the objectives of their parent institutions. Academic libraries are ever in the forefront of providing information services to different categories of users i.e. lecturers, students and researchers in order to support their teaching, learning and research needs.

1.2 Types of Materials Found in Academic Libraries

Academic libraries in playing their supportive role to institutions of learning collect various types of scholarly materials published from all over the world. This is done through buying, receiving donations and gifts from well-wishers and through subscription to online data bases. Materials that are collected range from print to non-print and electronic materials. Yusuf and Iwu (2010) assert that different users of academic libraries utilize different materials, such as reference materials, text books, journals, newspapers, past projects, electronic books/journals and many more. Academic libraries being the nerve centre of any institution endeavor by all means to stock their collections with necessary materials. Thus, to ensure that these materials that are offered to users are relevant, it is essential that obsolete and irrelevant materials are removed from the collections. This is what is referred to as weeding (Thompson and Konlan, 2015).

1.3 The Concept of Weeding

Weeding has been defined differently by various scholars. For instance, (Yusuf, 2016; Lynd, 2015 and Johnston, 2011) define weeding as a periodic and continual evaluation of library's resources with the goal of removing obsolete, damaged and rarely used books.

Weeding of materials is an important component of collection management, yet it receives less attention than the selection of new materials in most libraries. There are a lot of benefits associated with weeding of print materials. According to Vnuk (2015), weeding frees up shelf space. This makes items much easier to browse, makes it easier to shelve and in general makes the collection look better. She further states that, it is not only looks that matter – it also saves the patrons' time and frustration. Larson (2012) gives six major benefits of weeding library print collections: saving space, saving time, making the collection appealing, enhancing the libraries reputation, keeping up with the collection needs and having constant feedback on the collection's strength and weaknesses.

Vnuk (2015) notes that crowded shelves and worn-out books can be distasteful especially to busy users. Just as a bookstore will clear out titles that do not sell to make room for new books to keep an eye on profits, a library must consider if removing titles that do not circulate can create space on the shelves to make books look attractive and visible to users.

Thus, the library's collection should be reviewed continually to ensure that the collection is meeting the current curriculum, research and informational needs of faculty and students. Materials that no longer meet the needs of the university community may be removed from the collection. All materials are considered for weeding based on accuracy, currency, and relevancy. Space limitations, edition, format, physical condition, and number of copies are considered when evaluating physical materials (American Library Association (ALA), 2018).

The ALA (2018) observes that regardless of the type of institution, weeding is an important component of a library's

collection management system and is often related to the goals and mission of the organization. Regardless of format, an optimal library collection is one that is reviewed on a consistent basis for accuracy, currency, usage, diversity, and subject area gaps (ALA, 2018). Dubicki (2008) indicates that in spite of the numerous benefits that could be realised from weeding a library collection, there are a number of reasons why librarians avoid weeding as a part of collection management: desire to maintain the size of the collection, lack of time, lack of experience, and also sometimes, the belief that a book may be needed in the future. Additionally, many academic libraries avoid weeding because of diminishing funds for acquisition of library resources. As a result of inadequate funds to acquire materials, many academic libraries rely mostly on donations and gifts. Sasikala et al.(2014) in his study done in Adhra Pradesh libraries where he was investigating trends in collection development activities in academic libraries states that, 91 percent of the collection in the libraries being studied was derived from donations and gifts . Despite the fears that many librarians may have on weeding, it is essential that library collections are kept current so as to meet the users' information needs.

The CREW (Continuous Review Evaluation and Weeding) is one method that can help librarians to keep their print collections current and relevant to users. This method uses an acronym, MUSTIE, to indicate when an item would be removed from the collection. MUSTIE is a remembered acronym for six negative factors that frequently ruin a book's usefulness and makes it an item for weeding: MUSTIE stands for: M= Misleading, U= Ugly, S=Superseded, T=Trivial, I=Irrelevant and E=Elsewhere. Thus, given the above mentioned MUSTIE factors that ruin the book's usefulness, libraries would be guided on which materials to weed and when to weed thereby maintaining updated collections (Larson, 2012).

1.4 Statement of The Problem

Weeding which is the removal of obsolete and irrelevant materials from the collection is an important component of collection development and management. It frees up shelf space, makes materials much easier to browse, makes it easier to shelve and most importantly makes collections current and attractive to users. In this electronic age where users rely mostly on electronic resources, weeding of print materials is very essential in academic libraries. However, these authors have observed with great concern that some libraries of higher learning institutions in Zambia are maintaining obsolete and overcrowded materials on the shelves indicating the lack of weeding. It is against this background that this study was undertaken to examine the current state of weeding practices in libraries of higher learning institutions in Zambia.

1.5 Objectives of the Study

The study sought to meet the following objectives:

1. Establish whether libraries of higher learning institutions in Zambia were weeding their print collections.
2. Ascertain whether weeding in libraries of higher learning institutions in Zambia was guided by collection development policies.
3. Establish the factors that affect weeding practices in libraries of higher learning institutions in Zambia.

2.0 Literature review

A number of scholars have conducted studies on weeding practices in libraries. Prominent among these are Khan-chandani et al. (2018) whose case study of policy and practice followed at Indian Institute of Technology (IIT), Delhi for weeding the old/damaged/obsolete/unused library collections endeavors to highlight the barriers and the need of weeding in the library. It discusses the criteria used to weed the collections in the central library of IIT Delhi as devised by the Advisory Committee for Library (ACL).

In a related study, Yusuf (2016) investigated effects of weeding strategies on information resources management among public libraries in North-Central States of Nigeria. The researcher observes that every library's print collection is limited by the space available, and collections must change over time to reflect changes in the community and in the library's goals. As a result, five (5) research questions and objectives were formulated with respect to how unwanted information resources were managed, shelf-time period of information resources, effects of weeding on library organisation and services and the challenges of weeding in public libraries. Survey research method was adopted for the

study and staff in the circulation, technical, reference, readers and collection development units of the public libraries in Plateau, Benue, Kogi, Kwara, Niger, Nasarawa and the Federal Capital Territory (FCT) constituted the population of the study. The study found among others, that public libraries in North-Central States of Nigeria keep obsolete information resources in store rooms which had affected basic tasks in library management such as acquisition, classification and preservation of materials.. The study concluded that every library had its own method for handling books pulled for discard.

Similarly, a survey conducted by Evans (2014) with the intention to assess the current state of weeding practices in libraries found that there was an apparent disconnect between library acquisition and weeding. Libraries did not consider the life of materials from acquisition to de-accession in developing, managing and weeding collections. There appeared to be an increasing interest in repurposing and reusing library material. Suggestions for future research such as collecting more information about best practices for collection development and weeding, library friend groups and foundation, and building more opportunities for libraries to collaborate online were included.

Likewise, Dilevko and Gottlieb (2003) opined that weeding of materials had become an integral part of library management. Based on a nineteen-question survey about weeding practices in public libraries, this article discussed the personal perspectives of public librarians on weeding as well as the weeding practices of their institutions. Librarians overwhelmingly believe that weeding increases use of books and patron satisfaction. In addition, the public library was framed as a venue that offers safe, clean, and fresh “product lines” with various natural life cycles and expiry dates.

3.0 Methodology

The survey was based on the twenty-five university libraries in Lusaka, Zambia. This study used questionnaires to collect data. Questionnaires were suitable to the study as they helped the researchers to get firsthand information from the people who were directly involved in weeding. Additionally, questionnaires enabled the researchers to get information from respondents who may have been busy with routine work to fill them up in their own time. The target group for the research was Heads of Collection Development Departments in all the twenty-five university libraries in Lusaka. The data that was collected from the questionnaires close ended questions was analysed using software called Statistical Packages for Social Sciences (SPSS version 23) while data from the questionnaires open ended questions was analysed using thematic techniques where data was grouped together to come up with common themes.

4.0 Results and Discussion

4.1 Weeding practices

Respondents were asked whether they weeded their print collections and the majority 17(68%) indicated that they weeded their collections as shown in table 1 below.

Variables	Weeding of print collections	
	Frequency	Percent
Yes	17	68.0
No	6	24.0
Not Sure	2	8.0
Total	25	100.0

Table 1: Weeding of print collections

Figure 1 below shows the weeding frequency of libraries of higher learning institutions in Zambia.

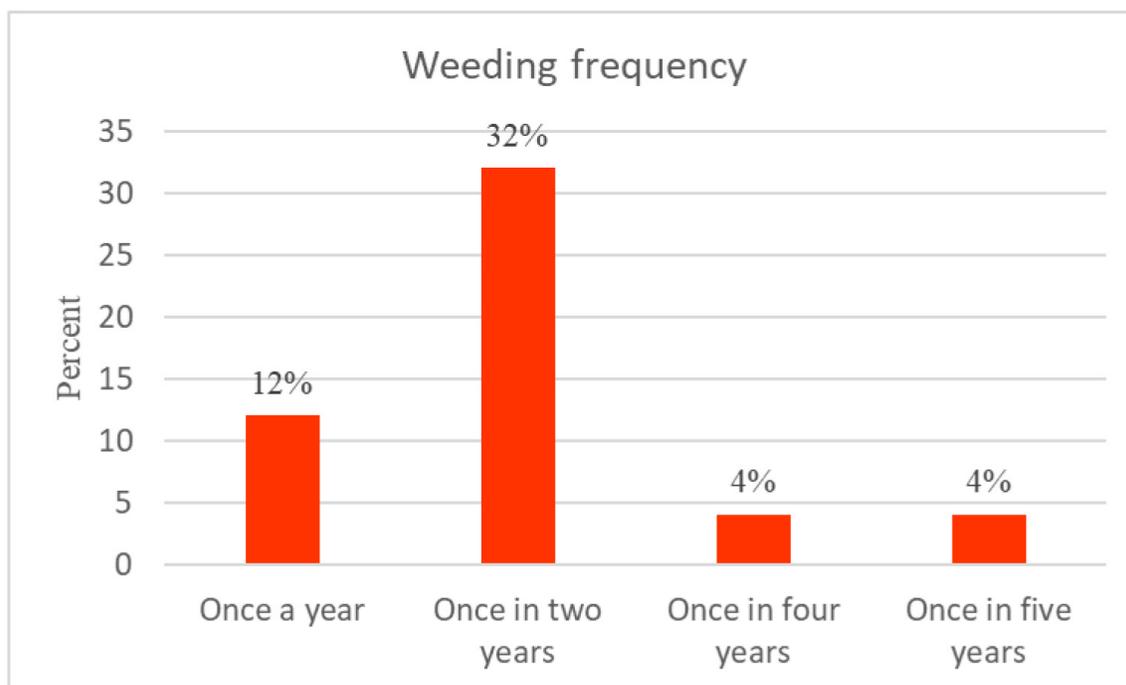


Fig. 1: Frequency of weeding

Respondents who indicated that they weeded their print collections were further asked how often they weeded their print collections and findings indicate that 8 (32%) weeded once in two years, 3 (12%) indicated once in a year, 1 (4%) said once in four years and 1 (4%) indicated once in five years while 12 (48%) did not give the frequency for which they were weeding. The reason why majority libraries were weeding their print collections more frequently could be that these universities could have been offering medical or engineering courses which needed very current information. This finding collaborates with the finding of Larson (2012) who states that, outdated and obsolete information (especially on subjects that changed quickly or required absolute currency, such as computers, science, space, health and medicine, technology, travel) and inaccurate or false information, including outdated information and sources that have been superseded by new titles or editions, need to be removed from the shelves. Thus, to ensure that they kept current information in their collections, these libraries were compelled to weed more frequently. In this digital era of electronic information resources where users easily access updated information online, libraries need to weed their print collections as not doing so would make their collections obsolete with overcrowded materials which would discourage users.

Seven (28%) respondents out of 12 (48%) who did not give the frequency of weeding specified that they could not give the frequency of weeding because their libraries were new and could not weed, that they did not have a specific period for weeding, that they weeded as need arose, and that weeding depended on when new stocks of books were acquired. The reasons that respondents gave that hindered them from weeding could be genuine but from the researchers' point of view, the major reason for not weeding could be that most institutions that owned these libraries were private and sourced their own funds to buy library materials. Thus, weeding such materials even if they were out of date would still be a problem as most libraries had no stable source of funding.

4.2 Collection development policies

In order to establish whether weeding in libraries of higher learning institutions in Zambia was guided by collection

development policies, a question was asked in order to find out if these libraries had collection development policies and the findings in figure 3 below shows that the majority of the respondents 16(64%) said they had, 4(16%) indicated they did not have while 4(16%) were not sure.

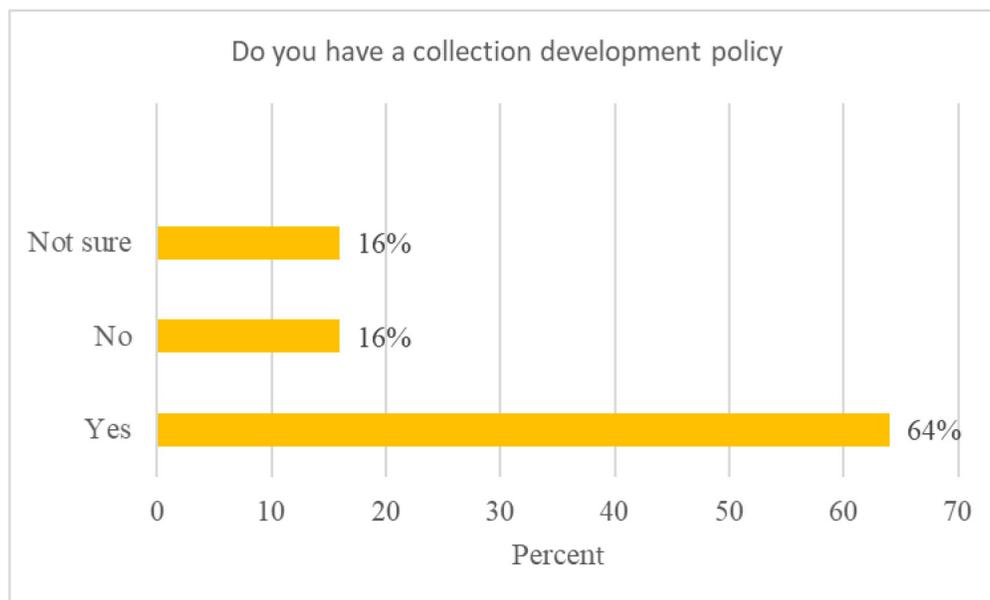


Fig. 3: Collection Development Policy

When 4(16%) respondents who indicated that they did not have collection development policies in their libraries were asked as to what guidelines they were using to weed their print collections, the following were their responses, some respondents said that they used their experience, some said they weeded materials that were in multiple copies, out of date, obsolete and damaged, some also said that they looked at the usability and condition of the materials while others said they consulted lecturers and students to weed.

Given that 4(16%) respondents had indicated that they did not have collection development policies and the other 4(16%) that were not sure, indicates that weeding in some libraries of higher learning institutions in Zambia was not guided by collection development policies. Consequently the absence of a collection development policy like Chaputula and Kanyundo (2014) found in their study, had greatly affected collection development practices at one university, that most of the core collection development practices such as selection, acquisition, weeding and preservation were haphazardly done as there were no clearly documented guidelines to guide the various individuals that were involved in the implementation of the collection development tasks to ensure consistency.

4.3 Factors influencing weeding practices in libraries of higher learning institutions

A Likert scale was used to determine the extent to which some factors affected the practice of weeding in higher learning institutions in Zambia. Table 2 below shows the factors that affect the practice of weeding in libraries of higher learning institutions in Zambia. According to the findings, 8(32%) respondents indicated that to a very large extent, lack of money to replace weeded books affected weeding, while another 8(32%) indicated that to a very large extent, fear that books might be needed in future affected weeding, and 8(32%) indicated that to a very large extent, hesitance to weed hard to replace books affected weeding.

Table 2: Factors that affect the practice of weeding

Variables	To a very large extent	To a large extent	To a less extent	Not at all
Lack of time	2(8%)	6(24%)	4(16%)	13(52%)
No money to replace weeded books	8(32%)	4(16%)	7(28%)	6(24%)
Fear that books might be needed in future	8(32%)	3(12%)	8(32%)	6(24%)
Lack of staff to do the weeding	4(16%)	5(20%)	4(16%)	12(48%)
Hesitance to weed hard to replace books	8(32%)	4(16%)	7(28%)	6(24%)

The findings of this study authenticate earlier findings by Juskiewicz and Garlish (2013) citing Dubicki (2008) who points out that, there was a general reluctance among librarians to remove any books from the library collections. This reluctance may stem from the above mentioned factors. Lack of funds to replace weeded materials discourages librarians from weeding and results into overcrowding of materials on the shelves. Thus, in order to mitigate this issue, libraries of higher learning in Zambia need to come up with ways and means to raise funds to replace weeded materials such as selling weeded materials to students and lecturers who may need them, or selling them to recycling companies. On the other hand fear that books might be needed in future and hard to replace books also discourages librarians from weeding. As a result libraries maintain obsolete materials on the shelves. Thus to mitigate these issues, libraries could develop book exchange programs with other libraries or engage in interlibrary loan.

5.0 Recommendations

On the basis of the study findings the following recommendations are proffered:

1. Libraries of higher learning institutions in Zambia which do not have CDPs should ensure that they come up with CDPs in their libraries to guide them in the weeding process. These libraries should also employ qualified staff who understand the importance of collection development policy.
2. Libraries of higher learning institutions in Zambia should develop programs that could help generate funds to replace weeded materials, such as:
 - selling weeded materials to people or institutions who may need them,
 - strengthening binding services,
 - and providing special internet services to be paid for by people within and outside their institutions, this would alleviate the fear of weeding for lack of funds to replace weeded materials.
3. Engaging in interlibrary loan and book exchange programs, this would mitigate the issue of fear that books might be needed in future and hard to replace books.

6.0 Conclusion

Weeding is an important component of collection development and management as it makes library collections to be relevant, visible and attractive to users. One of Ranganathan's five principles states that "books are for use". Consequently, books can only be used if they are relevant, visible and attractive to users. Therefore there is need for libraries of higher learning institutions in Zambia to systematically weed their collections in order to enhance service delivery.

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Information Literacy Levels among Students in four Selected Higher Education Institutions in Lusaka

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Abstract

Information Literacy (IL) skills are vital in Higher Education, where students are expected to be critical thinkers and lifelong learners, particularly in today's digital age. This study sought to investigate IL among students in higher learning institutions in Lusaka, Zambia. Its objectives were drawn from SCONUL's 7 Pillars of Information Literacy and included: finding out the students' ability to identify an information need; finding out how they defined the parameters of the information needed; establishing how they construct strategies for locating information; gauging the students' ability to effectively/efficiently access the information needed; finding out the students' ability to evaluate information; examining how well students organise information professionally and finding out students' ability to apply the knowledge gained. A sample of 250 students was randomly selected from 2 universities and 2 colleges in Lusaka. Structured questionnaires, consisting Likert Scale statements as well as open- and closed-ended questions, were used to collect the data. Research findings revealed that students had difficulties in identifying their information needs; were more familiar with Google than other search tools; used convenient search strategies; used relevance as main evaluation criteria; had difficulties citing electronic sources; and presented information better verbally than in written format. The study concluded that while students showed some evidence of information literacy, there was a serious need to introduce IL programs across learning programs in order to enhance students' IL proficiency. Further, it was recommended that Library orientation programs be re-designed for more effective IL instruction.

Keywords: Information Literacy, SCONUL Pillars, Higher Education

1.0 Introduction

The turn of the 21st century saw a change in the way of life of many communities, from industry-focused to knowledge-based. Propelled by the proliferation of Information Communication Technologies (ICTs) in everyday life, information is now widely available on every subject, easily accessible in a variety of formats.

The realities of this 'information explosion' can be seen in Higher Education institutions, the melting-pots of information and ideas. Here, issues surrounding the quantity and quality of the information available to students mean that mere memorisation facts and figures is insufficient to successfully accomplish tasks, solve problems or make decisions. Students need to be able to leverage the information and for that, they need to be Information Literate, i.e. they need to be able to effectively and efficiently identify, locate, evaluate and use information needed. In today's information and knowledge-rich environment, Information Literacy (IL) is seen as critical in the development of multi-skilled learners, who are motivated, critical thinkers and problem solvers, (Motschnig-Pitrik & Holzinger 2002; Ojedokun, 2007; Twaambo, 2019).

Throughout their years of study, students navigate through a number of tasks, problems, questions and decisions. So whether it is personal study, tests, assignments, seminar presentations, group discussions, term projects, examinations, etc., success hinges on the application of specific and relevant information (Gross & Lathan, 2009). Students are never short of information, in fact they are overwhelmed by the variety, velocity and volume of library resources ranging from monographs to peer-viewed journals, course work material generated by academic faculty and fellow students, internet-based resources etc. Thus challenges arise when students do not know where to look for specific information or how to look; how to judge validity, authenticity and accuracy of information or even deciding when visiting the library would be more effective than a Google search.

This highlights students' need for skills, attitudes and values necessary for effective & efficient retrieval and application of information. They need Information Literacy (IL) skills. The Society for College, National and University Libraries (SCONUL), defines IL as the set of skills and competences needed to identify information needs, effectively locate the needed information; manage the abundant information available; critically evaluate resources; synthesize information; effectively communicate the knowledge gained and ethically apply it to problem solving or decision making, (SCONUL, 2011)

IL was coined by Paul Zurkowski in 1974 to describe those that were "...trained in the application of information resources to their work", those that "...have learned techniques and skills for using the wide range of information tools as well as primary resources in moulding information solutions to their problems" (Badke, 2010:49). Although it was initially conceived as a set of problem-solving techniques that reflected the needs of what was then private industry's newly emerging technological environment, it was later adopted by Library Science in the User Education/Library Instruction, (Virkus, 2014). Thus, libraries have been very critical in IL instruction for decades.

1.2 Libraries and IL instruction

Libraries are seen as key in the promotion and teaching of IL to users. According to the Association of College and Research Libraries (ACRL) it is a duty of university libraries to equip students with the necessary information skills to function effectively and to meet the challenges of the information age (ACRL, 2000) With their expertise in information organisation and retrieval as well as having quality resources at their disposal, librarians are equipped to help information seekers understand how knowledge is organised. Additionally, their intricate understanding of users' information behaviour makes it possible for Librarians to guide users on how different information resources can be used to derive maximum benefit (Dadzie, 2008).

In Developed countries, IL-specific skills training are commonly offered by academic Libraries, often in collaboration with academic faculty. These include stand-alone classes, web-based tutorials or course-integrated instructions. This is however not the case in most developing countries, where academic libraries' User Training or Library Orientation and the traditional teaching of one-to-one searching & retrieval methods by reference service staff are often the only IL-related training that students are offered. Library User training programs often consist of guided-tours of library buildings, explanations of the various information resources and services provided, explanations of how to locate information resources via the Library catalogue, etc. Further, they are often offered to new users/students at entry level and are a one-off activity. One-to-one search activities by Reference librarians, ideally meant to be provided more regularly, are often hampered by inadequate staffing or limited resources (Lwehabura & Stilwell 2008). In reality, attendance by students at these programmes is often very low and do not provide adequate information literacy skills (Akakandelwa, 2010). The effectiveness of orientation program thus often questioned because of their limited scope, mode of delivery and detachment from the students' world of learning. Kavyula (2003:221) states that "...to have practical application, IL instruction is best carried out in the context of the students' daily use of information."

There is thus urgent need to re-design these programs in terms of scope and delivery if they are to be effectively impart IL skills to students. Moreover, scholars agree that because IL is inter-disciplinary in nature, IL initiatives would be more effective if integrated into subject areas across university programmes (Omar, Haji & Mwitumbe, 2014; Dadzie, 2008) as opposed to stand-alone courses. This calls for close collaboration of librarians with academic faculty and support by administrators. It is argued that such an institution-wide approach harnesses the expertise that librarians

have, those of academic staff (pedagogy) and policy frameworks do much to enhance the IL learning experience for the students.

1.3 Information Literacy in Higher Education

IL lends its relevance to students in Higher Education as an enabler in the formulation of research questions based on identified needs, development of appropriate search strategies, accessing of information required from a variety of sources, as well as the organisation of information retrieved using critical thinking and problem solving approaches (Doyle, 1996). Information Literate students are able to think through problems critically with the view of finding solutions, a trait useful within and outside the classroom. They are also able to adapt to the increasing demands of the environment around them as they progress in their studies, they become lifelong learners: individuals who have 'learned how to learn', and can always find the information needed for any task or decision at hand (Ojedokun, 2007; Lawal et.al. 2008). The absence of IL skills, the inability to identify an information need for instance, can be seen in the formulation of poorly phrased search queries, over-reliance on particular search engines for all queries and the retrieval of search results that are different from those sought. (Anafo & Filso, 2014; Head & Eisenburg, 2010). Inability to evaluate the information available often results in failure to judge between fact and opinion, use of poor quality, irrelevant or shallow information or inability to synthesise information with one's knowledge base. This, in today's era of active Social Media, has perpetuated the spread of 'Fake News'. Further, the inability to use information ethically is evidenced by the failure to cite correctly, 'copying & pasting', plagiarism, copyright infringements and poor standards of academic integrity (Averill & Lewis, 2013).

Lack of IL skills thus makes it difficult for students to navigate the murky waters of Information Explosion and may inevitably have a bearing on students' academic performance, such as poor grades in the short term and delayed progression, in extreme cases. Further, the extent of these problems may extend beyond the students' years in H.E., into the workplace and beyond. Left unchecked, these former students struggle to adapt to the dynamism of the workplace, which requires a constant updating of one's knowledge base through independent and collaborative research.

IL is however not a very well-known concept in Zambia, whose education system has for decades been focused on the improvement of literacy levels among the population, which currently stands at 53.3%. To elaborate, emphasis in schools is placed on numeracy and reading initiatives, with little or no mention on of IL as learners progress through primary school (Chisunka-Mwila, Daka & Mwiinga, 2019). Consequently, there is an overwhelming amount of research on literacy and its pedagogy, while a serious scarcity of IL and IL-related studies in the country exists to the point where it is nearly impossible to have an accurate picture of IL in the country and specifically, in H.E. A body of knowledge on the subject would better inform IL sensitization efforts and calls for its in H.E. curricular.

1.4 Statement of the Problem

IL is an important element in everyday life as it empowers individuals and communities leverage information for problem solving and decision making. In higher education specifically, it enables learners to take greater responsibility for their learning and develops in them the critical thinking skills necessary for problem solving and lifelong learning. Literature on the information literacy landscape in the country would be better inform any information literacy advocacy and initiatives. However, there seems to be a dearth of information on the subject, prompting the need for an exploratory study like this one. Hence, this study sought to investigate the information literacy among higher education students in Lusaka, as ground work for future information literacy advocacy and initiatives.

1.5 Objectives of the Study

The purpose of this study was to investigate the information literacy among students in four selected colleges and universities in Lusaka. It specifically sought to:

1. establish students' ability to identify a need for information to address a research question
2. investigate how students define the parameters of the information needed
3. establish how students construct strategies for locating information and data needed
4. gauge students' ability to effectively/efficiently locate and access the information needed
5. investigate students' ability to evaluate information retrieved

6. establish out how well students can organise information professionally and ethically
7. investigate students' ability to apply the knowledge gained from the information found

2.0 Literature review

Gowri & Padma (2018) studied the information literacy skills of engineering students of PSR Engineering College in India using the SCONUL 7 Pillars model. They found that students in their study were better skilled at: i) identifying the concepts and terms related to the information they need; ii) knowing what they don't know to identify and information gap; iii) defining the scope of search questions clearly in appropriate language; iv) using a range of retrieval tools and resources and using a range of retrieval tools and resources effectively. They are least skilled at: i) combining the existing information with original concept; ii) using new tools as they become available; iii) identifying controlled vocabularies and taxonomies to aid in searching if appropriate ; iv) identifying when the information need has not been met and v) critically appraising and evaluating their own findings and those of others.

Kimani & Onyancha. (2015) and Chamani (2018) conducted studies of entry level information literacy skills of incoming first-year undergraduate students. Their findings were very similar despite the fact that most respondents in the former study had library user training prior to university, while the latter did not. In Kimani & Onyancha's (2015) study at a university in Kenya, most of the students were: not knowledgeable about search strategies; had fairly good computer skills, but not familiar with retrieval tools other than Google; familiar with both electronic and printed information resources, but could not differentiate between primary and secondary sources; and were unfamiliar with ethical issues of information usage, such as citing, plagiarism and referencing styles. Chamani's (2018) study at a university in Sri Lanka found that students: had fairly good computer skills and good reading habits, but poor information search skills; were members of public libraries, but unfamiliar with use of library catalogues; and thus unable to make effective use of the library. Both studies concluded that the students did not have adequate IL skills required for successes in a university and recommended IL skills-specific courses to be provided.

Mutula, Wamukoya & Zulu (2004) in their report on the extent of integrating Information Literacy within the Department of Library and Information Studies academic program at the University of Botswana revealed that students in their study did not have satisfactory information literacy skills such as ability to identify, locate, review, select, and apply information needed for their studies and in the work environment; had difficulties in finding information resources needed to undertake their studies; had difficulties utilizing relevant tools to locate information and knowledge; and had difficulties in critically evaluating, analysing, and examining the information found.

Baro & Fyneman (2009) undertook a study on IL among undergraduate students in the Faculty of Social Sciences at Niger Delta University. It was aimed at determining the students' level of awareness of resources available in the university, finding out their level of digital literacy and the different search strategies they used. Key findings were that the students were aware of and made use of various sources such as consulting reference librarian, subject experts, and library resources. They used different search strategies such as chaining, browsing, consulting colleagues, browsing library collections and extracting using the library card catalogue. Findings showed that they also used the internet, different search engines and websites to source for information. The study however concluded that the students thought they knew more about IL than they were able to demonstrate when put to a test.

Baro, Endouware & Ubongu (2011) investigated the information literacy of undergraduate medical students Niger Delta University. It sought to determine whether the students were information literate and if they were aware of and used different information resources available. Findings showed that unlike Social Science students in the earlier study, the medical students' lacked of awareness and inability to use electronic medical resources such as MEDLINE, HINARI, the Cochrane Library and EbscoHost, depending mostly on textbooks and colleagues for information. The medical students also showed poor database searching skills resulting. Lack of time and inability to locate relevant information were cited as challenges that hindered the effective utilization of the library.

In Ghana, a study to promote IL among undergraduate students was undertaken at Ashesi University College by Anafo

& Filson (2014). The aim, among others, was to establish a baseline of students' skills around which IL programs could be built. Findings showed that most students lacked basic search skills, evidenced in their difficulties in identifying concepts, formulation of search strategies and unfamiliarity with the use of search tools such as the library catalogue and bibliographies. This is despite the Library having previously offered expanded Library Orientation program that offered more specialized IL skills training. Findings however found that most students had not grasped the fundamentals of ethical use of information. It concluded these challenges had a negative impact on the teaching and learning process at the institution.

Malanga & BoemoJorosi (2018) sought to assess IL skills among the undergraduate students at the University of Livingstonia in Malawi, with special focus on second year students. Findings revealed a high level of awareness of types of information sources, but poor information search and retrieval techniques. Further, the students did not know how to evaluate information. It concluded that majority of students at the University of Livingstonia did not demonstrate adequate IL skills and recommended that formal IL curriculum be considered. These findings correspond with those of Abdelrahman, Jwaifell, & El-Subhieen (2014) who studied IL among incoming First-year Undergraduates Students majoring in English Language at Al-Hussein Bin Talal University. They highlight two key points: (i) that library orientation alone is not enough to make one information literate, and (ii) that most students entering colleges and university are not information literate.

The current study was anchored on SCONUL's Seven Pillars of Information Literacy model (1999, revised in 2011). The model defines the core skills and competencies (abilities) and attitudes and behaviours (understanding) at the heart of information literacy development in higher education (SCONUL Working Group on Information Literacy, 2011). The first four pillars of the model focus on students' ability to locate and access information, while the remaining three pillars emphasise on the ability to understand and use information.

The seven pillars of IL are: Identifying, i.e. the ability to identify a need for information to address a research question; Scoping: i.e. the ability to assess one's current knowledge and identify gaps; Planning: i.e. the ability to construct strategies for locating information and data; Gathering: i.e. being able to locate and access the information needed; Evaluating: i.e. ability to review the research process and compare and evaluate information; Managing: i.e. being able to organise information professionally and ethically; and Presenting: i.e. the ability to apply the knowledge gained through presentation of results, synthesis of the information and dissemination, (SCONUL, 2011).

3.0 Methodology

This was an exploratory study that used the mixed-method design, combining qualitative and quantitative approaches. Four higher education institutions in Lusaka city were purposively selected on the basis that they had well established and functional libraries where a pool of respondents could easily be drawn. These consisted of two (2) colleges and two (2) universities. Convenience sampling was then used to select 250 students from those who frequented the four (4) libraries over a two (2) week period. A structured questionnaire was then used to solicit responses from the sample. It consisted of Likert Scale statements, as well as some open- & closed-ended questions. The questionnaire was divided into two (2) sections; section A had questions on the respondents' Demographic background, while section B had a number of questions based on SCONUL's 7 Pillars of IL.

4.0 Research Findings

4.1 Demographics of the Respondents

Two hundred and fifty questionnaires were distributed and 158 were returned, representing a 63% response rate. 41% of the respondents were aged between 17– 20 years old, 53% were 21 – 30 years old, while 6% accounted for those who were 31 years old and older. 64% of the respondents said they had undergone some library orientation/ user training at their institution of learning, while 36% indicated that they had not.

When asked if they were familiar with the term Information Literacy (IL), 69% of the respondents said Yes, while 31% said NO. They were further asked what their understanding of IL was and their responses fell in these three (3) categories. The first related IL to basic literacy and ICT usage, e.g.: "It is being able to read and write well, and use ICTs";

the second related IL being knowledgeable about information, information resources and how to use them, e.g.: “This is being acquainted with or having some knowledge on how to use books or websites to easily access the information you need.”; while the third category of responses indicated that IL has to do with the access, evaluation and application of information, e.g.: “it is being able to know when you need information, how to find it, how to assess its value and then how to use that information properly.”

4.2 Students’ ability to identify a need for information to address a research question

To find out their ability to identify an information need, respondents were asked to rank on a 5-point scale (never, rarely, sometimes, often, always) how well listed statements described what they did when faced with a question, task or problem. The results revealed that:

- 40.5% of the respondents said that they sometimes try to understand exactly what is required/being asked
- 20% said often or always try to understand exactly what is required
- 26.5 % indicated that they go straight to performing the task/answering the assignment question
- 29% establish what they knew about the topic
- 25.2% find out what they need to know about the subject and
- 16.4% formulate terms/keywords to use information search.

4.3 How students define the parameters of the information needed

To establish their scoping abilities, respondents were asked about types and formats of information sources, search tools and ease of determining the amount of information needed. Respondents were asked to rate on a 4-point scale, how familiar they were with the types of information sources.

- 69.6% said they were extremely familiar with primary sources (people, research articles etc.)
- 26.6% said moderately familiar, 0% said not at all,
- 3.8% said slightly familiar;
- 98.7% said extremely familiar with secondary sources such as textbooks
- 1.3% said moderately familiar;
- 65.2% were extremely familiar with tertiary sources (abstracts, index, encyclopaedia, etc) 32.2% moderately familiar, while 2.5% said slightly familiar.

When asked how familiar they were with print information resources:

- 74.7% said they were extremely familiar,
- 25.3% said moderately & slightly familiar

When asked how familiar they were with print audio-visual resources:

- 63.3% said moderately & slightly familiar with audio-visual formats
- 36.7% were extremely familiar

When asked how familiar they were with electronic information resources:

- 69.6% were extremely familiar with Electronic/Internet-based information
- 30.4% said either moderately or slightly familiar

The respondents were further asked how familiar they were with the use of various search tools and 68.9% said they were moderately and extremely familiar with the use of internet search engines such as Google; only 36.1% said they were moderately and extremely familiar with the use of Library Catalogues; 39.2% said they moderately & extremely familiar with the use of discipline-specific databases.

Further results showed that 41.1% of the respondents said it was easy & very easy for them to determine how much information they need to answer an assignment or complete a task, 37.3% said it was difficult and 21.5% said it was very difficult.

4.4 How students construct strategies for locating information and data needed

In establishing their Planning abilities, respondents were asked about search tools, search strategies and search techniques. Respondents were asked to rate their usage of various search tools. A combined total of 62.7% often used web-based search engines (e.g. Google); 58.9% rarely consulted librarians or library catalogues (OPAC); 39.9% often

used subject-specific databases and 42% sometimes consulted bibliographies.

Respondents were also asked how often they used listed search strategies and techniques. The results revealed that 68.4% of the respondents often scanned the contents pages and indexes; 64.4% sometimes used phrase searching; 53.8% rarely consulted librarians or library catalogues; 47.4% often used Boolean logic operators; 63.2% rarely used truncated search techniques or keywords. When asked how they narrowed or widened their search for information, 71.5% of the respondents often did this by using the publication date, 34.5 used type of information (originality), 55.1% sometimes used format, while 62.1% sometimes used location.

Respondents were further asked to rate their confidence at selecting the most appropriate search tools for a given question or task. Results revealed that 41.1% were either quite confident or very confident; 39.3% were confident; 18.4% of the respondents were either somewhat confident or not confident at all.

4.5 Students' ability to effectively/efficiently locate and access the information needed

In gauging their gathering abilities, respondents were asked about retrieval tools, search strategies and sorting of results. When asked to rate their ability to use a variety of retrieval tools and resources, 31.7% of the respondents were poor; 48.1% were good; 20.2% were very good. Additionally, 12.1% of the respondents rated their ability to convert their search strategies to work in different resources as fair, 49.4% as good; and 39.7% as very good. In terms of their ability to redefine a search strategy based on previous result set, 1.9% of the respondents rated themselves as fair, 53.6% rated themselves as good, 44.3% rated themselves as very good. Furthermore, 7.6% rated their ability to sort and manipulate results sets as being fair, 51.3% as good and 41.1% as very good.

4.6 Students' ability to evaluate information retrieved

Respondents were asked to rate their ability to evaluate the quality, accuracy, relevance, biasness of information they retrieved.

- Regarding the respondents' ability to evaluate the quality of information retrieved: 20.3% rated themselves as poor; 50% rated themselves as good; 20.3% rated themselves very good; and 20.3% rated themselves as excellent.

- Regarding their ability to assess its accuracy (completeness), 53.7% said fair, 37.9% rated themselves good, 8.2% said very good and excellent.

- Further 87.4% ranked their ability to assess the relevance of the information as excellent or very good, 12% as good; 0.6% as fair or poor.

- A total of 57.6% of the respondents rated their ability to identify biasness as poor & fair; 32.9% as good; 9.5% as very good or excellent.

- Furthermore, respondents rated their ability to assess the reputation and credibility of sources as poor as fair (46.2%), as good (31%), 22.8% as very good or excellent.

Finally, when asked to rate their ability to read critically and identify key points/arguments in the information they found, 53.2% rated themselves poor or fair, 28.5% rated themselves good, 18.3% rated themselves very good or excellent.

5.7 How well students can organise information professionally and ethically

In establishing their ability to Manage/organise the information they find, respondents were asked about referencing styles, citation and plagiarism. When asked what "plagiarism" referred to, 3 (three) categories of students' responses were noted:

1. Copying and pasting some one's ideas.
2. Not citing or failing to cite correctly when making reference to another's work
3. Using copyrighted material without permission

All (100%) of the respondents indicated that plagiarism was wrong.

Concerning their ability to use the referencing styles prescribed by their institutions of learning, 46.2% said with ease or with great ease, while 41.7% said with some difficulty or with great difficulty (12%). Furthermore, 87.3% said they could cite printed sources (e.g. books) with ease or with great ease, while 12.7% said with some difficulty. Furthermore, 84.1% said they could cite electronic resources (e.g. e-journals) with some difficulty or with great difficulty, while only 19.6% said with ease or with great ease.

4.7 Students' ability to apply the knowledge gained from the information found

To find out about their presenting abilities, respondents were asked about application of the knowledge gained. When asked to describe how well they incorporated new research findings into the context of the existing knowledge, 24.7% said poor or fair, 24.1% said good or 50.6% said very good or excellent. Respondents were then asked to rate their ability to summarise documents and reports (verbally or in writing), 37.9% said poor or fair, 21.5% said good, while 40.5% said very good or excellent. In addition, when asked to rate their ability to analyse and present data appropriately, 2.5% said poor or fair, 37.3% said good, and 51.1 % said very good or excellent.

Respondents were further asked to rate their ability to communicate the information effectively using written styles in a variety of formats (e.g. essay, abstract, literature review, journal articles, posters, PowerPoint presentations, etc.). 46.2% said very good & excellent, said 28.4% good, 25.3% said poor & fair. Finally, respondents were asked how well they communicated information verbally (e.g. discussion, seminar presentation), 60.1% said very good or excellent, 22.1% said good, and 17.7% said poor or fair.

5.0 Discussion of Findings

Research findings show that majority of the respondents were within the average age-range of an under-graduate student in Zambia, which ranges between 19 and 22 years (for school leavers) and graduate between 23 to 26 years old (for four – year programmes). The deviation from the given range accounts for those entering H.E. for in-service training. This means that the students in this study comprised two categories, whose knowledge levels and experiences in as far as information literacy is concerned varied. On the one hand, the younger students are often just out of a secondary school system that still uses the traditional teacher- centred pedagogy and need IL training to enable them take greater responsibility for their learning. On the other hand, the older students usually brought with them the workplace experience of requiring information on-demand for effective corporate decision-making. Both categories require IL instruction. This is further highlighted by the fact that most of the students had received some library instruction, but had a varied understanding IL.

From the findings, one can infer that the majority of the respondents face challenges in identifying an information need and are unable to formulate effective keywords to begin their information search. For instance, by 'sometimes' choosing not to seek clarity or taking the time to understand, the students leave room for misunderstanding or misinterpreting what is asked/required of them. And without taking time establish what one already knows about the topic versus what is being asked, accurately pin-pointing an information need is nearly impossible. Of concern also are the findings pointing to those that immediately plunge into the question/task, because in their rush to get started, they risk having a very ineffective or/and inefficient information search. This is because effective keywords are born out of an understanding of the information needed. These findings are similar to those by Hepworth (1999) and Anafo & Filson (2014) who found that students had difficulty identifying research questions because they did not spend enough time trying to understand it.

Findings show that most of the students were knowledgeable about the types and formats of information sources and use of internet search engines like Google, but had difficulties in determining how much information they needed to meet an information need. "Knowing what you don't know" (identifying a gap in their knowledge) is made easier if one is familiar with the various types & formats of information sources and search tools. This is because it enables students quickly to decide when to use particular types of information sources & formats and which search tools would be appropriate.

Interesting to note however, is that the students were more familiar with search engines like Google than with other search tools like Library Catalogues and Databases. This raises valid questions about the effectiveness of the Library Orientation/User training programs (where it is expected that the students received some instruction on how to use their libraries' Catalogues and the discipline-specific databases accessible to them). The findings however confirm what previous studies revealed concerning students' preference of generic search engines, like Google, over their Libraries' catalogues and discipline-specific databases. Google's popularity among students is attributed to its flexibility and ease

of use: “Google is smarter at finding what you’re searching for. If you spell it wrong it knows what you mean whereas the library search isn’t as effective. Google is also easier to manipulate in terms of putting in different word combinations to find what you’re looking for”, (Georgas, 2013:170).

However, an information literate student must be familiar with a variety of search tools and capable of knowing when and how to use them depending on the information sought. (Georgas, 2013;Omar, Haji & Mwitumbe, 2014) The noted difficulties by most of the students in determining how much information is required, is most likely a consequence of their failure to adequately identify their information needs. Usually, questions or problems are often self-limiting and tasks often specific enough to offer cues on the information required to address them. Inability to follow these cues affects the efficiency & effectiveness of the information search process and is a sign of lack of Information Literacy skills.

Phrase searching and scanning of contents pages of information resources & indexes were the most popular search strategies among the students. It was noted that Library Catalogues (and Librarians) were not highly preferred, neither were the time-honoured Boolean Logic and Truncation strategies, which are useful in narrowing or widening searches. Further, majority of the students rarely look at the originality of the information as a means of widening or narrowing their search, preferring instead the more convenient options of Publication date, location and format. It can be inferred from the findings that the students prefer to use strategies that may not require a lot of effort or take more time to get results, especially when overwhelmed by tasks and tight deadlines. They may view the rigidity of using Controlled vocabularies Library Catalogues as well as the understanding required for effective use of Truncation or Boolean Logic as ‘inconvenient. This agrees with Lowe (2018) who explained this behaviour by referencing Zipf’s Principle of Least Effort. Further, the students might also not possess the knowledge and skills needed to use certain strategies or techniques. This is supported by Echem & Udo-Anyanwu (2018) and agrees with findings by Gowri & Padma (2018) and Anafo & Filson (2014) who both found that students were not particularly keen on in using a variety of search strategies to broaden or limit their search, but does not agree with Baro & Fyneman (2009).

Findings show that majority of the students rated their ability to able to use a variety of retrieval tools and resources, convert their search strategies to work in different resources, refine a search strategy based on previous result sets and sort and manipulate results as “good”. Being versatile in the information search process helps students to overcome challenges such as too few or too many results, limited access to resources. Thus the findings give indication that majority of the students are well able to locate a variety of information resources and access information contained to apply to their needs. Findings agree with Gowri & Padma (2018), contradicts Anafo & Filson (2014) and Mutula, Wamukoya & Zulu (2004) whose students’ ability to locate and retrieve information was poor.

Majority of the students rated their ability to assess the quality information found as “good”. However, when “quality” was broken down to specific attributes, findings show that the students said they were least skilled in assessing the accuracy, objectivity and reputation & credibility of the source, ranking their abilities as between “poor” and “fair”. The fact that majority of the students said they were least skilled in reading critically as well as identifying key points in the information, confirm that they lack critical evaluation skills because one needs to apply critical thinking when making decisions on the validity of an information source and the potential usefulness of the information contained (Head & Eisneburg (2010). It is clear that the major attribute the students were concerned with in terms of “quality” was the relevant of the information to their need. However, compromised quality has huge bearing on the effectiveness of the information for problem solving or decision making. These findings are similar to Head & Eisneburg (2010), Gowri & Padma (2018) Anafo & Filson (2014) and Kimani & Onyancha (2015).

From the findings, all the students demonstrated an understanding of what plagiarism referred to by indicating acts that constitute the plagiarism. Further, the majority of the students had difficulties in using the referencing styles prescribed by their institution of learning, with nearly all of them stating that they were better skilled at citing printed sources than electronic resources ones. An awareness of what plagiarism is a positive thing and gives hope in the fight against the vice. However, mere knowledge is no guarantee that the students do not engage in plagiarism. In order for deterrence to be achieved, knowledge of right and wrong needs to be coupled with knowledge of consequences. Thus

the need for institutional policy on plagiarism is to be handled. These findings agree with Mutula, Wamukoya & Zulu (2004) Anafo& Filson (2014).

Findings showed that majority of the students were well able to synthesise information gained with existing knowledge, summarise as well as analyse and present the information appropriately. This indicated that they were well able to create new knowledge that can then be applied to address the information need. Further, skills like the ability to detailed or summarise the knowledge (as need may dictate) and 'package' or present in an appropriate format facilitate effective communication to others. The findings indicate that nearly as many were lacking in this areas as those that were well skilled. Most of the students were also better skilled at presenting the knowledge verbally than in written formats. It is thus safe to conclude that these students possibly had challenges turning in well thought-out and articulated course assessments such as written tests, assignments or essay-type examinations and final year research papers, but did much better in class group discussions or tutorial/seminar presentations. These findings are at variance with Gowri & Padma (2018).

6.0 Conclusion

Information literacy is critical in today's information and knowledge-rich society as it enables information seekers to know when the need information, where to find it, how to find it and how to use it appropriately. In H.E. IL skills are a game-changer, as they allow students to take greater control of their learning.

The study sought to investigate IL among students in selected H.E. Institutions in Lusaka and found some evidence of such skills among the students in the study. Some of the key findings were that most of the students had difficulties in identifying their need for information because they did not take time to clearly understand the question or problem. The study also found that while knowledgeable about different types of information sources & formats, they were not very familiar with a variety of search tools other than generic search engines like google. The study further found that the students' chose the most convenient of search strategies and search tools, which they used consistently to retrieve information resources. Finally, the study found that most students used relevance as their main evaluation criteria, had difficulties citing electronic sources and were better able to present their information in verbally as opposed to written format.

The study has to agree with Abdelrahman, Jwaifell, & El-Subhieen, (2014) that library orientation alone is not enough to make one information literate, and that most students colleges and university are not as information literate as they need to be. There is a need to look at how IL can be included or integrated into academic curricula.

7.0 Recommendations

1. As a short term measure, the study recommends a re-designing of library orientation programs offered by academic libraries, both in terms of scope and delivery mode to make them more effective in IL instruction.
2. The study also recommends that H.E. Institutions facilitate collaborative activities between academic librarians and academic faculty through the formulation of IL policy frameworks and the designing of IL courses, where appropriate.
3. As a long term measure, the study recommends the design and implementation of institution-wide multi-structured IL initiatives aimed at making IL part and parcel of the students' world of learning.
4. The study also recommends that further studies be undertaken to ascertain the status of IL in the education sector in Zambia

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