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**AN EXAMINATION OF INFORMATION ETHICS STANDARDS IN THE
MANAGEMENT OF OPEN ACCESS ELECTRONIC INFORMATION
RESOURCES (OAEIR) BY ZIMBABWEAN UNIVERSITY LIBRARIES**

BY

HAWARD HOGO
(MSCLIS, BAECS, NDLIS)

Thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy
(Information Studies) in the School of Social Sciences, College of Humanities, University of
KwaZulu-Natal, Pietermaritzburg, South Africa

Supervisor: Prof. Ruth Geraldine Melonie Hoskins

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DECLARATION

I, Haward Hogo, declare that:

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ABSTRACT

The information society has given university libraries new technological tools and platforms to connect with their clients, eliminating the need to constrain what the library publishes and provision of access to its clients. However, it also unlocked many unanswered ethical questions and dimensions. The proliferation of open access electronic information resources (OAEIR) has created more significant ethical challenges for Library and Information Science (LIS) professionals, from the privacy, accuracy, property, and access to ethical standards, more so from the African cultural perspective. LIS professionals' adoption of information ethics standards, ethical dimensions and associated dilemmas are increasingly becoming topical issues in the information society due to the proliferation of OAEIR. The study was conducted to determine the adoption of information ethics standards in managing OAEIR by LIS professionals. Additionally, the study sought to determine information ethics dilemmas encountered by LIS professionals in executing open access electronic information management processes. Finally, the study sought to establish contextual information ethics standards that LIS professionals could implement in the open access electronic information management processes. The study adopted the deontological ethics theoretical framework and PAPA information ethics framework to thoroughly interrogate the library information processes, which are creation, organisation, and dissemination. The study used a pragmatism worldview as a research paradigm, a mixed-methods research approach, and a sequential explanatory research design. The study population was drawn from LIS professionals serving in nine Zimbabwean university libraries. The study used the census survey sampling technique and purposive sampling for operational level LIS professionals and managerial level LIS professionals, respectively. Additionally, the study used document analysis, which looked at OAEIR-related policies and standard operating procedures. Quantitative and qualitative data analysis procedures were employed through descriptive statistics analysis and the SPSS, and thematic content analysis, respectively. The findings revealed that there was generally a lack of information and awareness on information ethics available to LIS professionals. University libraries' affiliation to the LIS code of ethics was viewed in terms of being members of either AfLIA or IFLA, but with no clear policy guidelines on how they would draw from these institutions' codes. Local professional associations such as ZimLA and ZULC were not doing enough to conscientise LIS professionals on the profession's ethics. Resultantly, university libraries lacked clear policy direction regarding LIS professionals' ethical obligations in electronic content, affecting how ethical issues were being implemented in everyday electronic library workflow operations. Information management in this contemporary library

environment and the information-seeking behaviour of library clients have created many ethical dilemmas for LIS professionals. The electronic information revolution has created many problematic ethical grey areas for LIS professionals, and generally in all PAPA, in the management processes of OAEIR. LIS professionals' application of ethical standards in the day-to-day management of OAEIR was influenced by duty-based principles at the library level, aided by experience. LIS professionals' culture greatly impacted the adoption and application of ethical principles and decisions in the management of OAEIR, ushering in an African culture ethical dimension. The available global codes of ethics standards for LIS professionals applied to LIS professionals in Zimbabwe in a broader sense, hence the need for a contextualised code of ethics framework. The study's findings contribute towards awareness, perception, and adoption of information ethics standards by Zimbabwean university libraries and other local affiliated associations, including managing ethical dilemmas emanating from the management of OAEIR. The study findings contribute a cultural dimension to the deontology ethics theoretical framework, thereby enhancing appreciation of the theory. The findings also contribute to more research on information ethics in relation to the LIS profession, especially from the African perspective, in addition to the offering of the discipline in LIS studies across the country and beyond, especially as viewed through the eyes of the contemporary library field.

DEDICATION

This thesis is dedicated to my wife Caroline, daughter Shivonne, my father Wonder, my late mother Rosemary, my siblings, and to friends and lecturers who have enhanced my life by finding meaning in everything I do.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACEIE	African Centre of Excellence for Information Ethics
AfLIA	African Library and Information Associations and Institutions
AIPPA	Access to Information and Protection of Privacy Act
ALA	American Library Association
ANIE	African Network for Information Ethics
BSA	Broadcasting Services Act
CECA	Censorship and Entertainment Control Act
DATAD	Database of African Theses and Dissertations
DC	Dublin Core
EIFL	Electronic Information for Libraries
ICTs	Information and Communication Technologies
IFLA	International Federation of Library Associations
INASP	International Network for the Availability of Scientific Publications
IP	Intellectual Property
IR	Institutional Repository
LIS	Library and Information Science
OA	Open Access
OAEIR	Open Access Electronic Information Resources
OPAC	Online Public Access Catalogue
OSA	Official Secrets Act
SOPs	Standard Operating Procedures
PAPA	Privacy, Accuracy, Property and Access
POSA	Public Order and Security Act
UKZN	University of KwaZulu-Natal
UNESCO	United Nations Educational, Scientific and Cultural Organization
WIPO	World Intellectual Property Organisation
WSIS	World Summit on the Information Society
ZIMLA	Zimbabwe Library Association
ZULC	Zimbabwe University Libraries Consortium

CHAPTER ONE: INTRODUCTION TO THE STUDY

1.0 Introduction

The information society has provided the library system with multiple academic information sources. In response to this society, physical library resources, products and services worldwide are increasingly becoming less visible to the public (OCLC, 2005). Internationally, library and information science (LIS) professionals are building vast collections of free and fee-based electronic information resources at a remarkable rate. Resultantly, university libraries now house many open access electronic information resources (OAEIR), ranging from openly accessible electronic book chapters and journal article databases to locally-hosted digital collections of staff and students' scholarly literature. Frederiksen, Cummings, Cummings and Carroll (2011) noted that academic libraries worldwide had hugely increased their electronic collections in response to the information society – a society getting informed through computer technologies based on the massive exchange of information and extensive user demand for digital information. Academic libraries have, over the years, continuously provided information services such as collecting, organising and disseminating scholarly literature to students and researchers. However, with the turn of the century and the coming of the digital age, these services had to evolve to keep pace with technological developments. Gilman (2013, p. 6) observed that university libraries had also gradually moved away from being consumers of scholarly publications to becoming more active respondents in producing, organising, and disseminating scholarly materials. This has resulted in university libraries, apart from increasing outsourced online content, also launching their publishing platforms and, thus, they began offering publishing services to researchers in the form of institutional repositories (IRs), particularly within the context of the open access movement. However, these fascinating new library publishing purposes, including openly accessible digital libraries and IRs, have posed to LIS professionals many information ethics standards questions. Rhee, Rao, Al-Raimi and Moon (2010) stated that the information society should be based on universally-accepted values shared by all stakeholders, including upholding and promoting the common good.

Accordingly, in the near future, as more open access to electronic information resources becomes available, individual libraries and LIS professionals “will have far less control than today over the actual availability of information to the end-user” (Orick, 2000, p. 314). However, as Carbo and Almagno (2001) noted, much critical information access and use issues are misunderstood, inadequately considered, or even ignored in this increasingly complex, multicultural, and information-intensive society. Posner (2012) observed that digital technology had positioned publishers to gain more control over the creation, organisation, dissemination and preservation of information. However, with the very nature of the Internet making it nearly, if not entirely, impossible to evaluate the content of websites, it would be impossible for the LIS professionals to protect the integrity of the information the library provides. This will bring debate on ethical issues associated with the assurance of confidentiality, transparency, data integrity, responsibilities towards individuals, open access and protection of intellectual property, use and misuse of information, and free or restricted access to information. However, Anderson (2006) observed that the use of established ethical standards was one of the most significant obligations for LIS professionals in the digital environment; this comes as the usefulness, accessibility and durability of the institutional repository (IR) information depended upon them. Hoq (2012) argued that information ethics could help LIS professionals solve this problem and guide them in creating, disseminating, and using OAEIR in a just way.

1.1 Background and outline of the research problem

The information society era has seen more and more library and information science (LIS) professionals increasingly focusing attention and intellectual debate on ethical dimensions (Sturges, 2009). Jonas (1984, as cited in Igbeka and Okoroma, 2013) noted that there was increasing attention to professional ethics due to the massive growth of contemporary technologies that had altered the way LIS professionals acquired, organised, and disseminated information to their clientele. These technologies have resulted in the expansion of free, fee-based and locally-hosted electronic information resources. This, in turn, has given birth to an enormous amount of OAEIR of electronic book chapters, journal articles and diverse IR literature. Kawooya (2014) noted that whereas the digital revolution had made access to a plethora of electronic information possible, "a plethora of ethical challenges are already

prevalent in the digital environment (p. 9).” This is further underpinned by the fact that LIS professionals were entangled in ethical issues relating to privacy, accuracy, property, and access to information in the management cycle of electronic information; that is, the creation, organisation and dissemination of such information. Orick (2000) observed that LIS professionals in the electronic information environment faced new day-to-day challenges along with traditional ethical conflicts. Widén (2010) added that the vast proliferation of electronic information and literature has significantly exaggerated the situation and had created many challenges for LIS professionals in academic libraries. These challenges range from providing equitable access to usefully-organised resources to addressing petitions to deselect or alter, negotiate less-restrictive licensing policies, and maintain individual users' anonymity within electronic transactions. However, as Hoq (2012) observed, the emergence of an 'Information Society', which had resulted in a vast expansion of OAEIR, had added a new dimension to the age-old debate on 'right' and 'wrong'. LIS professionals were also burdened with this fundamental question of determining whether their actions were right or wrong, ethical or unethical.

Information ethics is becoming increasingly important in a society dubbed the information society, a society in which the creation, distribution, and manipulation of information have become the most significant economic, political and cultural activity (Pankowska, 2009). Britz (2013) defined information ethics as:

“A field of applied ethics that investigates the ethical issues arising from the life cycle of information, including the generation, gathering, organisation, retrieval, distribution and use of information, focusing on the following areas: the right to privacy, the right of access to information, the right to intellectual property, and the quality of information (PAPA) (p. 3).”

According to Alexander and Moore (2016), information ethics investigates ethical issues arising from developing and applying information and communication technologies (ICTs) in libraries. Information ethics provides a critical ethical framework for considering moral issues concerning information privacy, accuracy, and problems arising from the lifecycle of information (creation, collection, recording, distribution, processing). Information ethics also

particularly extends to critical issues involving information ownership and copyright in the digital environment. The above definitions were reinforced by Reitz (2017, information ethics), who stated that ethics, when applied to the LIS field, become information ethics, a "branch of ethics that focuses on the relationship between the creation, organisation, dissemination, and use of information, and the ethical standards and moral codes governing human conduct in society."

The information society and, subsequently, the coming in of OAEIR, is extremely testing the tenacity of LIS professionals' long history of working with standards. Thus, information ethics has become extremely important in the library and information field, especially in this massive web of information society. This is so because LIS standards have the same significance in the digital environment as in the print world. Anderson (2006) asserted that applying ethical standards in the information society was one of the most significant obligations of LIS professionals, who had previously excelled in acquiring, classifying, indexing and finding information in the print generation. Characteristically, as a service profession, the duty of LIS professionals is based on their commitment to serve the needs of a library's patrons, guided by a high sense of ethical obligation (Ferris, 2008). Rhee et al. (2010) noted that ethics worked as a good filter in preventing many inappropriate behaviours and was a valuable tool in the information society's control. LIS professionals' work has for years been permanently anchored on carefully-executed acquisition (creation) processes, purposeful classification, cataloguing and indexing (organisation), and provision of access (dissemination) to reading resources. In all these processes, the LIS professionals' ethics or code of ethics has always served as a useful guide to ethical decision-making (Morrisey, 2018). The American Library Association (ALA, 2008, professional ethics, pp. 4) asserted that the foundation of contemporary librarianship "rests on an essential set of core values which define, inform, and guide all professional practice, and reflect the history and ongoing development of the profession."

During the past decade, LIS professionals developed various ethical frameworks in response to the need to improve professional self-awareness about information ethics standards. Globally, the International Federation of Library Associations (IFLA) developed a 'code of ethics for librarians and other information workers' framework (IFLA, 2012). Internationally,

the American Library Association (ALA) adopted their code of ethics document in 2008 (ALA, 2008). On the continental stage, the African Library and Information Associations and Institutions (AfLIA) code of ethics was developed and adopted in 2012 and amended in 2015, as part of the association's constitution framework (AfLIA, 2015). Regionally, through the efforts of various African stakeholders, an African Network for Information Ethics (ANIE) was established and, subsequently, the African Centre of Excellence for Information Ethics (ACEIE) – a centre established to function as a hub for the ANIE network, by championing information ethics discussions, training and adoption within the African context (ACEIE, 2017). However, whilst these frameworks highlighted many information ethics standards to which LIS professionals are supposed to adhere to, Mason's Privacy, Accuracy, Property and Access to information framework (PAPA), which the study will focus on, is still considered to be dominant, appropriate and significant in studying ethical issues in the management cycle of electronic information (Parrish, 2010). The PAPA framework covers the following aspects:

- Privacy: assurance of privacy, confidentiality, secrecy and transparency.
- Accuracy: data integrity, responsibilities towards individuals and society.
- Property: ownership of information, open access and intellectual property, use and misuse of information.
- Access to information: free or restricted access to information (Mason, 1986).

While some would argue that the PAPA framework is not broad enough in scope to deal with the ethical environment of today's information technology, Parrish (2010) argued that the PAPA framework focused on the more stable nature of the qualities of information rather than the dynamic nature of the information technology itself. The four areas covered in the PAPA framework also apply to all information. Although human society has become increasingly entrenched in the digital information era during the past two decades (Woodward, 2011), the PAPA framework has popularly continued to be the ethical foundation of information and communication-related technologies (Masrom, Hasnaa, Zainon, Wan & Jamal, 2012). The four areas covered in the PAPA framework are also ideal for studying the management cycle of open access electronic information: the creation, organisation, dissemination, and use of such resources. Parrish (2010, p. 187) observed that "focusing on these issues can help those living in the information society construct the social contract to deal with the threats to their

intellectual capital." However, the adoption of this framework in the management of OAEIR still needs to be broadly examined, as related literature is scarce. Sturges (2009) stated that the unavailability of a range of monographic literature on the philosophy of information impeded the growth of information ethics as a discipline. This was because the availability of this literature was the obvious route toward substantial treatments of the ethical aspect of information as a subject area.

1.2 Statement of the problem

The information society has given university libraries new technological tools and platforms to connect with their clients, thereby effectively eliminating the need to constrain what the library publishes, and provide access to its clients. However, information society also unlocked many unanswered ethical questions and dimensions in the process. In Zimbabwe, whilst university libraries have been steadfastly embracing OAEIR, the adoption of ethical standards and moral codes governing LIS professionals' conduct and involvement in the creation, organisation, and dissemination of these OAEIR still needs to be broadly examined. Due to the proliferation of these OAEIR, which has created greater ethical challenges for LIS professionals, there is now an increased need to examine the adoption of privacy, accuracy, and property, and access ethical standards. This is protracted by the need to examine it from the African cultural perspective, as LIS professionals daily deal with the ethical challenges emanating from their management of these OAEIR.

1.3 Purpose of the study

The study sought to assist LIS professionals in this information society in aligning open access electronic information provision to library clients with appropriate information ethics standards. The study sought to achieve this by determining the level of adoption of information ethics standards, including exploring ethical dimensions and dilemmas associated with managing open access electronic information resources. From the African cultural dimension perspective, the study sought to contextualise the information ethics standards that LIS professionals could implement in the OAEIR management processes. LIS professionals' adoption of information ethics standards, ethical dimensions and associated dilemmas are increasingly becoming topical issues in the information society. This is because the creation,

organisation and dissemination of information have become enormous due to the proliferation of open access electronic information resources.

1.4 Objectives of the study

The following research objectives guided the study:

- i. To determine the level of adoption of information ethics standards in the management of open access electronic information resources by LIS professionals;
- ii. To determine information ethics dilemmas encountered by LIS professionals in the execution of open access electronic information management processes; and,
- iii. To recommend contextual information ethics standards that LIS professionals could implement in the open access electronic information management processes.

1.5 Key questions to be asked

The following research questions guided the study:

- i. What is the LIS professionals' level of adoption of information ethics standards in managing open access electronic information resources?
- ii. What are the information ethics dilemmas that LIS professionals encounter in executing open access electronic information management processes?
- iii. What contextual information ethics standards could LIS professionals implement in open access electronic information management processes?

Table 1.1: Mapping research questions with sources of data and research approach

Questions	Source of data	Research approach
i. What is the LIS professionals' level of adoption of information ethics standards in managing open access electronic information resources?	Questionnaires	Quantitative
	Interviews	Quantitative and Qualitative
	<ul style="list-style-type: none"> • Document analysis (policies and Standard Operating Procedures - SOPs) • Literature review 	Qualitative
ii. What are the information ethics dilemmas that LIS professionals encounter in executing open access electronic information management processes?	Questionnaires	Quantitative
	Interviews	Qualitative
	<ul style="list-style-type: none"> • Document analysis (policies and Standard Operating Procedures - SOPs) • Literature review 	Qualitative
iii. What contextual information ethics standards could LIS professionals implement in open access electronic information management processes?	<ul style="list-style-type: none"> • Interviews • Literature review 	Qualitative

1.6 Significance of the study

Hog (2012) stated that leading international and national library and information associations all have “a long-standing code of ethics for guiding the LIS professionals in discharging their professional duties in a just and ethical way (p. 45).” This study could assist LIS professionals in the Zimbabwean university libraries, individually or at the consortium level, to outline and fully integrate contextualised information ethics standards associated with the creation,

organisation and dissemination of OAEIR. This may enable Zimbabwean university libraries to align OAEIR provision to their user communities, with appropriate information ethics standards. Additionally, LIS professionals in the Zimbabwean university libraries might ride on these information ethics standards in OAEIR licence negotiation processes with information suppliers (publishers and supply models). The study could also trigger Zimbabwean LIS schools to unpack, fully integrate, and provide more depth in offering information ethics to LIS professionals in their colleges and universities, especially in light of the newer ethical dimensions inflicted by the information society and, subsequently, coming in of OAEIR.

The adoption of information ethics standards by LIS professionals in the management of OAEIR still needs to be broadly examined. This is against the background that although information ethics has grown over the years as a discipline, in LIS, courses devoted regularly and solely to information ethics issues are still very scarce. Up to today, most ethical and legal issues concerning information ethics are presented in the context of another topic (Froehlich, 2004). Additionally, as Fallis (2007) observed, LIS professionals need additional exposure to information ethics, and just like business ethics for business students and medical ethics for medical students, information ethics should be part of the education of library professionals. In Zimbabwe, LIS schools do not have specific courses devoted specifically or wholly to information ethics, and it tends to be taught in the context of broader course modules (Hikwa, 2010). Britz (2013) also observed that information ethics was generally not part of the curriculum in African higher education institutions. Where it was taught, it was mostly done within the Western philosophical traditions, thereby becoming clear that there was an urgent need to integrate African ethical values into the international debate in this global information society. This is despite the fact that awareness and enforcement of LIS ethics should start in LIS schools (Igbeka & Okoroma, 2013). However, with the laggard position of Information Ethics in Africa, proactive efforts have been made to infuse Information Ethics, founded on African traditions, into the 'LIS profession' education syllabus (Mutula, 2013). Additionally, Sturges (2009, p. 247) noted that relevant literature on information ethics hardly came from book-type material but much more from journal articles and web content. The lack of monograph writing indicated a still immature sub-discipline (of Information Science). Resultantly, it was probably not surprising that there was not any outstanding textbook on the

ethics of librarianship. Though there was undoubtedly a substantial commitment to teaching information ethics, the presence or absence of information ethics in academic syllabuses was not completely obvious in the education system, and assessing its extent was frustrating. This was attributed to the fact that the discipline of information ethics was often concealed within modules on management, information systems, computer ethics or information in society. This scenario exposes LIS professionals to the reality of information society and the reality of balancing information provision and information ethics without hindering information access. Thus, while making information-based decisions in the library, there is a need for LIS professionals to instil ethical values in these decisions and amongst library clients, which is more important in the present information society landscape, so as to make the right approach.

Shachaf (2005) noted that although ethical considerations had been a cause for concern for LIS professionals over the years, not much empirical research focused on LIS professionals' ethics was available. Additionally, Capurro's (2006) assertion that the discipline of information ethics was still an open task in Africa and not much study had been carried out on the subject is still largely applicable up to today. This has led to stifled growth and possible implementation of contextualised information ethics standards from the perspective of the African cultural dimension. Britz (2013) asserted that an empirical reflection by Africans on information ethics in Africa was in many ways still in its infancy, "and not much research had been done on the African continent on this very important topic" (p. 4). Resultantly, LIS professionals' level of adoption of information ethics standards in the management of OAEIR is still largely an open area in Zimbabwe. However, Adetimirin's (2017) study on LIS doctoral students and cyber ethics based on the PAPA framework highlighted the need for LIS professionals' awareness and knowledge of the legal, moral and social issues in the use of various ICT-driven information sources for their research and other academic activities. However, the study did not cover practising LIS professionals and, subsequently, the management of OAEIR, a research gap that this research aims to fill within the African context perspective. Lastly, this study should contribute to the literature and subsequent elimination of gaps in the present literature on applying information ethics in the management processes of OAEIR by LIS professionals in the Zimbabwean university libraries.

1.7 Assumptions of the study

The study assumed that the uptake of ethics by LIS professionals in the day-to-day management of OAEIR was still in its infancy in the Zimbabwean university libraries. Additionally, LIS professionals in the Zimbabwe university libraries face many ethical dilemmas in managing OAEIR. Usually, they end up 'tossing the coin' in making ethical decisions related to creating, organising, and disseminating such information. Contextualising the ethical standards to suit the African cultural dimension would greatly assist LIS professionals in the Zimbabwean university libraries in dealing with ethical issues they encounter daily in executing their duties involving electronic information resources from their cultural perspective.

1.8 Scope and delimitation of the study

The study focused on nine (9) universities out of 18 chartered public and private Zimbabwe universities (see Chapter 4 of the study). A total of eight (8) Zimbabwean universities were not selected for the study because they have not had well-established open access electronic information platforms of electronic book chapters, journal articles and IR literature over the past decade. The period defined above has seen the emergence of more and more OAEIR and LIS professionals' steadfast involvement in their management. The researcher found these attributes relevant to this study, where experience in handling electronic information resource collections over time is vital. Of the two (2) remaining universities, one (1) refused to participate in the study (Appendix 10), and the other was not selected as the researcher was based at the institution and might have aroused bias and misinformation. Additionally, the study covered the adoption of information ethics standards based on duty-based perspective (deontology) and not the consequences of LIS professionals' actions concerning the subject area. It did not extend further to focus on its consequences due to resource constraints and anticipated increases in research data volumes. Thus, the consequences of ethical standards adoption by LIS professionals will present a need for a further separate study.

1.9 Definition of terms

The following are the key terms and concepts used in the study:

- **Electronic Information Resources**

These refer to scholarly information what can be electronically and freely accessed through a computer via the Internet or local area network. Examples include electronic books and journal databases, IR of staff research literature, dissertations and theses (Ani & Ahiauzu, 2008).

- **Electronic Resource Management**

This entails the practices and techniques used by LIS professionals to track the selection, acquisition, licensing, access, maintenance, usage, evaluation, retention, and de-selection of a library's electronic information resource (Jewell, 2001).

- **Ethics**

“Ethics in the information profession is concerned with applying moral standards to the conduct of librarians and other individuals involved in information dissemination. It is a type of applied ethics concerned with clarifying the obligations and dilemmas of librarians and other information professionals who make decisions regarding the acquisition, processing, and dissemination of information to individuals, groups, and society at large (Mont & Ruhig, 1991; Fitzpatrick, 2008; MacKinnon, 2009; Rachels & Rachels, 2010).”

- **Information Ethics**

Information ethics refers to “a branch of ethics that focuses on the relationship between the creation, organisation, dissemination, and use of information and the ethical standards and moral codes governing human conduct in society (Reitz, 2017).” It is a field of applied ethics “that investigates the ethical issues arising from the life cycle of information, including the generation, gathering, organisation, retrieval, distribution and use of information”, focusing on the following areas: the right to privacy, the right of access to information, the right to intellectual property, and the quality of information (Britz, 2013).

- **Information Society**

“Information society refers to society in which the creation, distribution, and manipulation of information have become the most significant economic, political and cultural activity (Pankowska, 2009).” Digital information and communication technologies are the main

drivers of the information society (Hilbert, 2015), which is characterised by a high level of information intensity in personal, social, educational and business activities (INSINC, 1997). The information society has given birth to the massive production and exchange of information.

- **Institutional Repository**

An Institutional Repository is an archive for collecting, preserving, and disseminating digital copies of the intellectual output of an institution, particularly research and/or academic institution (Dhanavandan, 2015). At an academic institution, the intellectual output includes dissertations and theses by students and scholarly literature by staff, and is available in full text.

- **Library and Information Science (LIS) Professional**

A LIS professional is a skilled information practitioner involved in the creation, preservation, organisation, retrieval and dissemination of recorded knowledge and has a professional qualification in Librarianship, Information Studies or Information Sciences (Sueur, Hommes & Bester, 2013).

- **Open Access**

“Open access (OA) is the free, immediate, online availability of peer-reviewed scholarly research articles, coupled with the right to use these articles fully in the digital environment. Open access ensures that everyone interested can access and use these research results (SPARC, 2018).” Open access has become increasingly visible and important due to the expansion of information in this information society, where electronic information databases and IR platforms are anchoring this initiative.

1.10 Theoretical framework informing the study

The study primarily used the Deontological Ethics theoretical framework, a theory introduced by Immanuel Kant in the late 18th century, which is sometimes described as the duty-based approach. Deontological ethics is a normative ethical theory:

“Regarding which choices are morally required, forbidden, or permitted. In other words, deontology falls within the domain of moral theories that guide and assess our choices of what we ought to do (deontic theories), in contrast to those that guide and assess what kind of person we are and should be (Alexander & Moore, 2016, p. 1).”

Moreover, the Deontological Ethics framework is concerned with what people do and not with the consequences of their actions. It judges the morality of an action based on rules, thereby making the action more important than the consequences. In this study's context, Deontological theories deal with what obligations and permissions LIS professionals have in managing OAEIR, one that is binding or proper in relation to societal values and norms. In using the Deontological Ethics theory, the study sought to examine LIS professionals' adoption of information ethics standards based on set rules (contractarian), instead of the consequences of their actions (consequentialism).

The Deontological Ethics theoretical framework was used for this study as LIS professionals have an obligation to provide information to the public. The American Library Association (2008) recognised that the chief ethical responsibilities of LIS professionals in this changing information environment are to provide all library users with the highest level of service through appropriately and usefully organised resources which provide accurate and equitable access to information. The International Federation of Library Associations (2012) stated that the core mission of LIS professionals is to ensure access to information for all library clients.

Whilst Deontological Ethics was the primary theoretical framework used for this study, Mason's (1986) Privacy, Accuracy, Property, Access (PAPA) information ethics framework was also adopted so as to thoroughly interrogate the following library information processes: creation, organisation, dissemination, and use of electronic information resources in the information society. Privacy deals with what information a person must reveal and what things people can “keep to themselves and not be forced to reveal to others”. Accuracy is concerned with “who is responsible for the authenticity, fidelity and accuracy of the information” and who is to be held accountable for errors in the information. Property is concerned with who owns the information, whether the price for its exchange is just and fair, who owns the platform through which information is communicated, and how access to the information is allocated.

Accessibility deals with what information a person has a right or a privilege to obtain and under what conditions (Mason, 1986, p. 5).

The study adopted the PAPA theoretical framework because as LIS professionals execute their duties' (deontology) in the creation, organisation, and dissemination processes of OAEIR, there is a need to look at the privacy, accuracy, property, and access aspects from these processes. Moreover, the level of adoption of information ethics, contextualised information ethics standards, and ethical dilemmas of LIS professionals in the management of OAEIR will be determined by their involvement in the privacy, accuracy, property, and access ethical framework. The PAPA theoretical framework was recently used by Masrom et al. (2012) in 'Ethical issues in the use of information and communication technology', Adebayo, Akole and Salau (2016) in the assessment of 'Core values of librarianship and practice of Information Ethics', and by Adetimirin (2017) as the anchor for her study on the 'Awareness and knowledge of cyberethics by LIS doctoral students'.

1.11 Research methodology and methods

This section introduces the fundamental aspect of the research methods adopted for the study. The study used the pragmatism research paradigm, which originated in the late 19th century in the United States and is a philosophical underpinning for mixed methods studies (Creswell, 2014; Gray, 2018; Kaushik & Walsh, 2019). The study used a combined research approach, where elements of both quantitative and qualitative approaches are combined in various ways within different stages of a research study. However, they remain relatively independent until the interpretation stage. Reams and Twale (2008), as cited in Cohen, Manion and Morrison (2011, p. 22) argued that a mixed research approach is ideal for a study that needs to expose viewpoints in a less biased and more accurate conclusion after validating the data. Additionally, the study used a sequential explanatory research design. Driscoll, Appiah-Yeboah, Salib and Rupert (2007, p. 21) stated that “sequential mixed methods data collection strategies involve collecting data in an iterative process whereby the data contained in one phase contributes to the data collected in the next.” The study population was drawn from 122 LIS professionals serving in nine Zimbabwean university libraries, representing 50% of the chartered universities in Zimbabwe. The study used the census survey sampling technique and

purposive sampling for operational level LIS professionals and managerial level LIS professionals, respectively. The researcher used methodological triangulation to gather data using structured questionnaires (for operational level LIS professionals) and semi-structured interviews (for managerial level LIS professionals). Additionally, the study used document analysis, which looked at OAEIR-related policies and standard operating procedures. To minimise errors, the reliability of the instruments used in this study was achieved by pre-testing the instruments at an equivalent institution that was not part of the study. Validity in this study was ensured through methodological triangulation for data collection and analysis using the methods highlighted above. Lastly, the study used descriptive statistics and thematic content analysis and the Statistical Package for Social Science (for quantitative data analysis) to analyse data. Descriptive statistics data analysis procedures describe the basic features of the data in a study, providing simple summaries of the sample and the measures (Trochim, 2006). On the other hand, thematic analysis emphasises pinpointing, examining, and recording patterns within data (Marshall, 2015).

1.12 Ethical considerations

Permission to undertake the study was sought from the universities that participated in the study. The researcher undertook to uphold the anonymity of respondents and the confidentiality of responses. Informed consent was sought from all respondents by the researcher through an introduction letter explaining the purpose of the study. Respondents were informed that participation was voluntary, and that where necessary, recordings would be done, and they could withdraw their consent at any time during the study. Additionally, the data collected were presented, interpreted and analysed as per the research ethics guidelines of the University of KwaZulu-Natal (UKZN). All materials cited in the study were appropriately referenced.

Once the research study has been completed, feedback would be given to the respondents using any of the following channels:

- A copy of the research findings would be summarised and availed to participating institutions.

- The researcher would publish research findings in open access journals and point respondents to the link.
- Participating institutions would also be provided with a link to the article from the UKZN IR.
- The study results would also be presented at the Zimbabwe University Libraries Consortium (ZULC) and the Zimbabwe Library Association (ZimLA) annual conferences.

1.13 Preliminary literature study

Carbo and Almagno (2001) stated that questions concerning ethics and how an individual can ethically act when confronted with issues related to libraries and, more broadly, information have been ever-present in LIS professionals' lives. Nevertheless, Carbo and Almagno (2001) noted that LIS professionals often encounter conflicts when their values differ from those of others, the library, or the organisation where they work. Thus, Smith (2001) noted that daily, LIS professionals are faced with having to make ethical decisions in their work related to creating, organising, preserving, disseminating, and providing access to information and documents in all formats. Hoq (2012, p. 40) observed that, in their desire to perform their functions in an ethical way in the course of their professional activities, LIS professionals are now faced with many dilemmas relating to the processing, preservation and dissemination of OAEIR. Ethical dilemmas occur when LIS professionals' values are in conflict, which would cause decision-making problems between two potential ethical obligations, which are both acceptable and appropriate. Dilemmas regarding the lifecycle of information are becoming more and more visible in a society that is defined as 'the information society', a society in which the creation, distribution, and manipulation of information have become the most significant economic, political and cultural activity (Pankowska, 2009). The information society is a century when information had become "easily accessible through publications and through the manipulation of information by computers and computer networks" and "a society where most of the workforce was engaged in the processing of information" (Sueur, Hommes & Bester, 2013, para. 35, 37).

The massive proliferation of information in every sphere of human endeavour poses unique problems for LIS professionals and information users, where they are no longer disturbed by

the scarcity of information but, rather, feel confused by the overabundance of information (Hoq, 2012). To this end, Adebayo, Akole and Salau (2016) stated that LIS professionals need to be aware of the core values and ethics of information management that arise from the lifecycle of electronic information resources. Moran and Morne (2018, p. 369) stated that the explosion of so much technology had brought information ethics to the forefront of ethical considerations as society tried to unpack "relational issues such as the relationship between information and the good of society, the relationship between information providers and the consumers of information." Against this background, fair and rational use of information for solving day-to-day problems is increasingly becoming challenging in this information society.

Hasan (2015) found out that university LIS professionals intentionally or unintentionally practise ethics or no ethics to serve information among users but lack an understanding of the constraints and outcomes of ethics. Matingwina (2015) observed that privacy and access to resources were the major ethical dilemmas affecting LIS professionals and advocated for the need to craft a general, locally relevant ethical framework for use by Zimbabwean LIS professionals in relation to these ethical dilemmas and information provision. However, as a step further, this proposed study will seek to determine the level of adoption of information ethics standards associated with the management of OAEIR, which Zimbabwean LIS professionals could implement to improve service delivery. This is so as ethical values guide libraries' service delivery so that users' information needs can be effectively addressed, which is the LIS professionals' *raison d'être*. Thus, LIS professionals are responsible for providing effective and efficient library services guided by the profession's ethics (Phillips, Oyewole, & Akinbo, 2018).

Adebayo, Akole and Salau (2016) noted that reasons that constituted the low uptake of information ethics by Nigerian LIS professionals varied from:

“Lack of exposure to a course specifically on information ethics, low level of enforcement of ethical conducts by library management, concern for self-survival at the expense of the rule of law, to low awareness and promotion of professional code of ethics by professional associations (p. 1).”

Adebayo and Mabawonku (2017) observed that Nigerian LIS professionals' level of practice of information ethics “was moderate in some aspects and low in other aspects of information ethics” (p. 1). This called for all stakeholders to intensify their efforts in promoting professional ethics among LIS professionals. However, these studies did not cover ethical issues in the management of OAEIR, a 'new' information format posing LIS professionals with specific ethical challenges in this information society, a research gap that this study aims to fill.

Jewell (2001) observed that as libraries increased their reliance on electronic resources, one big challenge was that the resources were typically governed by contract rather than solely by copyright, posing concerns, as most licenses often forbid interlibrary loans. Frederiksen et al. (2011) stated that, from the start of the electronic information revolution, LIS professionals were concerned by the use of digital content and questions surrounding license terms, circulation caps, and interlibrary loan privileges had been ever-present. Posner (2012) asserted that this new digital information format also poses many ethical and legal challenges to the inter-library loan (ILL), that are threatening to rebuild the walls that the library predecessors worked so hard to tear down, that is, the direct relationships among libraries in the sharing and circulation of resources that were now firmly in place. LIS professionals' information ethics dilemmas in dealing with OAEIR also included netiquette by library clients. Netiquette is a set of rules for acceptable online ethical behaviour, which has also come into play requiring LIS professionals to also focus on the acceptable ethical use of online resources by library clients. This development has highlighted the need for LIS professionals to have a complete approach toward open access to electronic information provision and usage in an ethical environment in this information society.

Lastly, ethical dimensions involving the cultural perspective have also been an indispensable issue in this information society. On the African continent, the debate concerning ethics in the LIS domain has changed fundamentally in the last decade, to focus more on the cultural dimensions of ethics, with ACEIE being a prominent front-runner. This was a direct result of the shift from a predominantly content ownership model in libraries toward a content access model. The former entails acquisitions, cataloguing, conservation and user education by LIS professionals, whilst the latter mandates LIS professionals to engage with a range of ethical

issues such as intellectual property, user privacy, accuracy and access to information, in which the ethical, cultural dimension predominated (Sturges, 2009). During the past decades, attempts have been made by contemporary African philosophers to take the diverse cultures of the world seriously and to give sustained reflective attention to African moral ideas in global ethical thinking, to achieve truly intercultural information ethics (Gyekye, 2010; Bothma, 2013; Mutula, 2013; Kibugi, 2014).

1.14 Structure of the thesis

The thesis is structured into seven (7) distinct chapters: Introduction, Theoretical Framework, Literature Review, Methodology, Research Results, Data Analysis, and Summary and Conclusions. The complete thesis will include the following chapters, headings and units:

Chapter One (1), the Introduction, covers the background to the study, statement of the problem, the purpose of the study, research objectives, research questions, significance of the study, assumptions of the study, scope and delimitation of the study, the definition of terms, theory of the study, methodology of the study, ethical considerations, preliminary literature and summary of the chapter.

Chapter Two (2), the Theoretical Framework, presents the main theories and frameworks that guide the study, including components of the deontological ethics theoretical framework and PAPA.

Chapter Three (3), the Literature Review, gives a comprehensive review of existing theoretical and empirical literature in relation to information ethics standards in the management of OAEIR, that is, the creation, organisation and dissemination of such information.

Chapter Four (4), the Methodology, focuses on the research methodology and methods used to conduct the research study. These include the research paradigm used, the research approach, the research design, the population of the study, sampling procedure, data collection and analysis procedures, validity and reliability of instruments and ethical considerations.

Chapter Five (5), the Research Results, presents findings of quantitative and qualitative data collected through survey questionnaires, interview schedules and analysis of relevant documents.

Chapter Six (6), the Data Analysis, discusses the findings presented in Chapter Five and their interpretation of their meaning to the results.

Chapter Seven (7), which is the Summary and Conclusions, presents a summary, conclusion and recommendations of the study, in light of the literature reviewed, findings of the study, originality and contribution made by the study to the existing body of knowledge.

1.15 Summary of the chapter

This chapter has provided the context of the study by discussing the main variable of the study. In this chapter, the introduction to the study, the research problem, the study's purpose, the significance of the study, the scope and delimitations, and the study's limitations were discussed. Definitions of key terms used in the study were also provided. The principal theory upon which the study was constructed was identified and discussed. A brief outline of various research methodologies employed by the study was given. Preliminary literature on the research problem was discussed, including within its African context. Additionally, the literature addressed the study's many facets, ranging from unpacking information ethics in the contemporary environment and why it is important to study it, ethical dilemmas and dimensions, and related prior studies informing the research. The chapter ended with a brief discussion of the structure of the study. The next chapter will discuss the conceptual framework informing the study in greater detail.

CHAPTER TWO: THEORETICAL FRAMEWORK

2.0 Introduction

This chapter discusses the ethical theory adopted by the study, along with other closely associated ethical theories. These theories are associated with information ethics and the management of electronic information resources by library and information science (LIS) professionals in this contemporary information environment. Three competing approaches to normative ethical analysis are discussed in this chapter. These approaches include virtue ethics, which focuses on effort, deontological ethics, which focuses on conduct, and consequential ethics, which focuses on impact (Kaptein & Wempe, 2002). However, the study adopted Deontological Ethics as the theoretical framework, a theory introduced by Immanuel Kant in the late 18th Century, and is also known as the duty-based approach. In this study's context, deontic ethical theories deal with what obligations and permissions LIS professionals have in managing OAEIR, those that are binding or proper concerning societal values and norms. In using the Deontological Ethical theory, the study examined LIS professionals' adoption of information ethics standards based on set rules (deontology), as opposed to reason or effort (in virtue ethics) or consequences of their actions (in consequentialism ethics).

The study's main objectives were to determine the level of adoption of information ethics standards, and to establish information ethics dimensions and dilemmas associated with managing OAEIR by LIS professionals in the Zimbabwean university libraries. The American Library Association (2008) recognised that the chief ethical responsibility of LIS professionals in this changing information environment is to provide all library users with the highest level of service. This chief ethical responsibility is achieved through appropriate and usefully organised library resources, established equitable service policies, equitable access, accurate, and courteous responses to all requests. The International Federation of Library Associations (2012) explained that the core mission of LIS professionals is to guarantee access to information for all people for personal development, including for education, economic activity, cultural enrichment, leisure, and informed participation in, and enhancement of, democracy. Thus, the Deontological Ethics theoretical framework was chosen for this study as LIS professionals have an obligation to provide information to their users, based on set-down

professional principles. Additionally, studies that focus on deontology and the adoption of work-based rules in the management of information are scarce, a void which this study seeks to fill. Additionally, Deontology theory is ideal for this study as numerous studies have revealed how awareness and spelt-out rules determined LIS professionals' practice (adoption) of ethical principles of the profession (Adebayo & Mabawonku, 2017). Like the Consequential and Virtue Ethics framework, to my understanding, previous studies that adopted the Deontological Ethics theoretical framework in LIS are very scarce, apart from Santana and Nunes (2018).

While Deontological Ethics was the primary theoretical framework used for this study, Mason's (1986) Privacy, Accuracy, Property, Access (PAPA) information ethics framework was also adopted. Merging the two frameworks was done to thoroughly interrogate the following library information management processes: creation, organisation, dissemination, and use of electronic information resources in this information society. Privacy deals with what information a person must reveal and what things people can keep to themselves and not be forced to disclose to others. Accuracy is concerned with who is accountable for the authenticity, reliability and accuracy of the information and who has the chief ethical responsibility to be held accountable for errors in the information. Property is concerned with who owns the information, and whether the price for its exchange is just and fair. Additionally, it is concerned with who owns the platform through which information is communicated, and how access to the information is allocated. Accessibility deals with what information a person has a right or a privilege to obtain and under what conditions (Mason, 1986, p. 5).

The study adopted the PAPA theoretical framework because as LIS professionals execute their duties (deontology) in the creation, organisation, and dissemination processes of OAEIR in this contemporary library environment, there is now a greater need and importance to look at the privacy, accuracy, property, and access aspects of the same processes. Moreover, the level of adoption of information ethics, including contextualised information ethics standards and ethical dilemmas of LIS professionals in the management of OAEIR, will be determined by their involvement in the privacy, accuracy, property, and access ethical framework. The four issues in the PAPA theoretical framework are still timely and relevant (Woodward, 2011). The

theoretical framework was recently used by Adetimirin (2017) as the anchor for her study on the ‘Awareness and knowledge of cyberethics by LIS doctoral students in two Nigerian universities’. The Deontology Ethical theory, its constructs, and the PAPA theoretical framework will be discussed in subsequent sections of this chapter.

2.1 Theoretical framework

A well-constructed study requires a theory to reinforce its meaning, and in research, a theoretical framework forms the basis of this assertion. A theory, which comprises interconnected concepts that provide an organised interpretation of phenomena, gathers together all the separate pieces of empirical data into a coherent conceptual framework of broader applicability (Cohen, Manion & Morrison, 2011). According to Creswell (2014), a theory is a scientific prediction or explanation for what the researcher expects to find, providing a blueprint used to construct their research inquiry. Thus, a theory in quantitative research is an interconnected set of concepts (or variables) shaped into propositions, or hypotheses, that specify the relationship among variables (characteristically in terms of greatness or course). A theory provides a framework for further unearthing additional and possible sources of information, thereby extracting essential areas for additional exploration or interrogation. To make an appropriate selection of a theoretical context, the researcher must consider the guiding principles of the study and situate the problem concerning it (Grant & Osanloo, 2014). A theoretical framework that a researcher chooses must highlight the purpose and importance of the study. Creswell (2014) stated that in quantitative research, researchers use and test theories as an explanation for answers to their research questions and, thus, an entire research section is devoted to presenting the theory for the study. “Without a theoretical framework, the structure and vision for a study are unclear, much like a house that cannot be constructed without a blueprint; and with it, it allows the research to be strong and structured with an organised flow from one chapter to the next” (Grant & Osanloo, 2014, p. 13). Moreover, as with this study, in mixed methods research, a theoretical framework may be contained within both quantitative and qualitative data collection. Additionally, the purpose of theory in research “is to provide tools for the interpretation of collected data, prevent the fragmentation of knowledge by ordering, give the inquiry a focus, and provide theoretical explanations and a deeper understanding of what is being investigated” (Ngulube, Mathipa & Gumbo, 2015, p.52).

The theoretical framework of a study provides a common worldview or lens from which to support one's thinking about the problem and analysis of data. A theoretical research framework, consisting of theoretical principles, constructs, concepts, and tenets of a theory, is the guide for research, just as a map is when travelling to a particular place (Grant & Osanloo, 2014). A theoretical framework assists a study by stimulating it to provide direction and energy, and in the process, it serves as the foundation upon which the research is constructed. According to Ngulube, Mathipa and Gumbo (2015), a theoretical research framework assists researchers in interpreting and understanding a research study's findings within a framework that makes sense of the data. A theoretical research framework, which is the specific theory or theories about aspects of human endeavour that can be useful to the study of events, serves the same purpose as a foundation is to a house, thereby ensuring that the research is constructed upon a solid base. To this end, a theoretical framework assists the researcher in staying in the course of an acceptable structure, that is, a particular theoretical perspective that will make the final product of his/her research scholarly. According to Grant and Osanloo (2014), the theoretical framework is the backbone and blueprint of the research. It provides a grounding base that holds all knowledge for a research study, from the rationale for the study, the problem statement, the purpose, the significance, and the research questions. It also serves as an anchor for the literature review process of the study and, most importantly, the research methods and data analysis. Adom, Hussein and Joe (2018) reinforced this by stating that "a theoretical framework guides and should resonate with every aspect of the research process from the definition of the problem, literature survey, methodology, presentation and discussion of the findings as well as the conclusions that are drawn" (p. 438). Additionally, a theoretical framework directs the path of research and offers the basis for establishing its credibility, with an overall aim of making research findings more meaningful, acceptable and generalisable. Thus, a study without a theoretical framework as a basis of research will present challenges in providing accurate direction for both the literature review process and the intellectual discussions of the findings. Additionally, the above-stated authors note that without a theoretical framework, it is difficult for readers to ascertain a study's academic position and the underlying factors of the researcher's assertions and/or hypotheses. Resultantly, this position renders the research sloppy and not recognisable as contributing significantly to the advancement of the frontiers of knowledge.

Grant and Osanloo (2014) presented a checklist that enabled researchers to identify a suitable theoretical framework for their research survey. Critical components of this checklist included the ability of the theoretical framework to knit well with the study's objectives, problem and research questions, while also being able to inform the literature review, data analysis plan, and underpin the conclusions and recommendations based on the data analysis. In the context of this study, the Deontological Ethics theoretical framework is used to facilitate understanding of issues around the adoption of information ethics standards in the management of OAEIR by LIS professionals in the Zimbabwean university libraries. This would also be analysed in the context of ethical dilemmas that hinder the effective adoption of information ethics standards and appropriate ethical standards that LIS professionals could apply in their day-to-day execution of library duties.

2.2 Ethical theories

The field of ethics, which is as old as humanity itself, is a framework that seeks to define, understand, explain and provide a theory of right and wrong (Anderson, 2006). Ethics is also concerned with questions of how individuals should act and in the process, presenting the rightest behaviour recognised as the one causing the greatest good to one another and society in general. According to MacKinnon (2009), ethics appeals to specific norms or reasons when it evaluates an individual's actions as right or wrong, good or bad, and this is important to the moral enterprise, a procedure concerning creating awareness of 'ethical' issues and following them through into the statute-book. Gensler (2011) stated that ethics was important to humankind as moral philosophy served to assist individuals in thinking better about morality in the course of making moral judgements. Ethics provides a set of standards for behaviour that helps one decide how they ought to act in a range of situations, including understanding and interpreting what is right or wrong in a societal set-up (Bonde & Firenze, 2013). Ethics is about making choices and providing reasons why one should make these choices. It is also about undertaking ethical decisions that are right and wrong concerning a specific context and can be at the religious, legal or moral level. Many individuals face difficult moments in implementing ethical decision-making as most societal or life scenarios do not always address the scope of ethical choices they face today. The field of ethics is also used to refer to rules or guidelines that institute what conduct is right and wrong in societies for individuals and for

groups. Britz (2013) also stated that as a philosophical concept of what is good or bad regarding human relationships with themselves, others and their environment, ethical behaviour does not come naturally, as individuals need to learn it. Thus, ethics is not subjective and relative in nature, but based on reasoning and moral justification. When codified, ethical codes of conduct express relevant ethical standards for a library and information science professional. According to Bonde and Firenze (2013, p. 6) “making good ethical decisions requires a trained sensitivity to ethical issues and a practised method for exploring the ethical aspects of a decision.” It also involves evaluating the thoughts that influence individuals to make a particular choice as a course of action. As ethics is an integral part of good business, where good ethical practices always mark organisations that are well respected, organisational ethical climate needs to influence employees’ values.

Ethical theories are there to, among other things, ascertain what moral standards (in the form of norms and values) humankind should take into account when assessing individual actions and decisions towards one another in society. Ethical theories expand from the above by ascertaining further whether such moral standards are justified. Drake, Snyder and Cegielski (2007) noted that in ethical decision-making, ethical standards are useful and include rules and principles for deciding what falls within the ethical domain (meta-ethics) as well as rules and principles about what one should do (normative ethics). This was reinforced by MacKinnon (2009, p. 10), who stated that as ethical reasoning and arguments can be done well or poorly, it was important that good reasoning in ethics be indirectly or directly referenced to a particular ethical theory. An ethical theory provides reasons or norms for judging acts to be right or wrong and attempts to give a justification for these norms. Gensler (2011) also stated that moral philosophy, also known as ethics, was concerned with questions of morality and covered such areas as meta-ethics and normative ethics. Moral philosophy deepens humankind’s reflection on the ultimate questions of life and helps individuals think better about morality. Rachels and Rachels (2010, p. 10) stated that moral philosophy was the determination by humankind to understand the nature of morality, how individuals in society are supposed to live and the reasons behind it. In other words, morality is the determination to guide one’s conduct by reason, where the best reasons for doing an action are employed while giving equivalent consideration to the interests of each individual affected by the decision. There are three main

branches of the philosophical study of ethics. According to Munigal (2018), three main areas of study today divide ethical theories into three general categories: meta-ethics, normative ethics, and applied ethics. Unlike meta-ethical theory, a more basic division of ethics, normative and applied ethical theories formulate and defend moral principles by prescribing what people ought to do in various situations (Gensler, 2011).

Meta-ethics consists of the attempt to answer the fundamental philosophical questions about the nature of ethical theory itself. It deals with the theoretical meaning of moral propositions and how their truth values can be determined. In contrast, applied ethics concerns what a person is permitted to do in a specific situation of action. Drake, Snyder and Cegielski (2007) defined meta-ethics as a field that attempts to answer questions regarding why an individual ought to be moral and what the proper standard for value judgments is. It addresses questions such as what is 'goodness' and why we should want to be good. Major meta-ethical perspectives include rationalism, contractarianism, intuitionism, and intrinsic value. Gensler (2011) stated that meta-ethics is a more basic branch of moral philosophy which deals with the nature and methodology of moral judgement, concerning "how to select moral principles and thus how to do normative ethics." It deals with how humankind could be able to validate or reasonably guard their beliefs about right and wrong. Thus, the meta-ethics view is divided into two parts: moral judgements and methodology. Moral judgement refers to the 'common good' while the methodology entails the process of how to select moral principles from what society approves of (Gensler, 2011, p. 3). Britz (2013) asserted that meta-ethics was concerned with the origin of ethical norms and principles, thereby investigating the meaning of 'good' and the roots and meaning of the ethical concepts in humankind use. Munigal (2018) stated that meta-ethics provided a birds'-eye-view of ethics and investigated universal truths, meaning, and judgements, based on reason. The challenge with the above sub-meta-ethical theories is that they do not provide an objective standard for ethical decision-making, as they tend to rely on arbitrary moral bases. Nevertheless, these sub-meta-ethical theories lay the foundation for various normative theories, such as utilitarianism, consequentialism, and deontology. This is because they provide a method for selecting and arguing about moral principles in everyday life situations (Gensler, 2011).

On the other hand, applied ethics consists of the attempt to answer difficult moral questions people face in their lives, such as whether the death penalty or abortion is always morally wrong. According to Fitzpatrick (2008), applied ethics, sometimes known as practical ethics, is concerned with practical problems and is attached to professional activities such as social work, medical, legal and business ethics. Additionally, Gensler (2011) stated that applied ethics looked at specific moral issues and questions. This was reinforced by Munigal (2018), who said that applied ethics applied to various fields, such as business and medicine, and examines specific ethical issues. Applied ethics dates back to the 1970s when philosophers were becoming exhausted with meta-ethics (Fitzpatrick, 2008).

The current study narrowed down to normative ethics and its proponents. According to Osmo and Landau (2006), normative ethics provides a more contemporary classification of ethical theories in the philosophical literature. Ethical theories in the humanities and social sciences can be divided into two major groups or perspectives on which ethical decisions are based: the deontological perspective or the teleological (consequential) perspective (Landau, 2006, p. 865). Further, Hinman (1994), (as cited in Osmo & Landau, 2006), presented the rights theories of ethics as contemporary theories. These included those that focus on principles of action, respect and recognition of users' rights, utility and justice, and those that focus on the character of the moral agents and their relationships with each other, and the ethics of care. These rights theory of ethics, which are proponents of normative ethics, include deontological, utilitarian, and virtue orientations. Thus, normative ethics provides humankind with principles about how individuals in society ought to live and blend well with LIS professionals' information work in libraries (Gensler, 2011).

2.3 Normative ethics

When LIS professionals are confronted with an ethical dilemma in their day-to-day duties, they could employ several different procedures to deal with these ethical situations. Stueart and Moran (2007) noted that philosophers had established different approaches in dealing with ethical situations, including developing various normative ethical frameworks that can be used to evaluate ethical behaviour. As a category of ethical theories, normative ethics is a form of ethics that major ethical thought frameworks subscribe to, such as virtue ethics, deontology

ethics, and consequential ethics, which describe how a ‘moral act’ will be best performed. According to Freeman and Werhane (2008), a moral act is an act executed by an individual as a sense of principle, a principle that one would want other members of a group or society to adopt in their actions, and an act that respects others as moral agents. In contemporary terms, a moral act would be an act that reasonable persons would agree was right, that one would expect others to do, that could be embodied into a universally applicable law, and that respects people equally (Freeman & Werhane, p. 2). Moral judgements are evaluated, that is, they place a value on some action, whether negative or positive, and rely on beliefs about standards of good or bad, right or wrong (MacKinnon, 2009). Normative ethics is this sort of ethics because it is both descriptive and evaluative and bases its judgements on certain norms or values.

Normative ethics is the ethical study of what makes a person’s actions, situations or events right or wrong, good or bad, and what makes people’s actions righteous or ruthless. The difference between applying normative and applied ethics in ethical situations is that normative ethics examines what characteristics make an action right or wrong. In contrast, applied ethics, in actual cases, attempts to spell out whether or not individual acts have those features. Gensler (2011) stated that normative ethics were principles on how humankind ought to live in different situations, such as the principles of ‘right and wrong’ things to do. It also looked at what things were worthwhile in life and of general goodness to societal values. Bonde and Firenze (2013) explained that normative ethics deals with the standards or ideologies used to ascertain whether an action is right or good. It concerns real-world means of defining a moral course of action in a given situation. Britz (2013, p. 2) stated that normative ethics, as prescriptive ethics, “was based on the assumption that moral behaviour is based on a single rule or a set of principles.” The primary goal of the normative ethics of behaviour is to determine what makes actions right or wrong. According to Sueur, Hommes and Bester (2013), normative ethics came from the ideologies of norms, which were prescriptive and socially acceptable standards of behaviour that guided individuals on how to behave in real-life situations. In other words, normative ethics reflects moral norms and standards that underlie moral philosophies. Munigal (2018) stated that normative ethics regulated the moral standards of right and wrong conduct by individuals in society. Normative ethics contributes to social order when observed by assisting in the generation of shared values and expectations of individual behaviour in society.

However, these shared values and expectations should align with society's cultural values to make them desirable, acceptable and appropriate.

Three normative ethical theories have been in a lively state of development during the past decade. According to Baron, Pettit and Slote (1997), three compelling and basic approaches to normative ethics have assumed positions of individual prominence over time. These approaches to normative ethics included deontology, consequentialist, and virtue ethics. On the other hand, Gensler (2011) noted that normative ethics has two basic approaches, consequentialism and non-consequentialism. Consequentialism covers teleology, whilst non-consequentialism covers deontology ethics. Consequentialism subscribes to the notion that individuals ought to do whatever action maximises good consequences and, in the process, disregard what kind of things they do but the consequences. On the other hand, non-consequentialism subscribes to the notion that individuals should note “that some kinds of actions were wrong in themselves, and not just wrong because they have bad consequences” (Gensler, 2011, p. 110). Kaptein and Wempe (2002) reinforced the above by stating that the three competing approaches to normative ethical analysis were virtue ethics – which focuses on effort, deontology ethics – which focuses on conduct, and consequentialism ethics – which focuses on impact, as illustrated below in Figure 2.1. Today these three approaches are used both as an ethical outline for resolving moral problems and as a means for analysing and assessing ethical behaviour and ethical practices (Kaptein & Wempe, 2002. Humankind has been using these, on one side, to act “as a framework for solving ethical dilemmas and, on the other side, to act as a stepping-stone for the ethical analysis and evaluation” of individual behaviour in society (p. 1). Below is an illustration of how the three approaches to normative ethics work in a particular person's day-to-day ethical interactions or situations:



Figure 2.1: Normative ethics effects

Source: Kaptein and Wempe (2002, p. 1)

The study will discuss the three ethical approaches illustrated above in detail in the subsequent section.

2.3.1 Virtue ethics theoretical framework

Virtue ethics is one of the three approaches of normative ethics credited to its founding fathers, Plato and Aristotle, which regards moral action as tightly intertwined with the concept of moral character (Fitzpatrick, 2008). It emphasises a person's character when it comes to ethical thinking instead of consequences and actions. In other words, virtue ethical theory judges an individual by their character rather than by an action that may deviate from their normal behaviour, taking the individual's morals, reputation, and motivation into account when rating an unusual and irregular behaviour that is considered unethical. According to Kaptein and Wempe (2002), the term 'virtue' itself, which can be traced back to classical antiquity of both the Greek arete and the Latin virtus, refers to an individual's or something's ability to achieve a specific goal. It could also be referred to as 'quality ethics', where virtue or quality ethics, in this case, refers to every ethical theory that formulates norms based on human characteristics or qualities (Kaptein & Wempe, 2002, p. 20). Virtue is also seen as a person's good habit, one that controls and internalises norms into one's character (Gensler, 2011). It enables rules to be part of someone's inner soul such that one "will follow them instinctively as if they were part of one's nature" (p. 138). A virtuous person can be defined as one who has internalised the correct principles and norms about how one ought to live (Gensler, 2011, p. 149). Britz (2013) also stated that virtue theories stressed the importance of developing good habits that will naturally guide ethical behaviour and could be learned from a young age, such as wisdom, courage, temperance, justice, sincerity, and fairness.

Kaptein and Wempe (2002) highlighted that virtue ethics was a theory of moral obligation where the agent, not the action itself, takes centre stage, where it was not the action or the consequences that were evaluated, but the person in question. Thus, virtue ethical theory concerns one's intention behind their action, for example, what kind of person one would want to be. In Plato's philosophy, there are four main virtues: wisdom, self-control, courage, and justice (Gensler, 2011). Wisdom entails:

“Excellence in thinking, while self-control involves rational control over one’s impulses and desires. On the other hand, courage involves rational control over one’s spirited part, which covers emotions and fear. Lastly, justice entails the correct ordering of the parts of the soul, whereby the rational part guides the spirited part, and both together guide the appetites (Gensler, 2011, p. 140).”

However, Aristotle further developed the ethics of virtue and put its components into two main groups: intellectual and moral virtues. According to Aristotle, everything in life has a purpose. Intellectual virtues deal with the thinking aspect, such as philosophy, wisdom, intuition, scientific knowledge, and knowing how to live. On the other hand, moral virtues involve the acting part, such as justice, self-control, courage, generosity, and friendliness (Gensler, 2011, p. 141). Sueur, Hommes and Bester (2013, p. 72) explained that virtue ethics is a comprehensive philosophy that goes far beyond the meaning of ‘good’ or what we ‘ought’ to do. This is because the purpose of any human being is to function in society and achieve happiness in the fullest sense of the word, which all comes down to the need for a cultivated virtue and moral character.

2.3.2 Consequential ethics theoretical framework

Kaptein and Wempe (2002) stated that consequentialism ethics theory is referred to as teleological ethics, meaning ‘end’ in Greek. This is because it employs a certain standard against which the consequences of action are judged at the end. Thus, in this ethical theory, actions are taken to achieve a particular end, which end is judged to be the most desirable. As a theory of consequentialism, Anderson (2006) stated that utilitarianism was the primary teleological theory that relied on an objective, and universal standard of good (utility).

“Teleological theories argue that certain actions are to be performed because they are good by virtue of their consequences, and one teleological orientation that has influenced humanities and social science over time is the utilitarian one.” (Osmon & Landau, 2006, p. 865).

Utilitarianism is a term that covers many theories, one of which is consequentialist ethical theory. All utilitarian theories departed from the assumption that an intrinsic good exists that

can serve as a criterion for evaluating actions, but holds that there is only one value that should be used as a criterion, that is, pleasure or enjoyment (Kaptein & Wempe, 2002). In utilitarianism, the ideology is that all values cannot be reduced to one value, but a value is that which individuals find valuable, holding instead that there are several values that are primarily good (Kaptein & Wempe, 2002, p. 5). Thus, consequentialist ethical theory as a theory of utilitarianism was subjective in its philosophical foundations. Rachels and Rachels (2010) stated that a classical utilitarianism could be summarised in three propositions, namely; actions are to be judged right or wrong solely by virtue of their consequences, and anything else does not matter; the amount of happiness or unhappiness that is created is the only matter, and everything else is irrelevant; and, each person's happiness counted as equally the same. In conclusion, right actions under utilitarianism "produced the greatest balance of happiness over unhappiness, with each person's happiness being counted as equally important as the other" (Rachels & Rachels, 2010, p. 109). Consequentialists view ethical rules only as loose 'rule of thumb', thus rejecting exceptionless rules and believing that any rule can be broken when it has better consequences (Gensler, 2011, p. 123). Thus, "classical consequentialism or utilitarianism only has a single basic norm that people ought always to do whatever that brings about the greatest balance of pleasure over pain for everyone affected by one's action" (p. 164). Capraro, Sippel, Zhao, Hornischer, Savary, Terzopoulou (...) and Griffioen (2018, p. 2) stated that that according to consequentialist tradition, the consequences of action have often been classified in terms of happiness, thus meaning that an action is morally good if it brings about favourable consequences. In consequentialist ethics, the moral content of an action is determined by its real and expected consequences of an action; an action is morally good if its consequences are desirable and bad if they are not.

According to consequentialist ethics, an action was morally good if its consequences were desirable to humankind and bad if they were not (Kaptein & Wempe, 2002). This was because in consequentialist ethics, the moral content of action was determined by the real and expected consequences of that action to humankind. According to Gensler (2011), consequential ethics provides a general view of what individuals ought to do that maximises good consequences. Individuals implement consequentialism from various perspectives. These include the egoism perspective (a consequence that maximises individual good), the utilitarianism perspective (a

consequence that maximises good for everyone affected by an action), the hedonism perspective (a consequence that is evaluated solely in terms of pleasure and pain), and the pluralism perspective which validates the action based on a variety of goods (p. 114). Bonde and Firenze (2013) stated that the consequentialist ethics framework focuses on the future effects of the individual's possible courses of action and determines outcomes most desirable in a given situation. In coming up with the above, the consequentialist ethics framework also considers the people who will be directly or indirectly affected. This theory sees the good of action through its value to society, that is, the happiness it brings to mankind. "Therefore, the ethical decision is the one that leads to consequences that produce happiness and minimise the pain of all concerned" (Anderson, 2006, p. 4). According to Freeman and Werhane (2008), consequential ethical theory subscribes to the notion that moral standards have exceptions, where there are times when one cannot respect all moral rules or respect them equally. For instance, when one's life is threatened, one often must kill in self-defence.

An individual adopting the consequential ethical framework wishes to produce an outcome that produces the most good and, thus, considers ethical conduct that will achieve the best consequences. However, as some will argue, the concern for all leads to weaknesses in the theory, as it is difficult to determine people's preferences. Additionally, consequentialist theories fall short where justice needs to be done to certain principles, such as an individual claim to rights and fairness, which was essential in academic libraries (Kaptein & Wempe, 2002, p. 10). Gensler (2011) that, unlike consequentialist ideals, there cannot be exceptionless duties, as such duties would lead to conflict and contradictions at work. Contextualising it, in a workplace like a library, keeping promises you would have given to a user to deliver the information they want would be of paramount importance rather than judging its consequences which would lead to inhumane results. Thus, keeping one's word to users is a serious duty as one's promise creates a strong obligation and carries with it a special moral weight (Gensler, 2011, p. 127).

2.3.3 Deontological ethics theoretical framework

Deontological ethics, also known as the duty-based theory, is a normative ethical theory regarding which choices are morally required, forbidden, or permitted, based on obligation,

rights, and fairness. The word 'deontology' comes from the Greek word *deon*, which means 'duty' or 'one must' (Kaptein & Wempe, 2002; Tannsjo, 2013), and has a moral judgement if duty has duly been complied with or not (Munigal, 2018). German philosopher Immanuel Kant, the proprietor of this deontology point of view, argued that an act was morally right if done out of a sense of duty. Freeman and Werhane (2008) stated that as a moral theory, deontology ethical theory sets rules and criteria for acceptable behaviour by specifying how all individuals are expected to act without making an exception for themselves. According to Sueur, Hommes and Bester (2013, p. 21), deontology "is a theory of ethics that proposed a universal moral law, based on rationality." Kantianism is sometimes identified with the conclusion that goodwill is the only thing that is good in all circumstances (Tannsjo, 2013). Thus, the deontological ethics theory follows the golden rule of the Holy Bible, which states that "... whatever you want men to do unto you do also to them ..." (New King James Version, 2017, Matthew 7:12) or "do for others just what you want them to do for you" (New King James Version, 2017, Luke 6:31). This was reinforced by Sueur, Hommes and Bester (2013, p. 21) who stated that deontological ethics was based on the golden rule that subscribed to the notion that "always treat others as you would want them to treat you." Deontological ethics subscribes to the notion that morality is a matter of duty, where individuals have moral duties to do things that are right. Thus, the moral duty is not to do things which are wrong, and where right takes priority over good. Thus, according to deontologists, whether something is right or wrong does not depend on its consequences but, rather, on whether an action is right or wrong on its merit. Deontological ethics subscribes to the notion that the nature of the act itself, regardless of the consequences it causes, is only of relevance. According to Gensler (2011), deontologists live in a universe of moral rules, such as, it is wrong to kill innocent people, steal, and tell lies, but it is right to keep promises. In the deontological perspective moral rules are seen as humankind's basic duties, and "duties are perceived as closely connected to rights, an act that one can justifiably demand of others" (Gensler, 2011, p. 131). In deontological ethics, one decides if an act is right or wrong without looking at the consequences, but "if an action is not right for everyone to take, then it is not right for anyone" (Onoyeyan et al., 2014). In other words, deontology falls within the domain of moral theories that guide and assess our choices of what we ought to do (deontic theories), in contrast to those that guide and assess what kind

of person we are and should be (Alexander & Moore, 2016), or the expected consequences and the states of affairs they bring about (Capraro et al., 2018).

Constructs of the deontological theory include agent-centred, patient-centred, and contractarian deontological theories. At the heart of agent-centred theories is the idea of agency, and the moral credibility of agent-centred theories is rooted here (Larry & Moore, 2016). According to agent-centred theories, individuals have both permissions and obligations that give them agent-relative reasons for action. The idea is that morality is intensely personal, in the sense that we are each urged to keep our own moral house in order (Larry & Moore, 2016, p. 17). Patient-centred deontological theories are appropriately characterised as theories premised on people's rights. Unlike contractarian deontological theories, agent-centred and patient-centred deontological theories are rights-based rather than duty-based (Larry & Moore, 2016, p. 37). Contractarian construct emanates from the idea of contract or mutual agreement. It subscribes to the notion that moral acts are those that all individuals in a group would agree to if members were objective about it. Additionally, it also subscribes to the idea that moral rules in themselves are a sort of a contract, and therefore only people who understand and agree to the terms of the contract are bound by it (Larry & Moore, 2016, p. 49). This notion serves well in a professional setting like the LIS profession.

From the above, it can be concluded that the major difference between the deontological view and the consequential view of things is that consequentialism begins by considering what things are good, and identifies 'right' actions as the ones that produce the maximum of those good things. On the other hand, deontologists appear to do it the other way round, as they first consider what actions are morally 'right' and proceed from there; though in practice it is not really the starting point of deontological thinking. In Kant's view, the source of an individual's morality is his/her ability to rationally make decisions and then possess a 'will' to execute it. Thus, deontological ethical theories regard the action itself as the object of ethical assessment. They deal with one's ethical principles in given situations, principles that guide one to act in a certain way. Additionally, they deal with what common reason requires of one regarding the treatment of others, and obligations one owes to others in society. Additionally, the deontological ethical framework is concerned with what individual people do in groups or

practical situations, as opposed to the consequences of their actual actions. Thus, deontology judges the morality of an action based on rules people set in groups or society, in that way making individuals' actions more significant than the end consequences. Furthermore, in the deontological ethics perspective, "some kinds of actions are wrong in themselves, and not just wrong because they have bad consequences (Gensler, 2011, p. 110)." This evades subjectivity and ambiguity, as one simply has to follow laid down rules. The duty-based ethical ideology teaches people that some acts are right or wrong just because of the sorts of things they are, and individuals have a moral duty to act accordingly, irrespective of the good or bad consequences the action may produce. Thus, a person who applies duty-based ethical principles in their actions should do the right thing, even though that might produce more harm (or less good) than doing the wrong thing. This is because according to Kantian's view, people have a duty to do the right thing, even if it produces a bad result. Reasonable people advocate and defend the deontological school of thought because it is in the interests of all of us if these rules are followed, and it is usually not in our long-term interests if these rules are habitually violated. According to Kaptein and Wempe (2002), deontological ethical theories outline duties that must be observed irrespective of their consequences. When considering an example of lying, even if one has a good reason to lie, such as protecting a friend from physical torture, the deontological ethical theory will still argue that it is wrong to lie. Unlike the utilitarian ethical theory, which will argue that the lie is justified because of the consequences, Kant will argue that no outcome can excuse breaking a moral law (Freeman & Werhane, 2008). Thus, deontological theories claim that certain kinds of action are naturally right or good, as a matter of principle. This theory focuses on fulfilling one's duties, including respecting the rights and independence of others and treating others with equivalent fairness (Osmon & Landau, 2006, p. 865). Anderson (2006) stated that deontological theory also focuses on the rights of the individual, in this case the library user, the freedom to choose, to know the truth, the right to privacy, and the right to expect others to live up to their agreements. Deontic theories, in this study's context, deal with what obligations and permissions LIS professionals have in the management of OAEIR, one that is binding or proper in relation to societal values and norms. The theories emphasise the legitimate rights of individuals that ought to be respected and at the same time prohibiting unfair action. This was reinforced by Gensler (2011) who stated that

duties, as defined in the deontological perspective, connected closely to rights, as rights were what could be justifiably demanded of others.

Freeman and Werhane (2008) stated that deontology ethical theory is one branch of thinking about ethics that focuses on the rightness of an action or the motives behind a decision. Additionally, deontology moral choices respect others as persons, based on predefined moral criteria. From a Kantian perspective, the following kinds of questions would be asked when deciding what action to take:

- Does the action set positive or negative precedents?
- Is it an action that is acceptable to other reasonable persons?
- Is it 'legislable', that is, is it applicable to other similar situations?
- Does it respect or at least not denigrate human dignity?

From the above, it can be noted that in deontology ethical theory analysis, some actions are judged to be wrong not because of their positive or negative outcomes, but rather actions are judged to be wrong because they violate standards for acceptable behaviour or moral rules in society (Freeman & Werhane, 2008, p. 1). Additionally, Tanner, Medin and Iliev (2008) observed that a long tradition in decision-making assumed that people usually took a consequentialist perspective, focusing on the outcomes only when making decisions, but largely neglected the existence of a deontological perspective.

2.3.4 Analysing the three schools of 'ethical' thought

When analysing the three schools of ethical thought, one will be persuaded to conclude that the difference among the virtue, consequential and deontological ethical approaches to morality tends to lie more in the way moral dilemmas are approached rather than in the moral conclusions reached. This is because a consequentialist might argue that lying is wrong because of the negative consequences produced by lying, but at the same time recognising that certain foreseeable consequences might make lying acceptable. A virtue ethicist would focus less on lying in any particular instance and, instead, consider what a decision to tell a lie or not tell something about one's character and moral behaviour. On the other hand, a deontologist might argue that lying is always wrong, regardless of any potential 'good' that might come

from lying. As such, using the different ideologies above, lying would be made on a case-by-case basis that would be based on factors primary to the three normative ethics approaches such as personal benefit, group benefit, and intentions. According to Kaptein and Wempe (2002), the essential difference between deontological and teleological theories, such as consequentialism, lies in the role that is attributed to the consequences of the action under review. However, both deontology and utilitarianism ethical theories emphasise the importance of duty or obligation. Their 'Act' component stresses the primacy of individual action over general rules, and their 'Rule' component stresses the primacy of rules (Tavani, 2004, p. 53). Tannsjo (2013) stated that though consequentialism is often contrasted with deontological ethics, as if these two kinds of moral theories divide the entire ethical field between them, it is certainly not correct as there exist other possibilities as well, such as virtue. However, deontological ethics and consequentialist ethics do differ in a very radical manner, where, according to a deontological ethics viewpoint, it is the nature of the act that is decisive to its moral status. Thus, consequentialist ideology requests us to reflect on the consequences of the act, whilst the deontological ethics ideology requests us to reflect the act, without thinking of its end consequences (Tannsjo, 2013, p. 59). On the other hand, according to Gensler (2011), deontology and virtue ethics are different sides of the same coin and, therefore, are not comparable. Virtue ethics relate to duty in a primary and derivative role, where on one extreme, the ethics of duty is primary, and on the opposing extreme, the ethics of virtue is primary. Additionally, cultural relativism and utilitarianism can be expressed either in terms of duty-based ethical ideology or virtue-based ethical ideology, that is, in terms of either norms of right action or good character traits (Gensler, 2011, p. 149). Great moral philosophers as far back as the time of Plato and Aristotle have brought both duty and virtue ideologies into ethical discussions to add richness and obtain comprehensive viewpoints.

2.3.4.1 Why not virtue?

Virtue ethics theory, just like any other ethical approaches, also has its strengths and weaknesses. On the strength side, virtue ethics theory deals with an individual person's qualities and how one uses these qualities to enable the livelihood of other persons in society better. Thus, if an individual has virtues, they can allow him or her to act morally and to treat other people with respect, kindness and love. Fitzpatrick (2008) stated that although

consequential ethical theory and deontological ethical theory suggested how to act morally in particular situations, the theories do not automatically encourage one to become a moral being, which the virtue ethical theory does. Additionally, these virtues will prompt a person to do good things to others as these virtues are inborn in him or her, contrary to the deontological theory where people are compulsorily expected to do good deeds out of duty, or the consequential theory where people are compulsorily expected to look for greatest happiness in order to execute an action.

However, virtue as a framework of ethics makes it impossible to define what is ‘good’ in an absolute sense, as what makes a person good could be relative. This is also because a person is good or bad in comparison with other people. What makes a person good is one of the most fundamental questions the philosophers of Greek ancient times struggled with (Kaptein & Wempe, 2002, p. 20). Because qualities that make a person good at a particular task or tasks do not necessarily make that individual a good person, just as a good writer can be a bad person at the same time. Additionally, Kaptein and Wempe (2002) note that,

“The idea of good exists not only as an intellectual concept but also as an independent, actual object. According to Aristotle, the good does not exist independently of concrete reality but only with the help of reason that it can be abstracted as a concept, thus becoming a thought constructed and based on concrete reality (p. 21).”

Additionally, the authors note that, the “standards of excellence for people differ from culture to culture and perhaps even from individual to individual (p. 26).” Though virtue ethics assists individuals in understanding the framework of being a righteous human being and providing a framework for living a virtuous life, as an ethical framework it fails to provide for unambiguous procedures for resolving ethical dilemmas. This is so as virtues can be influenced by the subject (Kaptein & Wempe, p. 25).

2.3.4.2 Why not consequentialism?

Kant argued that ethics and ethical reasoning involve the uniquely human ability to make rational, free choices from several possible alternatives (Freeman & Werhane, 2008). Thus, moral decisions have to do with what individuals can bring under our control, based on their

choices and intentional actions rather than the consequences of their actions. Consequences of an individual's actions are difficult and unpredictable to always regulate, making consequentialism a complicated ethical theory to implement, especially as a sole theory in day-to-day work situations. Additionally, Fitzpatrick (2008) noted that consequential theory is too unpredictable to be a foundation of morality, a concept which should only be reserved for 'reason' and, thus, pleasures and desire which it represents are not of any higher order than reason. Woodward (1990) noted that, like in the LIS environment, the great difficulty with consequentialist ethics was that it required a large database of facts and huge amounts of processing time, which can be particularly difficult as LIS professionals, in most cases, had to make these decisions in a short space of time. Kaptein and Wempe (2002) explained that in trying to implement consequential ethics theory, one dilemma exists where it is difficult to rank different dimensions of pleasure, which might be individuals' physical pleasure or the needs of the spirit while pursuing the former is seen as leading to all kinds of evil. This was reinforced by Gensler (2011) who stated that pleasure does not necessarily bring happiness, and if so, judging the consequence of an action by the total pleasure it brought is misleading as a basis. Rachels and Rachels (2010) noted that most ethicists rejected consequentialism and its primary teleological theory, utilitarianism, due to a variety of objections. The first objection was that not all 'good' things were the 'right' things and that happiness was subjective. The second objection looked at if 'consequences on an action' was all that mattered, and ethicists used three arguments to attack the theory, that is, justice, rights and its backwards-looking reasons. The third objection was based on the fact that the theory was too demanding to fulfil, due to its 'equal concern for everyone'.

Deontologists argued that consequentialism was inadequate as a moral theory, as they believed that the consequences of one's behaviours were often outside of one's control. Additionally, Kaptein and Wempe (2002) stated that the 'ends' that function as the moral base in teleological theories, such as consequential ethics theory, were not moral in themselves, as they were particularly interested in choosing one or more of such 'ends' as a standard for judging the moral content of actions, based on its consequences. Thus, they would only become morally charged in their use as a standard for the moral content of actions after going through the series of its consequences. As teleological theories revolved around a targeted end, it was difficult to

produce that targeted end, as consequences of one's actions might differ from one person to another. This would often result in conflict and an ethical dilemma as to which 'end' should be employed as the criterion for moral action (Kaptein & Wempe, 2002, p. 2). Thus, Gensler (2011, p. 117) highlighted the usefulness of individuals to follow laid down strict rules, such as those grounded in the deontological perspective, as "the goal of morality was to bring about the best consequences for everyone." Following one's instincts, as is advocated by the consequential perspective, would lead to problematic conclusions as it would clash with what is socially approved. Thus, following a rationality approach, as is advocated by the deontological perspective, would be more appropriate, as many things were intrinsically good.

Determining what is best even for oneself, let alone what is best for everyone, is a different proposition that consequential ethical theory seek to implement, as one never really can. Thus, the consequentialist ethical theory simply guides one to do one's best at the applicable cost-benefit analyses. To this end, though consequentialism was a powerful moral intuitions theory, Kaptein and Wempe (2002) noted that it had two practical and two very fundamental problems associated with it. On the side of the practical problems, consequentialism had the problem of measurement and the problem of comparison, while on the side of the fundamental problems, it had the problem of justice and the problem of rights. Resultantly, the following were noted concerns about the practicability of implementing the consequentialism ethical theory:

- The problem of measurement: was it desirable to quantify the costs and benefits and by implication, the common good? A real danger existed that non-quantifiable consequences would fall to the wayside.
- The problem of comparison: how was it possible to compare fundamentally incomparable goods and services in order to determine the extent to which they promote happiness or the common good? In the library sense, how was it possible to compare privacy and access to information or accurate and intellectual property of information? To determine which situation represents the greatest common good, we have to be able to make a comparison between different goods.

- The problem of justice: how could the benefits for one person be weighed against the costs for another? The utilitarian criterion of the greatest pleasure for the greatest number says nothing about how the costs and benefits of that pleasure must be distributed.
- The problem of rights: on what grounds can people's rights be abused in the name of serving the common good? Is it acceptable to simply push aside rights that are based in a contractual agreement or in the Universal Declaration of Human Rights if it promotes the common good? (Kaptein & Wempe, 2002, p. 9)

Additionally, another problem with utilitarianism theories, such as consequentialist ethical theory, was that in human societies, not all needs were appropriate to be satisfied, calling for an appropriate moral standard that could be used for selecting the 'right' preferences or ethical philosophies (Kaptein & Wempe, 2002). Gensler (2011) stated that though consequential ethical theory outlined what individuals ought to do based on what that maximised good consequences are, regardless of what kind of thing they do, it had many bizarre implications as it made it impossible for an individual or a group of individuals to hold the same view in a consistent way. Thus, one might object to consequentialism simply because "even if it might lead to the right judgements, an individual might do so or use it for the wrong reasons" (Gensler, 2011, p. 123). Consequentialism is also frequently criticised on a number of grounds. Firstly, there is no jurisdiction of moral permissions, no jurisdiction of going beyond one's moral duty, no jurisdiction of moral indifference, and all acts are seemingly either required or forbidden. Secondly, consequentialism seemingly demands that in certain circumstances, innocents be killed, beaten, lied to, or deprived of material goods to produce greater benefits for others. In a consequentialism viewpoint, it does not matter how harmful these acts are to some, so long as they are more beneficial to others. Utilitarianism holds that an action is right if it leads to the most happiness and maximum pleasure for the greatest number of people.

2.3.4.3 Why deontology?

According to Kaptein and Wempe (2002), the "duty-based or deontological ethics theory solves a number of problems which are associated with consequentialist ethical theories such as utilitarianism." This is because, in the deontological ideologies, all individuals have certain obligations and rights, which are indisputable, non-negotiable or cannot be disposed of

(Kaptein & Wempe, 20002, p. 10). Thus, in deontological ideologies, different kinds of unchallengeable rights form the basis of these obligations. LIS as a profession has got moral and ethical principles that should be followed in the day-to-day execution of duties. Thus, the deontology ethics theory's point of view, which viewed an act as morally right if it was done out of a sense of duty, suits the working environment and principles of LIS professionals well. This is because in a library setting, all users are of equal standing before a LIS professional's eyes, regardless of gender, age, religion, and cultural principles. According to Freeman and Werhane (2008), Kant subscribed to the notion that moral choices and moral actions had to apply to all human beings equally, and the best moral choices were those that one would expect others to do, even to oneself, without exception. Thus, Kant argued that moral rules did not have exceptions. More importantly Kant, in his deontological ethics theory, "insisted that everyone had to be treated as an end, and not as a means to an end" (Sueur, Hommes & Bester, 2013, p. 21). This made the deontological ethics theory more objective than subjective in dealing with ethical situations, as the subjects (people) are not included as part and parcel of rationale when determining ethical judgement. Virtue and consequential ethics theories tend to be subjective, as there are high levels of 'subjects' residual in their ethical decision-making processes. According to Adebayo, Akole and Salau (2016), in essence, ethical considerations of information provision focus less on consequences for actual service delivery, but in deontological aspects. Thus, LIS professionals who interpret privacy of users, intellectual freedom and access to information as a universal human right, and their duty to protect them, are operating within a deontological ethical framework (Burgess & Knox, 2019). Refusing to treat library users as means (consequential), instead of ends (deontology), and respecting their agency and independence is a legacy of deontological ideology. According to consequentialist ethics theory, one can override a rule or standard only when one has good reasons, reasons that other reasonable people would accept as being sound because they appeal to another standard (Freeman & Werhane, 2008). However, although moral rules are general rules, how they are interpreted depends, in part, on the context of a particular situation. For example, one would be required never to lie, even in extreme circumstances such as national emergencies or war. This was reinforced by Gensler (2011), who considered the morality of abortion to apply the normative ethical viewpoints. The golden rule (deontology) was found out to be the safest bet because of its characteristic of consistently forcing people into an anti-abortion view,

something that would be impossible if greatest pleasure (consequentialism) and instinct (virtue ethics) viewpoints were to be applied.

Just as in the LIS profession's principles, respect of basic rights of everyone equally, such as the rights to life, freedom, privacy and fairness, is the backbone of the deontological ethical theory. Though in duty-based ethics 'rights' were the focal point, on the contrary, Kaptein and Wempe (2002) noted that 'rights, obligations and justice' were concepts that consequentialist ethical theory had no answer to. According to Freeman and Werhane (2008), these rules were part of the ordinary morality that reasonable people would agree should hold for everyone and fit well with the principles of librarianship. People holding 'protected values', through the application of deontology perspectives, showed increased attention to acts versus omissions and less attention to outcomes, which was common in the consequential perspective (Tanner, Medin and Iliev, 2008). According to Burgess and Knox (2019), the objective and shared nature of rules make deontology well-suited to serve as the basis of a professional code of ethics. Thus, the adoption of the deontological ethical theory resonates well with the objectives of the current study which sought to examine the adoption of information ethics standards by LIS professionals. This adoption was reviewed from LIS professionals' ethical management of OAEIR in university libraries' perspectives, which were mostly bound by duty-based rules emanating from set codes of conduct and/or principles of ethical practices for their workplaces. So, as observed above, deontology is a dominant theory that resonates well with LIS professionals' ethical awareness, particularly within the information management context and with regard to library principles and policy.

There is a need for standardisation of ethical practice at the workplace so as to safeguard individual employees from acting in opposition to the organisational norms or bringing their ethical values to the organisation. As LIS professionals needed to learn to think critically and to develop real concerns for library users they served (Brit, 2013), they needed to develop sound corporate culture, which is recognised as a key contextual influence in establishing and maintaining good ethical norms. Much unethical conduct is the result of organisational cultures that send mixed messages about what is important and expected of employees, which seems to be the problem of implementation of consequentialism and virtue ethics ideologies at the

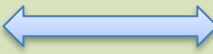
workplace. Research has shown that an organisation's ethical norms have a strong influence on how employees act and their ideas of right and wrong within that organisation. According to Larry and Moore (2016), deontological ethical theory possesses the strong advantage of being able to account for moral perceptions about duties better than can consequentialism. Thus, the deontological ethical theory, unlike consequentialist ethical theory, has the potential for explaining why certain people have the moral standing to complain about, and hold to account, those who breach moral duties. Consequentialism and virtue ethics viewpoints give more power to individual LIS professionals to implement their own choices in every work encounter, instead of standardised organisational values which are supported by the deontological theory. Brit (2013) reinforced this assertion by concluding that such scenarios could be avoided by employing a more standardised ethical principle across the organisation, and by all employees. The deontological ethical framework fits well with this structure, where it emphasises duty and rights in the implementation of work tasks by all employees. For LIS professionals, it is critical to understand, adopt from the start, and promote good ethical conduct in order to avoid ethical scandals in academic libraries. This suits well with the duty-based ethical framework, as it promotes a unified corporate culture, which will inform good ethical conduct by LIS professionals. Woodward (1990, p. 8) analysed the merits and demerits of consequentialist and deontological ethical theories as "bases for reasoning about ethical principles in general and intellectual freedom in particular." The study concluded that an individual's deontological defence of intellectual freedom was safer than a defence on consequentialist grounds.

2.4 Deontology and PAPA in context

Information ethics covers many areas, but more importantly, it is concerned with the lifecycle of information against the right to privacy, the right of access to information, the right to intellectual property, and the quality of information (Britz, 2013). Mason (2006) considered several areas of information ethics in which the control of information is crucial and came up with the following areas: Privacy, Accuracy, Property, and Accessibility, which is famously given the acronym PAPA. PAPA is a timeless ethical framework, whose common values are also the core values of the LIS profession. These values include values that are not absolute, values that are of more importance even though generation changes, values that are undeniably

relevant in resolving conflict situations, and values that can adapt to the contemporary LIS profession's ethical issues (Gorman, 2010, as cited in Foster, 2012). Additionally, PAPA ethical framework reflects the major components in the management process of electronic information resources by LIS professionals, hence the researcher found this theoretical framework very useful for the study. Focusing on these values can help LIS professionals construct the social contract by which to deal with the threats to their intellectual capital in this information society (Parrish, 2010). The following table highlights the study's perceived relationship between the management cycle of electronic information resources, which is creation, organisation, dissemination and use, and the 'duty' that LIS professionals ought to perform bearing in mind the Privacy, Accuracy, Property, and Access ethical dimensions.

Table 2.1: LIS professionals perceived OAEIR workflow illustrated

Creation of electronic information resources	Duty (Deontic theory) 	Privacy, Accuracy, Property, and Access
Organisation of electronic information resources		Privacy, Accuracy, Property, and Access
Dissemination and Use of electronic information resources		Privacy, Accuracy, Property, and Access

Source: Field Data (2019)

According to Parrish (2010), the PAPA ethical framework helps to establish norms that will allow better definition of the social contract that protects individuals in the information age. The social contract is defined as “existing social contacts embodying actual behavioural norms which derive from shared goals, beliefs and attitudes of groups or communities of people” (Dunfee, 1991 as cited in Parrish, p. 188). These values are the backbone of the deontological ethical theory.

2.5 Summary of the chapter

This chapter discussed ethical theories and the three compelling basic approaches to normative ethics: virtue, consequential, and deontological ethics. The study adopted the deontological ethical framework after examining the attributes, constructs, or variables of the above three normative ethics theories. The duty-based or deontological ethics theory solves a number of problems which are associated with consequentialist ethical theories. The legacy of the deontological theory is respecting and treating others as ends, instead of treating others as means, as advocated by the consequential theory. This legacy is supported by LIS professions' ethical principles, which respect the fundamental rights of everyone equally, principles that virtue and consequentialist ethical theory has no answer to. Thus, deontology is a dominant theory that resonates well with LIS professionals' ethical awareness, particularly within the information management context and concerning library principles and policy. The PAPA

ethical framework reflects the significant components in the management process of electronic information resources by LIS professionals, and focusing on these values can help LIS professionals construct the social contract. The next chapter will review the literature related to the study so as to provide a deeper understanding of the research problem.

CHAPTER THREE: LITERATURE REVIEW

3.0 Introduction

Studies should add value to the body of literature on a research topic, and research holds justification for its undertaking through the review of related literature on the topic, which “provides a framework for establishing the importance of the study as well as a benchmark for comparing the results with other findings” (Creswell, 2014, p. 27). Thus, a literature review accomplishes several purposes in a study, which include sharing with the reader the results of other closely related studies that have a bearing on the one being researched. It will then align the study to a broad discussion which is ongoing in the literature and related to the study, filling in gaps and/or expanding discussions on prior related studies (Creswell, 2014, p. 28). According to Magwa (2015), exploring and evaluating findings from prior literature against one’s study is an essential aspect of all research undertaking. Thus, this process of reviewing prior literature on related studies assists the researcher in widening the knowledge of the subject area and to investigate the problem more intelligently. A literature review is a process of reviewing published research on a particular topic, which is related to one’s area of study and is authored by accredited scholars (Creswell, 2014, p. 36). It is concerned primarily with the research studies that have previously been undertaken and which are connected to the main subject matter of a new research study.

The literature review chapter reviewed the following type of existing literature: awareness and subsequent adoption of information ethics standards by the library and information science (LIS) professionals focusing on the privacy, access, property, and accuracy ethical issues associated with the management of OAEIR. Additionally, it will review ethical dilemmas being encountered by LIS professionals which are associated with the management of OAEIR, and contextual ethical standards emanating from ethical dimensions prevalent in this information society which LIS professionals face as they create, organise and disseminate OAEIR. The discussion on the literature will first focus on those electronic information resources which are now being made available to library clients by LIS professionals, such as online databases of electronic books and electronic journals, and information resources being locally generated and provided by libraries through the IR content of staff publications and

student dissertations. It will then focus on the above resources in relation to the open access (OA) movement and its impact on libraries and LIS professionals' work in this information-intensive society. Code of ethics frameworks used by LIS professionals in the execution of their duties, information ethics and associated ethical issues peculiar to the information society and libraries will also be discussed from the global LIS profession ethical codes, other benchmarks, international ethical codes and continental codes of ethics perspective.

3.1 Libraries in the information society

The information society has made it possible to introduce ICTs in the LIS profession. As a result, the LIS profession has become more and more challenging and dynamic, especially in the face of ICTs, which are altering every fabric of the profession. Senapati and Singh (2012) noted that a number of changes involving library resources and services had taken place within the last two decades in this information society. These changes ranged from the format and type of library resources acquired, from purchase-based models to subscription-based models, and changes in the LIS professionals' skills required in this increasingly aligned ICTs-based system, though the selection and finding of trained manpower that was conversant with these latest technologies was presenting another dimensional problem (Senapati & Singh, 2012, p. 68). Martin (1988, as cited in Sueur, Hommes, & Bester, 2013, p. 37) stated that an information society is:

“A society in which both the quality of life and economic development depended mainly on the exploitation of information in everyday life, and a society that was reliant on information and knowledge for physical, mental and economic survival.”

According to Mishra and Mishra (2014), ICTs were serving as a significant instrument in the LIS profession as libraries were now more than capacitated to achieve their vision and mission, especially those that pertain to the management of information resources. These ICTs had, in turn, allowed library and information science (LIS) professionals to provide access to a plethora of electronic information resources, both in online databases and or in digital databases such as IRs (Mwafulilwa, 2017). These online platforms have made it possible for LIS professionals to provide access to an unlimited quantity of information to a large number of library clients in a 24/7 set-up. Additionally, the coming of the OA movement has further

broadened the range and speedy access to information by various library clients. The coming in of ICTs has offered library clients access to a plethora of books and journals in every possible form and format, in addition to supporting effective library services, as well as the extension of service beyond the boundaries of the four walls of the library (Mishra & Mishra, 2014). The utilisation of ICTs by LIS professionals worldwide has proved beyond reasonable doubt that a library could perform better through these enhanced facilities, which adequately provide access to the content of the library.

Young (2009) noted that the electronic environment had brought about a revolution in scholarly publishing, as a great number of scholarly resources were finding their way onto the web. This literature was being published, and access was provided from either electronic databases of an online journal or in other platforms such as the digital library and IR as part of a new wave of scholarship. Chandel and Saikia (2012) stated that ICTs had made a great impact on the availability and accessibility of electronic information resources in libraries. In contemporary academic libraries, the coming on board of electronic information resources has been called the greatest revolution in the capture and dissemination of emerging academic knowledge (Chandel & Saikia, 2012, p. 148). This was supported by Mishra and Mishra (2014), who stated that ICTs had brought a unique revolution to the university library and information services. The perception of a university library as a physical entity, where its collection was its pride and value, was eroded by online access to information and the rise of virtual university libraries, as access had replaced ownership. Thus, in this information society, the LIS professionals' pride and the ultimate aim of every library emanate from their ability to provide quick and comprehensive access to resources by using the best possible tools and techniques (Chandel & Saikia, 2012). Additionally, the development of ICTs as the largest repository of information and knowledge has changed the duties of LIS professionals from an intermediary in the print environment to a facilitator in the electronic environment (Chandel & Saikia, p. 244). This was a result of the new tools for information creation, organisation, and dissemination brought about by the prowess of the information society and had shifted the library's focus from physical to virtual services environment. Prabhakar and Rani (2018) noted that the LIS profession was operating in an information society where library clients could be able to access information from any part of the world just with a click of a mouse. Resultantly,

as university libraries were the heartbeat of educational institutions, this information explosion was having a huge impact on their library services in the effective execution of their duties in support of their parent organisations' academic programme (Prabhakar & Rani, p. 6904).

However, though ICTs have proved to be the greatest wonder of the 21st century, they had also opened up a plethora of information ethics concerns for LIS professionals in this information society. As the LIS profession becomes an increasingly technology-driven profession, particularly in the academic library environment, questions arise as to the extent of information technology knowledge and skills that LIS professionals require to ethically handle electronic information (Chase, Dygert & Johnston, 2000). This was supported by Hoq (2012, p. 39), who stated that the massive proliferation of information in every sphere of human endeavour was posing unique problems for LIS professionals and information users, as they were no longer being disturbed by the scarcity of information but, rather, feel confused by the overabundance of information. Moran, Stueart and Morne (2013) stated that the explosion of so much technology had brought information ethics to the forefront of ethical considerations as society tried to unpack relational issues such as "the relationship between information and the good of society, and the relationship between information providers and the consumers of information". Against this background, fair and rational use of information to solve day-to-day problems is becoming increasingly challenging in the information society. Additionally, with the proliferation of networked digital information, the roles of LIS professionals have shifted from being the custodian of information to information scientists. This is evidenced by major research libraries where LIS professionals spend much of their time creating electronic pointers to resources on the Internet. However, not much is known about LIS professionals' ethical awareness and adoption of ethical principles when executing these processes.

3.2 Electronic information in libraries

As learning resource facilities of the twenty-first century, academic libraries at the turn of this century took a series of deliberate steps to position themselves for the inevitable shift of emphasis from being traditional libraries towards being virtual libraries, 'from the brick concept to the click concept'. This was a direct result of the fact that over the decade, a shift in emphasis had been placed from simple information technologies to knowledge technologies,

which put more value on human intellectual capital and encouraged more collaboration and interaction within the economics of information (Sueur, Hommes and Bester, 2013, p. 37). The ever-increasing knowledge society had created this shift of emphasis that valued information as a key to economic prosperity. Additionally, the society increased information-related activities that ensured the interaction, exchange and freedom of information through the use of ICTs, thereby producing a plethora of information platforms. Thus, the initiative by the libraries was driven by the desire to move forward with changing international trends in information management and dissemination, which shifted the original emphasis of the library being a holder of information toward the importance of a library being a gateway to networked information, providing access rather than holdings.

This resulted in a boom of electronic information resources in academic libraries. Electronic information resources are any information resources provided in electronic form and accessed through the use of ICTs, commonly via the World Wide Web and the internet (Ani & Ahiauzu, 2008). Electronic information resources have provided library clients with access to a broader collection of resources than otherwise might have been available in the traditional print collections and have tremendously transformed information handling and management by LIS professionals, particularly in university libraries (Ani and Ahiauzu, 2008, p. 504). Most considerable, visible and important electronic information resources found in academic libraries in higher and tertiary institutions include Online Databases of electronic books and electronic journals content and IR content.

The chief aim of the university libraries was to, among other things, build an effective collection of electronic information resources and to ensure optimum use of the resources in support of the university's teaching, learning and research programmes (Khan, 2016). Thus, the availability of electronic information resources in academic libraries has augmented library collections and improved access to information by library clients. On the contrary, two decades ago, the availability of information to library clients was scarce, and the challenge was to make enough of it (Chase, Dygert & Johnston, 2000). However, with the coming of the information society and, subsequently, electronic information resources, there is now too much information, and today's LIS professionals' challenge is to identify information that is relevant

and useful to library clients and at the same time organising it to be more useful before providing access (Chase, Dygert & Johnson, 2000, p. 278). Chandel and Saikia (2012) predicted that by 2020 more than 90% of the materials accessible through academic libraries would be in the digital format, a situation that called for LIS professionals to cope with the newly emerging digital environment so as to manage future trends. Additionally, the information society and the OA movement have made it possible for an unlimited quantity of electronic information to reach LIS professionals and library clients, thereby causing information overload. Sueur, Hommes and Bester (2013) defined an information-overloaded individual as one who would have been confronted with so much information, relative to the amount of time it is presented, making it impossible to think clearly, make an informed decision, and make an ethically sound decision in morally complex situations like ethical dilemmas.

3.2.1 Online databases

A library without walls had been anticipated for years, owing to ICTs. Ani and Ahiauzu (2008) stated that the development of electronic databases in academic libraries had been a global phenomenon, posing a paradigm shift from traditional librarianship to technologically driven information handling in the electronic information environment. Resultantly, LIS professionals worldwide have been building large stocks of electronic information databases at an amazing rate. Frederiksen et al. (2011) noted that in just half a decade (2003 to 2008), academic libraries worldwide had increased their electronic database titles by almost 100 million titles, a trend that was set to continue. This was in response to the information society and at a time when more and more library clients were increasingly demanding access to electronic information. Khan (2016) stated that online databases were born as an outcome of the application of ICTs to education and research. Online databases were useful resources in libraries that had ushered in a variety of media that was assisting LIS professionals in the efficient and effective management of information, that is, in acquisition, organisation and dissemination of information. Online databases offer potential solutions to information shortages and provide access to a wider range of material that might otherwise be made available by LIS professionals through their physical library collections. They also have the additional advantages of allowing remote access and concurrent user access. Thus, they can be accessed from virtually anywhere

and at any time, hence are not tied to a traditional library's physical location and operating hours. Additionally, through appropriate metadata and information exchange protocols, online databases can easily share information with other similar online databases and provide enhanced access to library clients through a facility known as the web bridge function.

The information society has made it possible to unveil huge amounts of scholarly information, especially in an academic library set-up. Ani and Ahiauzu (2008) noted that online databases had provided wider access to a wide range of electronic information, electronic books and electronic journals in support of the teaching, learning, and research mandates of universities. According to Sinh and Nhung (2012), online databases were an essential, valuable and up-to-date source of information that was being provided by LIS professionals in universities worldwide, and were indispensable to the learning, teaching and research activities of university communities. The core purpose of online databases is to retrieve useful information for the user that fully or somewhat matches the user's search inquiry (Khan, 2016). An online database is an information database that is extremely organised and subject-specific that seeks to provide library clients with well-sourced and exhaustive information that can be used for research and is accessible via the Internet. Thus, online databases are hosted on websites, are accessible through a web browser, offer reliable information sourced from experts and professionals in a particular subject area, and are offered either for free (OA) or require payment, mostly through annual subscriptions. Principally, an online database is an integrated collection of bibliographic information with which library clients could communicate via ICTs (Khan, 2016, p. 65). Online databases are one of the products of the information society and ICTs that involve searching for information from remotely located databases via computers and communication networks such as the Internet (Khan, 2016). The emergence of online databases in the LIS field has introduced a new era in information searching and retrieval from traditional based retrieval systems to network-based retrieval systems (Khan, 2016, p. 65). One of this 'new era in information searching and retrieval' is that online databases, especially those on OA, can be accessed anywhere from remote physical or geographical locations through interactive computer and communications technologies. Thus, library clients would not need to go to the library to get information.

3.2.2 Institutional repositories

As ICTs continued to advance, many libraries had undertaken digitization efforts to put valuable resources at their clients' fingertips. Additionally, during the past few decades, university libraries have increased their involvement in the system of scholarly communication, a scholarly area that involves a wide range of activity, from publishing, communicating and disseminating the research initiatives, ideas and results, to providing access to the published literature (Widén, 2010; Creaser, 2011). Senapati and Singh (2012) noted that this new trend in university libraries was developing, including owning an IR platform resourced by the public-funded research and academics at the institution. LIS professionals are now gathering, organising and uploading all research output of their universities as part of their everyday duties. This research output consists of journal articles, student theses and dissertations, seminars and conference papers, technical and project reports, and annual reports. These IRs are available on the university websites, and the information content can be accessed and downloaded from any corner of the world under an OA setup (Senapati & Singh, 2012, p. 67). This resulted in libraries gradually moving away from being consumers of scholarly publications to becoming more active respondents in producing scholarly materials (Gilman, 2013). According to Yang and Li (2016), scholarly communication, engagement in publications and scholarly and research endeavours are of principal interest to LIS professionals in academic libraries. Conrad (2017) stated that LIS professionals had a long and distinguished publishing history by exposing their collections through bibliographies, facsimiles, and catalogues. The library's publishing aimed to make resources and collections identified and accessible to its patron base. While the Internet has made the discovery and dissemination of library holdings much more accessible than ever, electronic publishing technologies have also unlocked fascinating new purposes for library publishing, including through OA IRs initiatives. Electronic publishing, which has also enabled a self-publishing boom in recent years, has also provided a significant opportunity for academic libraries that had not been heavily involved in publishing activities before to develop IR platforms so as to create, organise, archive and disseminate their institution's intellectual output (Conrad, 2017, p. 10). The LIS profession has greatly benefited from information communication technologies, and many libraries are now converting their collections into digital format as part of their electronic information resource content (Prabhakar & Rani,

2018). Nevertheless, as this new purpose for library publishing has led to unveiling such platforms as OA, digital libraries and IRs, it has also unlocked many as yet to be answered ethical dimensions and challenges.

Sreekumar (2012) defined an IR as scholarly archives of the intellectual output of an institution that draws its strength from the OA movement. IRs enable LIS professionals to create, organise, archive and disseminate the research output of their institution through OA, via the Internet. According to Prabhakar and Rani (2018), an IR, which is a contemporary LIS duty for collecting, organising and disseminating scholarly works, is created to serve the purpose of availing to the campus and the community at large the research output of the institution's faculty, staff and students, free of access under an OA set-up. IRs manage and preserve effectively an institution's intellectual content outputs, which are generally not published or preserved elsewhere (Prabhakar and Rani, 2018, p. 6905). Benefits of the IRs included collecting and curating digital output and, when coupled with the OA movement, served to improve the visibility and impact of the institution's research output (Sreekumar, 2012). IRs provide access to digitalised scholarly resources from the institution's research output, and the resources are generally not available on other platforms on the Internet. IRs make use of computers and communications technologies to offer various types of information for serving the academic and research community globally (Khan, 2016). According to Bawack and Nkolo (2018), IRs present a single point of accessing, searching and organising the scholarly materials within an institution. Additionally, the information provided by IRs is mostly OA in nature, and users may not need to pay any amount of money to access it. Additionally, IRs also have the same advantages as online databases, of allowing remote access (off-campus access) and concurrent multi-user access. According to Prabhakar and Rani (2018), the IR supports the teaching, learning and research activities of the institution, coupled with increased visibility and centralisation, standardisation and storage of all types of institutional scholarly records. Additionally, through metadata harvesting of national and regional repositories, IRs can exchange and easily share information with other similar repositories to provide library clients with enhanced access to information, such as the Database of African Theses and Dissertations (DATAD) initiative, which is a unique repository for scholarly research published by African Universities and made available by the Association of African Universities. However, LIS

professionals needed to ensure that content within their IRs was and remained accessible, was accurate, retained its authenticity, reliability and integrity, and most of all remained relevant to its intended users (Bhawack and Nkolo, 2018, p. 6905).

3.2.3 Electronic information management processes

In this contemporary information society, information resources management incorporates a huge variety of processes, ranging from managerial, organizational, and ICTs issues (Drake, Snyder & Cegielski, 2007). Of special note, ICTs have presented the LIS profession with another dimension in the information management process. Mishra and Mishra (2014) noted that the information society and the introduction of ICTs had presented the LIS profession with new ways to manage information resources, which involved the collection, organisation and dissemination of information. However, Frazier (1999) noted that in this transformative ICTs era and the face of scholarly communication change, LIS professionals' ethical dilemmas in the library collection development processes were unavoidable. Khan (2016) added that the management of electronic information resources, which included selection (creation), organisation and dissemination (provision of access), was creating various ethical challenges for LIS professionals. Choosing to ignore these ethical dilemmas would cause serious ethical implications and consequences for both library clients and the library's parent institutions. Chase, Dygert and Johnston (2000) noted that LIS professionals had been creating, organising, and disseminating information for a long time. However, the information society had provided a new playing environment, chiefly due to the unprecedented volumes of information available in unprecedented formats. Thus, electronic information resources now require LIS professionals to take on new duties and responsibilities (Marilyn, 2006). Chandel and Saikia (2012) noted that LIS professionals had long dealt with print resources for centuries, thereby becoming acquainted with their acquisition processes. However, unlike the acquisition processes of print information resources which were well established and standardised, the acquisition of electronic information resources remained a challenge for LIS professionals (Chande & Saikia, 2012, p. 149). Electronic information resources management lifecycle and workflow had become increasingly complex in this information society than its predecessor resource, the print resource, which had dominated the LIS environment for centuries (Hosburgh, 2014). This scenario had changed entirely due to the proliferation of digital and

online publications, as content publishers were now availing their literature online on a yearly subscription basis and selling accordingly to suit their business policies (Senapati & Singh, 2012). This 'new' workflow had overwhelmed LIS professionals in the field of collection development, particularly the subfield of electronic information resources management (Hosburgh, 2014).

The workflow processes that would be used in this study will include the creation, organisation, and dissemination (use) of electronic information resources. These library electronic information resources collection development and workflow processes should always be tied up to good ethical standards, such as accessibility of the information, privacy of clients' information needs and requests, accuracy of information acquisitions, and protection of property rights of authors and their materials. The creation, organisation, and dissemination (use) of information, irrespective of format and type, is the foundation of any library. Therefore, contemporary digital collections need to respond to the library users' needs and provide an appropriate balance between quality and demand (Chandel & Saikia, 2012). Chase, Dygert & Johnston (2000) stated that the shifting from content ownership to access ownership by libraries, apart from growth in electronic information collections, had provided a great paradigm shift in libraries and library workflow management. Though the basic goal of LIS professionals from time immemorial had always been to create, organise and provide access to information to those who needed it, the coming of the information society and subsequently OAEIR had resulted in many ethical questions arising related to that paradigm shift (Fallis, 2007). Ani and Ahiauzu (2008) stated that though the transition from the print revolution to the electronic revolution had provided library clients with new fascinating tools and applications for massive information searching and retrieval, it had simultaneously also unleashed many ethical concerns and additionally created new ethical challenges, thereby presenting a major ethical shift in the LIS profession (AL-Nuaimi, Bouazza, Abu-Hilal & Al-Aufi, 2017). Ngu-War (2019) also observed that libraries, from time immemorial, have been serving the societies by collecting, organising, preserving and disseminating information available, more recently in multiple formats, ushering in the need for professional ethics and handling of ethical issues in the LIS profession. Chandel and Saikia (2012) encouraged LIS professionals to develop separate collection development policies for electronic books and

printed books accordingly, as each type of material had unique collection development processes, thus needing unique decision making. This was supported by Khan (2016), who stated that libraries needed to develop a separate collection development policy for print and electronic information resources to address the unique ethical issues related to the collection development of its different formats of resources. Thus, libraries needed to have a collection development policy or standard operating procedures for online databases and IR content. Adopting a collection development policy greatly assists LIS professionals by guiding them in planning, selection, development, maintenance and disseminating the library's materials. This would support academic activities as per the needs of their library clients and build a strong and balanced collection of information resources that aim to remain relevant to their clientele community (Khan, 2016, p. 123).

3.2.3.1 Creating electronic library resources

Traditional processes in acquiring library resources were significantly altered by the electronic information resources revolution, which was powered by the information society. Chandel and Saikia (2012) stated that most individual university libraries were not in a position to decide which titles or bundles to acquire, as these decisions were made at the consortium level. As if that was not enough, quality assessment of electronic information resources was proving to be more complicated than the printed resources, requiring LIS professionals to follow workflow parameters in the evaluation of these resources: appropriateness of the content, conditions attached to its access, the convenience of cataloguing, longevity, the convenience of use, usage statistics, technical characteristics and quality of service, and pricing structure (Chandel & Saikia, 2012, p. 149). Resultantly LIS professionals had turned a new 'blind' corner as they could no longer purchase electronic resources the same way they once purchased print resources. LIS professionals were now faced with signing licence agreements and leases to access electronic information resources content but not owning the content. It was a task they did not need to perform during the print information resources purchasing era. As Chase, Dygert and Johnston (2000) noted, defining library holdings had been fairly straightforward in the print environment, but the same could no longer be said in the electronic revolution, where there is access to remote databases, not physically held by libraries. Whereas LIS professionals used to fully and efficiently support the purchase of print materials for the library, their skills

and involvement in acquiring electronic information resources had somewhat been inadequate (Marilyn, 2006). In acquiring print resources, LIS professionals subcontracted most of their acquisition activities to book vendors who would intermediate them with an array of publishers and producers of scholarly information. Chandel and Saikia (2012) argued that the collection development of electronic information resources was essentially more complex and comparatively more challenging than the collection development of printed information resources. This was because the collection development of electronic information resources involved five essential elements that LIS professionals in all libraries needed to consider: budgeting, type of material, selection, acquisition, and evaluation.

Another ethical concern regarding the creation of electronic information resources was that though LIS professionals were able to select their exact requirements of print book and journal titles in their single form, the same was not true in the electronic information environment. In this electronic information environment, the LIS professionals have struggled with the direct role they are being expected to play in the management processes of OAEIR, with some libraries sub-contracting vendors to manage their acquisitions, and “what seemed so very simple in the print environment had become overwhelmingly complex in the digital environment” (Marilyn, 2006). Whereas in the print era, LIS professionals were able to acquire single titles of publications they required, having gone through the rigorous checks and balances against the law of the land, bundling of electronic resources titles by publishers and supply models, without giving a chance to pre-select, has brought many ethical dilemmas for LIS professionals. Chandel and Saikia (2012) noted that the collection development of electronic information resources had its own acquisition problems due to unpopular pricing models and publishers’ embargos, which made packages of electronic books and journals too costly to subscribe. One of the ethical dilemmas induced by this scenario was for LIS professionals to establish the “need to strike a balance between the rights and interests of the individual on the one hand and social obligations and the public interest on the other hand” (Matingwina, 2015, p. 54).

3.2.3.2 Organising electronic library resources

As far back as one and a half-decade ago, the need for organising electronic information resources had become more urgent for LIS professionals, as libraries were beginning to increasingly participate in the digital space, resulting in a steadfast increase in their electronic collections (Hsieh-Yee, 2000). However, this rapid growth in electronic information resources has stimulated much interest in their organisation, including developing metadata standards to describe and encode information objects for improved resource access. Resultantly, LIS professionals needed to have the skills that would enable them to make the most of the electronic information resources in their collections (Hsieh-Yee, 2000, p. 130). Mullen (2011) stated that the role of LIS professionals was to organise, through indexing, and recommend access to electronic information resources, including those freely made available through OA initiatives. Indexing OA resources helped with the organization of the materials so that they could sit nicely on the web and also provided additional value to library clients by making more scholarships available to them at the point of information search and retrieval (Mullen, 2011, p. 5). LIS professionals' deliberate involvement in organising electronic information resources added more value to the information resources in their holdings by assisting library clients in accessing the information quickly (Hsieh-Yee, 2000). However, OAEIR were bound by their access licensing terms which LIS professionals and library clients must follow to the letter. These had a bearing on the organising and indexing, if any, LIS professionals were permitted to execute. Young (2009) saw metadata application and careful cataloguing by LIS professionals as the only way they could optimise the accessibility of electronic information resources to interest the resource users. However, the provision of access best known by LIS professionals was through traditional cataloguing using machine-readable cataloguing (MARC) records (Young, 2009, p. 95). Online information resources posed unique organising (cataloguing) challenges to LIS professions. The chief reason is that the information is scattered around the web and not found in one standard location. Chandel and Saikia (2012) stated that electronic information resources management was so complex that it was difficult for LIS professionals to find satisfactory solutions required by library clients. This was contrary to scholarly print resources owned by traditional libraries, which were generally available on the library shelves and accessible from an in-house produced online public access catalogue (Ajuwon & Ajuwon, 2018).

The volume and diversity of electronic information resources in the information society emphasised the need for information organisation. Many critics have raised questions about whether the LIS profession's current cataloguing standards would enable LIS professionals to solve this challenge (Hsieh-Yee, 2000). According to Chase, Dygert and Johnston (2000), LIS professionals faced some unique challenges when describing and organising electronic information resources, both in online databases and those in IRs in digital format. Frequent ethical dilemmas faced included:

- “How LIS professionals described multiple resources aggregated into a single database.
- How LIS professionals defined holdings in a ‘paperless’ electronic environment.
- How LIS professionals draw the defining line around a resource that links to other resources, possibly from another database.
- How LIS professionals managed electronic information resources web addresses that frequently changed.
- How LIS professionals assisted library clients to navigate in an environment where the library catalogue was no longer the only central gateway to information.
- How LIS professionals incorporated new methods for organising digital information into libraries standardised cataloguing practices (p. 278)”

However, as Hsieh-Yee (2000) noted, cataloguing rules had been revised to accommodate the new format to enable LIS professionals to integrate electronic information resources into their collection and services easily. Changes in ICTs and the presentation of OAEIR on the Internet had necessitated this revision to accommodate the unique features of these resources. However, as Chandel and Saikia (2012) noted, electronic information resources in academic libraries had mostly remained unorganised and scattered on the library webpages on different publishers' websites. Presently, library-based software to effectively handle the management of electronic information resources barely has adequate provisions, except for a few proprietary software beyond the reach of many academic libraries in Zimbabwe (Chandel & Saikia, 2012, p. 152). This was contrary to traditional print resources found in libraries which enabled such features as indexing, archiving and preservation, and had proved to be a straightforward exercise for LIS professionals for decades (Ajuwon & Ajuwon, 2018). Thus, conclusively, LIS professionals were finding it difficult to integrate existing open-source software to manage

their libraries' electronic collections, resulting in LIS professionals being unable to handle electronic information resources efficiently.

3.2.3.3 Disseminating (use) electronic library resources

As ICTs continued to power library resource provision in the current contemporary library environment, increased importance in managing electronic resources was placed on effective information dissemination by LIS professionals to library clients. However, a literature search revealed that little research had been published on disseminating OAEIR (Young, 2009). While information dissemination was an integral role of LIS professionals from the earliest period through properly catalogued records, publishers took up part of this function (Young, 2009, p. 95). On the other hand, whilst publishing and libraries had become separate in online information resources, the two were converging again in the digital environment because IRs had brought relief to LIS professionals. By making a scholarly resource available online, especially on the library website, LIS professionals would have disseminated it to library clients. However, there was another viewpoint to this conclusion, one that touched on the ethical aspect of this process – metadata. LIS professionals used metadata to enhance the accessibility of information online by library clients. However, in various online dissemination, LIS professionals did not have control over the metadata and its applications, except on the IR platform.

3.3 Open Access landscape

Open Access is widely referred to in the literature as the free, unrestricted online access to research findings from such scholarly resources as electronic journal articles and electronic book chapters. Thus, the content is freely available and open to all interested users who do not have access or subscription fees. The International Federation of Library Associations (IFLA, 2016) defined OA publications as publications that would have been granted a free, permanent, and perpetual right of access for all information users, who would be permitted to freely use, copy and distribute the publications for any reasonable purpose and subject to proper acknowledgement of the creator. Thus:

“OA is the now known name for a concept, a movement and a business model whose goal is to provide free access and re-use of scientific knowledge in the form of research articles,

monographs, data and related materials, and is an essential issue within IFLA's information agenda (IFLA, 2016, p. 5)."

Bawack and Nkolo (2018) stated that OA was a broad term used to describe online scholarly resources made available for free, immediate, and permanent online access to the public without any deterrents or subscription fees. Additionally, unlike online articles in most conventional databases, academic libraries created their OA resources through local digital copies built in IRs, such as staff research articles and student thesis (Bawack & Nkolo, 2018, p. 3). The information distribution model of OA was the timely answer to communicating research output in which anyone could contribute to research without many intellectual restrictions (Echterling, 2019).

According to Sueur, Hommes and Bester (2013), one of the OA initiatives was the 2002 Budapest Open Access Initiative. As more and more people started to gain access to computers and internet connections, there was a growing demand to provide the public with free, unrestricted access to academic research through the OA movement, resulting in the need to provide a framework of acceptable principles for OA. As a way of enforcing the Budapest Open Access Initiative, universities and research institutions, among other stakeholders, were encouraged to implement OA policies, open licensing of academic works, and the development of OA IRs (Budapest Open Access Initiative, 2002, as cited in Sueur, Hommes & Bester, 2013). Creative Commons was another OA initiative that was established to provide a platform for the public to share, build on and use creative works without the traditional copyright restrictions, thereby supplementing copyright by enabling authors to modify copyright terms to suit their needs. (Creative Commons, 2013, as cited in Sueur, Hommes & Bester, 2013). Another influential OA initiative was the 2003 Berlin Declaration on Open Access to Knowledge in the Science and Humanities which, among other things, sought to encourage researchers to embrace the OA movement and its publishing standards (Bawack & Nkolo, 2018). These initiatives supported OA options that provided information users with a free reading, downloading, copying and printing of full text of works under legitimately permissible rights (Bawack & Nkolo, 2018, p. 2). Echterling (2019, p. 2) highlighted that the "fundamental goal of the OA initiatives was to support publication models that enable free, immediate, online

distribution of, and access to, scholarly research.” On the operational front, the OA movement has attracted several international organisations to initiate negotiation processes with content publishers for subsidised electronic information resources subscription rates (Bawack & Nkolo, 2018). Organisations such as the International Network for the Availability of Scientific Publications (INASP) and Electronic Information for Libraries (EIFL) have for more than a decade been assisting academic libraries in developing countries, particularly in Africa to access OA journals (Bawack & Nkolo, 2018, p. 16).

3.3.1 Open Access movement in libraries

Mullen (2011) stated that LIS professionals’ involvement in the OA movement was essential, especially through increasing within the library’s services space, the gathering, organisation, presentation and integration of a diversity of OA resources for researcher awareness and utilisation. “OA to research, educational resources and research data is now a global movement, and many organisations, libraries included, were working towards this goal” (IFLA, 2016, para. 11). Opening up access to research data and managing and communicating research data effectively and efficiently greatly promoted the beneficitation of research data to both local and global development efforts (ZULC, 2017). LIS professionals had already begun OA publishing of their own through IRs. The main reason for libraries to have IRs was to enhance the visibility and accessibility of the university's research output. Well-managed OA data, through libraries' system of organisation and preservation, is a source of extremely useful information that supports scientific and scholarly research, which can then be fully utilised to support local and global development initiatives. As an ethical movement, OA to scholarly information has contributed a lot to the common pool of scholarly knowledge, thus serving the societal obligation to accelerate research and provide innovations that contribute to humanity. ZULC (2017) highlighted that to spread the principles of OA and general national coordination towards embracing OA and ensuring equal access to knowledge generated locally, LIS professionals have been leading universities and research institutions on how to gather, process, organise, archive and disseminate this research data. Bawack and Nkolo (2018) noted that with the increasing growth of journal content, escalating subscription prices, and stringent budget, “academic libraries in developing countries were looking to the internet for relevant and reliable OA alternatives to supplement library collections, and they are finding them by

their thousands” (p. 2). Additionally, IRs were one of the major initiatives of this OA movement (Bawack & Nkolo, 2018, p. 7).

Research literature that is increasingly coming through the OA model has provided unrestricted global access to the latest scientific findings to anyone who has access to the internet (Ajuwon & Ajuwon, 2018). This research literature has also found its way into academic libraries’ electronic information collections. The OA to information movement had arm-twisted LIS professionals and libraries to redefine their information collections and client services policies. More recently, published research articles were increasingly becoming freely available online, hence libraries no longer need to pay exorbitant subscription fees. Bawack and Nkolo (2018) acknowledged that OA had a remarkable impact on academic libraries through increased access to scholarly resources of IRs and electronic journals without affecting their budgets. However, to the advantage of LIS professionals, libraries were ready to play an essential role in the OA movement through their expertise in building user-friendly digital information services and platforms such as IRs, training faculty in scholarly research, providing support in research data curation, disseminating and sharing, and developing OA policies and subsequent supporting infrastructure. Ngu-War (2019) stated that LIS professionals’ interest lay in providing the best possible access for library users to information in any format, bringing about the principles of OA, open-source, open science, open data and open licenses. Echterling (2019) noted that OA had moved mountains to claim its position in the library collection development policies and processes, to the extent that library resource budgets were being directed towards OA initiatives.

In Zimbabwe, the ZULC took the lead in advancing the ideals of OA in the research environment, particularly in universities. This included spearheading the drive for a national approach to OA and the effective management and communication of open research data, which also involved formulating a national policy on OA (ZULC, 2017). In aiding this initiative, member university libraries have been implementing IRs, developing OA policies and providing access to the research public to a wide range of OAEIR. This was in recognition of the important role that research played in societies and to aid in the broader sharing of research results for future re-use and further research.

3.3.2 Managing open information in libraries

IFLA (2016) noted that due to the OA movement, the duties of LIS professionals had changed tremendously. According to Bawack and Nkolo (2018), the OA movement has altered the electronic resources collection management processes, making them more complicated than ever for LIS professionals in academic libraries in their involvement in the creation, organisation and dissemination of such resources. The access point in the electronic information environment had changed, requiring LIS professionals to determine the next step as library clients could not use resources they could not find. However, Chandel and Saikia (2012) noted that multiple resources in the present electronic environment could be seamlessly integrated with a single login gateway, which would make it user-friendly to library clients, thereby increasing their accessibility, usability and user satisfaction.

However, though OA was an important creation and objective for libraries, it has raised many ethical dilemmas associated with library cataloguing standards, lack of additional funding and skills for LIS professionals to cope with the collection and organisation of this emerging format (Echterling, 2019). Additionally, this was also highlighted by Young (2009), who noted that the dissemination of OAEIR had presented LIS professionals with the most difficult challenge in the concept of the OA movement. Echterling (2019) stated that the OA publishing model had presented enormously different membership requirements on behalf of libraries compared with its predecessor model, the conventional (print and proprietary electronic resources) publishing model. This has created ethical dilemmas for LIS professionals as they try to balance relationships with publishers, collection development and associated ethical standards, and library clients.

OA has been a new phenomenon in the LIS field and integrating some of its aspects presents new challenges as well as innovative ways of handling electronic information resources in academic libraries. Mullen (2011) noted that whilst LIS managers had been:

“Advocating for OA to research as a way to promote the library values of openness, LIS professionals on the front lines of client services, such as reference and library instruction, were not necessarily integrating OA publications and research tools into their day-to-day interactions with library users (p. 1).”

Additionally, Dyas-Correia (2014) noted that although LIS professionals in many institutions had implemented OA services, there had been little integration of the same in library collection development policies. Thus, OA resources were not yet integrated into the norms, functions and roles of the LIS professionals and professions, including in mainstream workflow processes such as cataloguing and indexing services. Echterling (2019) noted that though the OA movement had been embraced in the LIS profession, library collection development policies were still driven by the 'print revolution' ideologies and were general or even silent regarding OA acquisitions. Nevertheless, the new mode of scholarly communication required LIS professionals to revisit all practices and workflows to incorporate OA developments and their integral variances with conventionally published content. Change of traditional practices by grassroots LIS professionals was also necessary if the OA movement was to be successful and filter down to all library clients. Even with this challenge, Echterling (2019) suggested that OA ethical dilemmas could best be addressed within the confines of the LIS professionals' existing collection development ethical standards policies. University of North Texas Libraries (2017) policy on OA to electronic information resources was particular on minimum selection guidelines for subscribing to this resource. These included publishers licensing and contract terms that were compliant with various minimum standards for information access, such as interlibrary loan rights, right to include in-course packs, remote access availability and the number of simultaneous users allowed, patron privacy protections, and various technological and human usability standards. Other libraries also found ways of sneaking OA issues into the mainstream library environment through their IR policies and related standard operating procedure documents. Thus, this kind of effort was essential for the OA movement to gain substantial LIS field recognition.

Though IFLA (2016) strongly supported the OA movement and the launch of many OA compliant publications, it acknowledged ethical dilemmas in the management of this information recourse format in libraries and advocated for the need to address the challenge on a number of fronts and in partnership with many stakeholders. This was supported by Echterling (2019), who stated that LIS professionals were expected to contribute to OA development and its maturation in order for their professional ethics to continue to hold the

public trust. Areas of ethical concern in the OA movement that were noted included the notion to:

“support and defend the moral rights of authors, whilst at the same time seeking balance in copyright legislation to protect and extend the public domain and public interest in access to information (IFLA, 2016, para. 6).”

On the practical side, LIS professionals were encouraged to purposefully scrutinise the benefit and harm of OA resources in their collection development exercise before leaning on generally-endorsed OA statements (Echterling, 2019).

Mullen (2011) observed that all future LIS professionals needed to be conversant in OA issues in order to establish consistency in OA best practices. Thus, LIS programmes that included and trained future LIS professionals in OA to scholarly communication issues were advocated. Additionally, Echterling (2019) stated that as LIS professionals had been faced with having to consider OA initiatives as a new and additional format for library collection development, they needed to accept the fact that the ‘new format’ could result in limited evaluation tools and techniques, posing ethical dilemmas for the library. Orick (2000) noted that if the very nature of the Internet made it nearly, if not entirely, impossible to evaluate the content of websites, it would be impossible for the LIS professionals to protect the integrity of the information the library provided. Previously in the LIS field, a clear distinction existed between ethical issues associated with print media, such as newspapers, and the credibility of reference sources (Froehlich, 2004). However, with the coming of the information society and subsequently the Internet, publishing had become quick and easy, making the credibility and evaluation of websites that offered access to information a cause of concern for LIS professionals. Thus, OA increased the need for information literacy skills (ILS) training for library clients, especially in areas that involved evaluation of information sources, effective search techniques and information synthesis. Additionally, Hoq (2012) argued that information ethics could help LIS professionals solve this problem and guide them in the creation, organisation, dissemination, and use of OAEIR in a just way.

3.4 Ethics for 21st century libraries

Carbo and Almagno (2001) highlighted that in this increasingly complex, multicultural, and information-intensive society, many critical information access and use issues are misunderstood, inadequately considered, or even ignored. Thus, in the near future, as more and more OAEIR become available, individual libraries and LIS professionals will have far less control over the actual availability of information to the end-user (Orick, 2000). The information society and the subsequent information explosion have made the LIS profession a highly ethical activity involving professional work with information, a role that has become more challenging daily, for LIS professionals. This situation required the LIS profession to develop ethical standards to guide LIS professionals in the information society. Shachaf (2005) highlighted that like many professional occupations providing service, LIS professionals were also required to abide by some sort of ethics. This was because the adoption of LIS professional ethics directly impacted service quality and users' satisfaction in the library (Adebayo & Mabawonku, 2017). Like every profession, the LIS profession also has a clear guiding philosophy that protects work values and helps guide members' behaviours. This guiding philosophy is usually contained in the LIS professional associations and their individual organisations' codes of ethics (Shachaf, 2005). Ethical frameworks provided LIS professionals with techniques for analysing ethical dilemmas and putting them in a broader perspective (Stueart & Moran, 2007). As LIS professionals were obligated to execute their duties ethically, many LIS professionals' organisations have adopted codes of ethics frameworks. Ethics require imagination to envision alternatives that address a problem and honour a professional value, making exceptions in a principled way (Preer, 2008). Thus, ethics are fundamental to practising professionals such as LIS professionals because specific ethical issues must be confronted in their day-to-day interaction with information, especially in this information society.

Ethics is the discipline that defines the values that guide an individual's actions in everyday life situations. Drake, Snyder and Cegielski (2007) stated that ethics was the study of societal values and virtues that individuals were supposed to adhere and it feeds into information ethics. Thus, the role of ethics in judgment and decision making emanated from the nature of values and virtues (Drake, Snyder & Cegielski, 2007, p. 3). Stueart and Moran (2007, p. 347) defined

ethics “as a set of principles and values that governed the behaviours of an individual or a group concerning what is right and what is wrong”, thereby supporting an ethical working environment, such as a library environment. Igbeka and Okoroma (2013) defined ethics as a way of conduct and acceptable behaviour of individuals in a professional body or society, formed from moral principles and beliefs concerning what is right and wrong. Sueur, Hommes and Bester (2013, p. 29) defined ethics as a field of study of morality that considered and compared approaches from various ethical theories such as deontology, utilitarianism and virtue ethics. Markkula Centre for Applied Ethics, Mabawonku (2010), as cited in Adebayo and Mabawonku (2017) stated that “ethics defined and provided ideas that sustain an action that was good and right in terms of obligation, fairness and benefits to society, as well as describing the conduct of individuals or groups in the society” (p. 2). Additionally, ethics involves studying the principles of practical reason that individuals make in the hope of finding the right thing to do in any given situation. These principles involved doing the right thing and upholding obligations entrusted to individuals (Mwafuililwa, 2017). Adebayo and Mabawonku (2017) summarised ethics as a moral assessment or guidelines that judged what was right or wrong in professional practices.

Whenever LIS professionals needed to make decisions, it was essential for them to reflect on the ethical aspects of the choice as part of the process (Stueart & Moran, 2007). Ethics in the information profession is concerned with applying moral standards to the conduct of librarians and other individuals involved in information creation, organisation, and dissemination. Preer (2008) explained that ethics was “not the same as good customer services or efficient management, although ethical issues arise in both service and management context” (p. 2). Further, ethical conduct did not mean adherence to strict rules of behaviour but, rather, applying values in situations where there was no fixed rule or clear right answer. According to Igbeka and Okoroma (2013), ethical principles guide individuals’ actions in the group and their dealings with others within and outside the group. They provided a basis for judgment in any situation and were not intended to replace law or morality but to assist as guidelines for professional conduct.

Consequently, it can be noted that ethical principles inform the professional code of ethics. Mabawonku (2010) (as cited in Igbeka & Okoroma, 2013) defined professional ethics as principles and rules that guide the conduct of individual group members to ensure that the accepted standards of the group are maintained. Adebayo and Mabawonku (2017) stated that just like every profession, the LIS profession had ethical codes of conduct for their professionals, “which not only guided members in the manner they ought to conduct themselves so as to preserve the image of the profession but also made for the good of the society” (Igbeka & Okoroma, 2013, p. 1270). Just as Shachaf (2005) noted, these codes of ethics provided LIS professionals with norms, values and guiding principles in the face of ethical dilemmas, whilst Fallis (2007), as supported by Onoyeyan et al. (2014), viewed the code of ethics as a list of guiding principles for ethical behaviour of LIS professionals. Professional codes of ethics should outline the boundaries of acceptable conduct and guide on what kind of actions are considered right or wrong in the profession. Code of ethics does not only cover morals, typically referring to the practices of individuals (Stueart & Moran, 2007), but all-encompassing motivations behind such practices, and also sets high professional standards against which individual employees can measure their performance, thereby expressing the significant structure of the profession to externals (Shachaf, 2005). Thus, in their daily execution of professional duties, LIS professionals should be guided by, and/or strictly adhere to, their professional code of conduct in their deliverance of information to their clientele.

Ethics as a philosophical domain was concerned with right and wrong behaviour. Stueart and Moran (2007, p. 347) stated that ethics was a branch of philosophy, and its principles were derived from theories of what is right and wrong. Thus, the ethics framework informs professional ethics, which are accepted standards of personal and business behaviour in a particular profession, coupled with the expected values and group guiding principles. Strahlendorf (n.d.), (as cited in Onoyeyan et al., 2014) stated that:

“Professional ethics relates to moral rules that influenced a professional’s actions or behaviour in the course of discharging of his professional responsibilities, helping him or her in choosing what to do when faced with a problem at work that raised a moral issue (p. 77).”

These professional ethics codes are often enshrined in that profession's codes of professional ethics to support the organizations' desire to assist and guide their members in executing their duties and responsibilities according to sound and consistent ethical principles and judgment. Thus, these codes of ethics are:

“Highly cherished and esteemed by members of a group so that it is easy to distinguish a professional group member, just by mere interaction or association on a few occasions. Igbeka & Okoroma (2013, p. 1271).”

The information society had focused LIS professionals' attention on professional ethics as the frameworks of information acquisition, organisation, preservation, and dissemination had been increasingly altered, making ethical codes indispensable in the LIS profession (Igbeka & Okoroma, 2013). Moreover, contemporary approaches to ethics have drastically shifted the point of focus to position itself on ethical issues arising with the increasing prominence of the role of information and ICTs in this information society (ACEIE, 2017). Thus, Adebayo and Mabawonku (2017) stated that LIS professionals needed to be aware, understand and adopt ethics in their day-to-day duties, as ethics had implications on their professional actions, competence and integrity, and on how they could be able to offer exemplary services to their clients. Preer (2008) stated that LIS professionals needed to balance individual moral values and the profession's deontological principles in the execution of their day-to-day information management duties. Phillips, Oyewole and Akinbo (2018) noted that it was essential that LIS professionals are guided by a professional code of ethics, especially in light of many ethical dilemmas they are now facing in the information society that are exerting extra pressure to violate their professional ethics. These professional codes of ethics assist LIS professionals in discharging their mandate and help them when they come face-to face-with ethical dilemmas.

3.5 Code of ethics for LIS professionals

As Shachaf (2005) stated, every profession had a vibrant guiding philosophy that governed the behaviour of members concerning what is right or wrong. This guiding philosophy was enshrined in the profession's code of ethics, which helps a professional choose what to do when faced with a problem at work that raises a moral issue. Over the years, many LIS associations and organizations have developed various codes of ethics that focused on

principles and values that guided members' behaviours regarding what is right or wrong. A code of ethics is a formal statement of the profession's values regarding the ethical behaviours of its members. The code of ethics focuses on the profession's principles and values and, in the process, supports a more ethical working environment. Additionally, a code of ethics spells out the expected behaviour of an individual or group in a profession, prescribing standards against which measurement of their performance is determined, in addition to outlining the profession's value system to those outside the professional organization. Miltenoff and Hauptman (2005) stated that every LIS professional must belong to a particular professional association and thereby be guided and abide by that association's code of conduct, failure of which would attract such penalty as loss of accreditation. Munigal (2018) reinforced this assertion by stating that a code of conduct is a fundamental requirement of any profession and integral to the profession's development as it helps in, among other things, defining what is of value in a profession, setting professional obligations and defining professional boundaries. These code of ethics guidelines will then assist members of a profession in understanding professional expectations, serve as a point of reference when faced with ethical dilemmas, and compel the upholding of professional principles (Munigal, 2018, p. 71).

As various codes of ethics were being developed across sectors, Onoyeyan et al. (2014) stated that it was a prerequisite for LIS professionals to recognise as well as keep abreast with ethics and ethical consequences of their actions in order to make the best decisions as well as safeguard the LIS profession from embarrassments. Thus, in order for LIS professionals to effectively and efficiently offer contemporary library services to their multitude of clients, they must be guided by the profession's ethics (Phillips, Oyewole & Akinbo, 2018). Munigal (2018, p. 71) stated that, "A code of ethics becomes important then for the LIS profession to be recognised as worthwhile, respected, valuable and professional as well as for a professionalisation of librarianship." Among other benefits, implementing a code of conduct in the LIS profession improves self-awareness by LIS professionals, promotes good moral behaviour, obligates LIS professionals to adopt professional guidelines, and safeguards the profession's reputation. As library services are essentially human-oriented, LIS professionals depend on ethical principles more than any other profession and must have a moral responsibility to the patrons, adhering to the value of human life. Ngu-War (2019) reinforced

this by highlighting that the LIS profession was a service-oriented profession which comprised three elements: library staff (LIS professionals), information sources, and library patrons. As LIS professionals serve as the link between the library patrons and information sources, they need to perform their professional obligations in the right manner, so that the mission of libraries is achieved without any hindrance, an obligation that has given rise to the concept of professional ethics in the LIS profession.

The first African debate on ethics was realised in 2007 through a Pretoria information ethics conference aimed at tackling peculiar ethical challenges that were fast obtaining in the information age (Frohmann, 2007). Since then, ethics workshops and debates have become a more common LIS profession calendar of events in Africa. However, there is still a need to accelerate ethics awareness and subsequent adoption of good ethical practices by various LIS stakeholders in Africa, especially those working in the fast and huge information generation like universities. Below are some of the LIS profession's codes of ethics frameworks developed by various LIS associations from the global and continental perspectives:

3.5.1 International Federation of Library Association's code of ethics for librarians and other information workers framework

The International Federation of Library Association (IFLA, 2012) developed a code of ethics and professional conduct for LIS professionals. The codes were offered as a series of ethical propositions for the guidance of individual LIS professionals and for consideration by various LIS associations when creating or revising their own codes. Thus, the codes of ethics were meant to improve LIS professionals' self-awareness of professional principles, provide transparency to library clients on ethical situations, and encourage LIS professionals to have a document they could reflect on when forming policies and handling dilemmas in their day-to-day duties. IFLA codes of ethics were divided into six categories, as follows:

- **Access to information**

The code noted that the core mission of LIS professionals was to ensure that access to information for all was preserved and should aim to provide fair, swift, economical and effective access to information to all library clients. Thus, LIS professionals should reject the restriction of access to information, particularly through censorship. In support of this

access goal, LIS professionals were encouraged to market and bring out awareness of their collection and services so that users and prospective users would become aware of their existence and availability. LIS professionals were also encouraged to make every endeavour to offer information access to their collections and services free of cost to all users, and where applicable, membership fees were to be kept as low as possible. Additionally, LIS professionals were to ensure that the most effective way to make their collection accessible was implemented by ensuring that information platforms and portals were in compliance with international standards for accessibility and access.

- **Responsibilities towards individuals and society**

IFLA noted that in order to promote inclusion and eradicate discrimination, LIS professionals were to ensure that the right to access information was not denied and that equitable service was provided for all users, irrespective of social orientation. LIS professionals were encouraged to organize and present their content in a way that allowed an independent user to find the information without assistance or delay, notwithstanding that LIS professionals should always help and support users with their information searching, including offering information literacy skills training to library clients. The American Library Association (2008) defined information literacy skills, which are essential for lifelong learning and the creation of an informed and prosperous citizenry, as the ability of an individual to recognise the extent and nature of an information need, then to locate, evaluate, and effectively use the needed information. Information literacy skills promote the ethical use of information by library clients and also help to eliminate plagiarism and other forms of misuse of information.

- **Privacy, secrecy and transparency**

The relationship between the library and the client was one of confidentiality, and LIS professionals were encouraged to take appropriate measures that ensured that clients' data were not shared beyond the original transaction. IFLA encouraged LIS professionals to respect the personal privacy of all their clients, in addition to the protection of personal data necessarily shared between individuals and their institutions.

- **Open access and intellectual property**

IFLA noted that LIS professionals' main *raison d'être* was to provide library clients with the best possible access to information in any media or format. Thus, LIS professionals needed to support information access principles of OA, open source, and open licences, and also had a professional duty to advocate for exceptions and limitations to copyright restrictions for libraries. LIS professionals should also recognise and ensure that the intellectual property right of authors and other content creators are respected. LIS professionals should negotiate the most favourable terms for access to works on behalf of their library clients and seek to ensure that access is not unnecessarily prevented or hindered by intellectual property laws. LIS professionals should also advocate that copyright terms should be limited and that information that has fallen into the public domain remains public and free.

- **Neutrality, personal integrity and professional skills**

IFLA encouraged LIS professionals to be strictly committed to neutrality and an unbiased stance regarding collection, access and service and should distinguish between their personal convictions and professional duties. Neutrality results in the most balanced collection and the most balanced access to information achievable; thus, LIS professionals should not advance their private interests or personal beliefs at the expense of neutrality. This entails that LIS professionals should define and publish their library policies for selection, organisation, preservation, provision, and dissemination of information. Additionally, LIS professionals should strive for excellence in the profession by maintaining and enhancing their knowledge and professional skills, designed to aim for the highest standards of service quality and, thus, promote the profession's positive reputation.

- **Colleague and employer/employee relationship**

LIS professionals were encouraged to treat each other with fairness and respect and oppose discrimination in any aspect of employment. Additionally, LIS professionals should share their professional experience with colleagues and help or guide new professionals to develop their skills. LIS professionals should also contribute to the activities of their professional association and participate in research and publication on professional

matters, including striving to earn a reputation and status based on their professionalism and ethical behaviour.

This IFLA code of ethics and professional conduct for LIS professionals was offered in the belief that:

- The LIS profession was, in its very essence, an ethical activity embodying a value-rich approach to professional work with information.
- The need to share ideas and information has grown more important with the complexity of an information society.
- The role of LIS professionals in this information society was to support the optimisation of the recording and representation of information and to provide access to it. Information service in the interest of social, cultural and economic well-being is at the heart of librarianship, and therefore librarians have social responsibility.
- Furthermore, this belief in the human necessity of sharing information and ideas implies the recognition of information rights as expressed in the United Nations Universal Declaration of Human Rights (Article 19) – the rights of freedom of opinion, expression and access to information for all human beings (IFLA, 2012).

3.5.2 American Library Association code of ethics framework

The American Library Association (ALA, 2008) code of ethics document sought to translate the values of intellectual freedom that define the LIS profession into broad principles that may be used by individual members of the profession for dealing with situations involving ethical conflicts. ALA recognised the importance of codifying and making known to the profession and to the general public the ethical principles that guide the work of LIS professionals. ALA code of ethics recognised that the values to which the LIS professionals were committed were being altered by the information society and noted that ethical dilemmas were bound to occur when values were in conflict, pressing the need to uphold the ethical responsibilities of the LIS profession in this changing information environment.

As LIS professionals had significant influence or control over the selection, organization, preservation, and dissemination of information, they were in a better position to commit to

intellectual freedom and the freedom of access to information. They have a special obligation to ensure the free flow of information and ideas to present and future generations. The following principles of the code of ethics were expressed in broad statements to guide ethical decision-making, thus providing only a framework that did not dictate conduct to cover particular situations:

- LIS professionals should provide the highest level of service to all library users through appropriate and usefully organized resources, equitable service policies, equitable access, and accurate, unbiased, and courteous responses to all requests.
- LIS professionals should uphold the principles of intellectual freedom and resist all efforts to censor library resources.
- LIS professionals should protect each library user's right to privacy and confidentiality with respect to information sought or received and resources consulted, borrowed, acquired or transmitted.
- LIS professionals should respect intellectual property rights and advocate a balance between the interests of information users and rights holders.
- LIS professionals should treat co-workers and other colleagues with respect, fairness, and good faith and advocate conditions of employment that safeguard the rights and welfare of all employees of our institutions.
- LIS professionals should not advance private interests at the expense of library users, colleagues, or our employing institutions.
- LIS professionals should distinguish between their personal convictions and professional duties and not allow their personal beliefs to interfere with fair representation of the aims of our institutions or the provision of access to their information resources.
- LIS professionals should strive for excellence in the profession by maintaining and enhancing their own knowledge and skills, encouraging the professional development of co-workers, and by fostering the aspirations of potential members of the profession (ALA, 2008).

3.5.3 African Library and Information Associations and Institutions code of ethics framework

The African Library and Information Associations and Institutions (AfLIA, 2015) code of ethics was developed as part of the association's constitution framework, as adopted in 2012 and amended in 2015, as BY-LAWS (Article 16, subsection 4.3). The codes were set to publicise the ethical principles of the profession that guide the work of its professional members and the general public. The African Library and Information Association and Institutions code of ethics stipulated the values, within which are the ethical responsibilities of the profession to which members must be committed. The following principles of the code of ethics were indicated in broad statements, not referring to specific situations and sought to guide LIS professionals in good decision-making:

- LIS professionals should uphold the principles of intellectual freedom to access and expression and resist all efforts to censor library resources.
- LIS professionals should protect the right to privacy and confidentiality of every library user relating to information sought or received and resources consulted, borrowed, acquired or transmitted.
- LIS professionals should provide the most effective service to all library users through all appropriate resources and policies, give equitable access to information, and offer accurate, unbiased, and courteous responses to all requests.
- LIS professionals should uphold the tenets of intellectual property rights so far as they do not infringe on users' right to relevant information.
- LIS professionals should respect, show courtesy and fairness to co-workers and colleagues and advocate and protect the conditions of employment that safeguard the professional rights and welfare of all employees of member institutions.
- LIS professionals should not support any private interests that will affect library users, co-workers, or employers unfavourably.
- LIS professionals should respect the difference between personal convictions and professional/corporate duties and not allow personal beliefs to interfere with the fair representation of employers' aims and objectives, especially the provision of access to information for all.

- LIS professionals should strive for excellence in the profession by continuing professional development to maintain and enhance knowledge and skills and mentor and encourage the professional development of co-workers to assist in attracting potential members of the profession (AfLIA, 2015).

3.6 Information ethics

The field of information ethics had grown tremendously over the years as a discipline in the library and information science (Froehlich, 2004, para. 1), and “a high percentage of LIS professionals had suddenly taken an interest in an area that just a few years ago was ignored by most of them” (Miltenoff & Hauptman, 2005, p. 665). This was corroborated by Britz (2013), who noted that information ethics had become prominent in the LIS field in this information society due to the massive production and exchange of information at the organisational and/or individual level. Globally, the field of information ethics spanned over a two-decade history and has sought to address some of the problematic areas in the LIS profession. Key scholars in the information ethics field include Robert Hauptman, who addressed various LIS ethical areas such as censorship, privacy, access to information, balance in collection development, copyright, fair use, and codes of ethics (Froehlich, 2004). Stueart and Moran (2007) stated that one of the subfields of ethics strongly related to LIS professionals was the field of information ethics. Froehlich (2004) noted that information ethics had transformed itself into a multi-threaded phenomenon over the years. This was directly related to the merging of many disciplines stimulated by the information society. Sturges (2009, p. 250) observed that the LIS professional discourse of librarianship had been enriched by an ethical focus, suggesting that the profession's increasing level of maturity was taking place, and a mature profession was an ethical profession.

As a type of applied ethics, information ethics is concerned with outlining the obligations and dilemmas of LIS professionals when they make professional decisions related to the acquisition, organisation, and dissemination of information to library clients and society at large. Information ethics is the science of discovering and defining code of values that guides LIS professionals' individual actions in information acquisition, organisation, and dissemination within and between individuals and organisations (Drake, Snyder & Cegielski,

2007). According to Britz (2013), information ethics is a field of applied ethics that investigates the ethical issues arising from the lifecycle of information, including the generation, gathering, organisation, retrieval, distribution and use of information, focusing on the following areas: the right to privacy, the right of access to information, the right to intellectual property, and the quality of information (PAPA). Sueur, Hommes & Bester (2013) stated that ethics could be applied to various fields like information science, thereby becoming information ethics when taking the form of applied ethics. Adebayo, Akole & Salau (2016) explained that the core areas of focus in information ethics included intellectual freedom, equitable access to information, information privacy, and intellectual property. Adam (2005), (as cited in Adebayo, Akole & Salau, 2016), defined information ethics as an 'applied ethics' field investigating ethical issues arising from information technology's development and application. When entrenched in the LIS profession, it referred to the responsible creation and organisation of information by LIS professionals and responsible use of information in various formats by library clients. As an applied ethics field, information ethics explores the normative aspects concerning contemporary universal attitudes and traditions of humankind in information, and information and communication technology fields at an individual and societal level (ACEIE, 2017). Reitz (2017, pp. 166) stated that ethics, when applied to the LIS field, becomes information ethics, a "branch of ethics that focuses on the relationship between the creation, organisation, dissemination, and use of information, and the ethical standards and moral codes governing human conduct in society". Information ethics is concerned with the values that information providers must adhere to in order to assist them in executing what is right. Additionally, information ethics provided a critical framework for considering ethical issues concerning intellectual freedom of information, privacy, and confidentiality (Mwafuililwa, 2017).

Information ethics has become essential in this information society as it addresses what information is of value and what actions are moral in acquiring that information, especially in light of the contemporary ICTs that usually aggravate unethical user behaviour (Drake, Snyder & Cegielski, 2007). Stueart and Moran (2007) noted that information ethics had become more important since the growth of ICTs, and subsequently, electronic information resources, which had saddled LIS professionals with new problems relating to their ethical understanding of

such issues as privacy, censorship and intellectual property. This subfield of ethics concerns issues such as the relationship between information and the good of society, and the relationship between information providers and the consumers of information. Information ethics also covers other areas, such as access to information, intellectual freedom, plagiarism, copyright, and digital divide issues. According to Preez (2013), information ethics examined the relationship between people (LIS professionals) and the world due to changes in the ICTs, which was affecting how information was now being conveyed to clients in the LIS field. Britz (2013) noted that the development of modern ICTs had fundamentally impacted the universal field of information ethics, evoking various ethical debates. This was reinforced by Capurro (2013, p. 9), who stated that “societal debates on ethical issues have rapidly increased, particularly since the rise of the Internet.” Kibugi (2014) noted that the main stakeholders in information ethics were: creators (of information), distributors or disseminators (of information), and users (of information). In this information society, the library was directly involved in the first two processes and had a hand in the last process. Through the IR and OAEIR, LIS professionals have been producing (creating) a vast amount of information to disseminate to their library clientele, who were the users of this information. Matingwina (2015) noted that there were a lot of grey areas and points of conflict regarding the application of ethical principles by LIS professionals as a result of the concept of information ethics being complex and elusive. However, information ethics, which fundamentally resided in applied ethics and investigated ethical issues arising from the growth and application of ICTs, had its core values in intellectual freedom, equitable access to information, the privacy of information, and intellectual property rights (Adebayo & Mabawonku, 2017, p. 2). According to ACEIE (2017), information ethics was a relatively new concept that developed due to the growing availability and use of ICTs to access and use information. Resultantly, information ethics was a rapidly developing field for those professions, such as the LIS profession, that dealt with the gathering, organising and sharing of information, as they were being forced to confront ethical dilemmas associated with electronic information in the face of public criticism.

Mutula (2013, p. 37) noted that whilst the field of “ethics was a concept that had come of age, information ethics was fairly new in literature”, having only increased prominence in the past decade or so. Additionally, as the pursuit for connecting information ethics practices in Africa

was gathering pace due to the technological revolution, it took place in an environment where there was little integration of information ethics in the education curricula on the African continent. Matingwina (2015) observed that whilst several scholars had executed research concerning information ethics, insufficient research had been carried out in Africa that focused on ethics and the LIS profession. However, as the use of technology was now of paramount importance for students and staff in academic institutions to conduct the learning, teaching and research processes, awareness of the ethical issues that surrounded the use of electronic information resources in an open environment was, therefore, now important than ever (Adetimirin, 2017). Thus, it was now anticipated that LIS professionals should abide by information ethics standards in this information extensive society to safeguard their careers and the profession (Phillips, Oyewole & Akinbo, 2018).

3.6.1 African Network for Information Ethics

The African Network on Information Ethics *raison d'être* was to deliberate and facilitate the implementation of an African based code of ethics and information ethics framework. The African Network on Information Ethics (ACEIE, 2017) was established from the efforts of various African stakeholders, and subsequently, the African Centre of Excellence for Information Ethics (ACEIE) – a centre established to function as a hub for the ANIE network. Preez (2013) stated that the ANIE network was established to focus on the activities and history of information ethics in the content of the African continent on the global stage by stimulating research on information ethics in Africa. ANIE has provided a unique platform for addressing information ethics opportunities and challenges that are unique to the development of African societies. It enabled the building of an information and knowledge society driven by critical reflection on contextualised information ethics ethos and values within the African context. On the other hand, ACEIE's main objective was to develop a curriculum for teaching information ethics in Africa and support the establishment of other information ethics centres on the African continent (ACEIE, 2017). The primary mandate of the focus of the African Centre of Excellence for Information Ethics was to:

- i. Promote academic research in the field of information ethics;
- ii. Develop tools for the practical application of ethical reasoning;

- iii. Ensure that the opportunities offered by the developing information society are effectively utilised for socio-economic advancement and a better life for all;
- iv. Establish an office and manage the administrative operations of the ACEIE;
- v. Support establishment of other Ethics Centres in Africa through the African Ethics Research Centre Network;
- vi. Convene, coordinate and administer ethics conferences, and follow up the implementation of the conference resolutions;
- vii. Host Ethics Award Ceremonies in collaboration with other partners as determined;
- viii. Lead in research and training on Information Ethics; and,
- ix. Publish (an) information ethics journal(s) (ACEIE, 2017, p. 7).

Thus, the ACEIE was supposed to synchronise research through workshops, conferences and public lectures, as well as books and articles, and coordinate academic activities in colleges and universities to enhance the awareness and knowledge of all stakeholders on the matter of information ethics in Africa (Bothma, 2013).

3.6.2 Ethical standards in managing electronic libraries

The continuing growth of ICTs posed considerable and fascinating ethical challenges to LIS professionals due to the complexity and cost involved in organising electronic information resources (Hsieh-Yee, 2000). However, Anderson (2006) stated that ethical standards were one of the greatest obligations of LIS professionals, as they, on the one hand, preserve LIS professionals' long history of working with standards and, on the other hand, provide the usefulness, accessibility and durability of digital libraries and IRs. Drake, Snyder and Cegielski (2007) noted that for an individual to determine the value between two or more actions, it needed some ethical standards to measure against, as a basis of comparison between these two or among more actions, and also to justify the decision itself. Ethical standards were desirable as they bring out a measure or norm in comparative evaluations, and applying ethical standards to judgments provides consistency. Without ethical standards, there will be no value judgment or basis of comparison between actions, making ethical judgments between similar and different actions equally important (Drake, Snyder & Cegielski, 2007, p. 4). Even worse, absence of ethical standards would be detrimental to the LIS professionals' highest values.

Resultantly, a profession run without ethical standards would collapse into complete chaos. Preer (2008) observed that LIS professionals faced related ethical issues from the onset of planning library services, even before the first client walked through the library door or visited the now popular library website. Chandel and Saikia (2012) observed that electronic information resources presented LIS professionals with many ethical challenges at every management level in their selection, acquisition, preservation, organisation, maintenance, and dissemination. In this regard LIS professionals needed to “devise best possible techniques and methods of managing these resources efficiently and effectively for their improved availability and accessibility, and ensuring convenient and comfortable use by library clients through overcoming all the barriers coming on the way” (Chandel & Saikia, p. 153). Onoyeyan, Ajayi, Adesina and Bamidele (2014) stated that LIS professionals’ ability to acquire effectively, organise, access and use the information, whether through the speed of access to needed sources or through complex skills to pinpoint information, affords them the power in this information society.

However, LIS professionals' need for ethical awareness has also grown in the information society due to the ICTs that have become faster and more pervasive. These ethical issues include basic choices even on the location, hours, collection and policies that need ethical judgement. Sueur, Hommes and Bester (2013) stated that due to the increased availability of information, the interaction and exchange of information and knowledge needed to ensure that the respect for other people’s privacy, beliefs, values, and norms and religions were upheld. Onoyeyan et al. (2014) noted that LIS professionals needed to understand ethical behaviour, be guided by their professional code of ethics, and religiously ensure compliance with every aspect of ethical consciousness in their day-to-day execution of library duties. Adebayo, Akole and Salau (2016) also suggested that LIS professionals in universities needed to be aware of the core values of the profession that arise from the lifecycle of information and adopt the ethical practice of information management as they carry out their duties.

3.6.3 Contemporary ethical issues in libraries

Issues relating to equity of access, censorship, intellectual freedom, privacy, and intellectual property are the major ethical challenges for LIS professionals in this information society.

According to Dole and Hurych (2001) as cited in Onoyeyan et al. (2014), the core values of the LIS profession comprised: intellectual freedom, open and free access to information, and resistance to censorship. Various LIS profession's code of ethics principles frequently highlight the following categories: confidentiality, privacy, and free and equal access to information (Shachaf, 2005). This was reinforced by Fallis (2007), who outlined that the core issues of information ethics in the LIS profession centred on intellectual freedom, equitable access to information, information privacy, and intellectual property. Matingwina (2015) stated that the main ethical issues confronting the LIS professionals in this information society were: equitable access to library materials, the accuracy of information provided, protection of intellectual property, and protection of personal privacy and confidentiality. Mwafulilwa (2017) noted that four major ethical concerns were prevalent to electronic information resources in the information society, as LIS professionals in the information society are primarily concerned with the privacy, accuracy, intellectual property and accessibility of the information to, and by, their library clients, especially within the scope of the information they provided in a digital environment. From the above, it can be noted that the core information ethics issues of the LIS profession in this information society and the management of OAEIR are Privacy, Access, Property and Accuracy, abbreviated to PAPA.

However, Barsh and Lisewski (2008) observed that though the LIS profession was guided by various comprehensive codes of ethics, covering various themes from intellectual freedom, privacy and confidentiality, to intellectual property and equity of access, little empirical research existed on ethics in LIS management at the operational level. This was supported by Adebayo, Akole and Salau (2016), who found out that though the core value of LIS professionals in the practice of information ethics included protection of personal data, privacy and confidentiality, equal treatment of users, and intellectual freedom, studies covering these areas in relation to libraries and the electronic information resources management were hard to come by.

3.6.3.1 Privacy in electronic libraries

According to Laudon and Laudon (1998), as cited in Onoyeyan et al. (2014) privacy, which is an essential element in any democratic society, is the right of a library client not to be

monitored in their information access and use by LIS professionals and the library itself. In addition, Sueur, Hommes and Bester (2013, p. 62) stated that privacy was the protection of personal information from publicity, and it involved the right of an individual to keep personal information and actions to oneself without being subject to surveillance. The main type of privacy related to the LIS profession and libraries is informational privacy, which involves control over information access to one's personal information. Thus, information privacy refers to the protection of personally identifying information and the ability of an individual to control the release of such information in the public domain (Sueur, Hommes & Bester, 2013). Matingwina (2015, p. 89) defined privacy as "the right of individuals to withhold information about themselves without disclosure" and to give consent on any information about themselves before authorised access could be granted to third parties. Privacy of library clients has become an important consideration due to the growth of ICTs, coupled with the proliferation of networked information, which has exaggerated further the ethical problems associated with the phenomenon. Thus, LIS professionals should respect privacy and safeguard library clients' privacy as much as possible. According to the ALA (2008), there was a deliberate need by LIS professionals to be continuously aware of their ethical obligation to protect the rights of library clients to use new and traditional sources of information without excessive scrutiny. This was supported by IFLA (2012), which stated that the LIS professionals had a major duty to safeguard their library clients' information and personal accounts, especially on the electronic platform. AfLIA (2015) also stated that LIS professionals should protect the right to privacy and confidentiality of every library user relating to information sought or received and resources consulted, borrowed, acquired or transmitted. However, whilst all the Library profession's codes of ethics frameworks discussed above affirmed LIS professionals' responsibility towards assuring library clients' "privacy by keeping users' information confidential, the current model of digital content delivery for libraries places library users' privacy at risk." Thus, LIS professionals need to take proactive steps towards protecting their library clients' privacy rights in their day-to-day duties. This is also against the background that the "devices, platforms, and technologies used to provide digital content to library users are often operated and maintained by commercial vendors who frequently do not share librarians' commitment to the profession's core values of intellectual freedom, privacy, and access (Cardwell-Stone, 2012, pp 9)." The library's electronic information service providers,

the publishers and content vendors are most concerned with revenue generation and placing access limits on content users than with library clients' privacy. Thus, processes that enable them to exploit content users' behaviour data for commercial gains are more attractive to them. This leaves it as the duty of LIS professionals to ensure that a level playing field is established before committing the library and library clients to unfavourable licence arrangements. LIS professionals should, therefore, support and protect the privacy of library clients in recognition of the strong connection between the freedom to read and the right to privacy. Protecting reader privacy ensures that library clients can freely pursue any inquiry or read any book, knowing they are not being monitored or tracked, without fear of judgment or punishment.

Stueart and Moran (2007) noted that the need for library clients' confidentiality had become a cause of concern due to the proliferation of OAEIR, powered by the ever-growing ICTs that included the Internet, which was posing new ethical challenges in the protection of individual library clients' information privacy. Ethics, LIS professionals' values, and the digital content that libraries are now providing to their clients seem to be at odds in this information society regarding privacy issues (Cardwell-Stone, 2012). The ethical dilemmas LIS professionals are encountering as libraries add digital content to their collections have accumulated. As the content and services provided by libraries become more technologically sophisticated, they facilitate and create opportunities for publishers, content vendors, government agencies, corporations, and individuals to control access to the published content and potentially track library clients' reading and research habits. Online databases have the ability to track the usage of an electronic book by a library client and can communicate unique identifiers or personally identifiable information that reveals a user's identity, especially now that they require one to create an individual user account for electronic books downloading purposes, among other personalised features such as bookmarking, copying and alerts setting. According to Sueur, Hommes and Bester (2013), the rise of ICTs has made piracy an increasing ethical problem due to the Internet's power to share information extensively and at the click of a button. Britz (2013) observed that ICTs had extremely changed the philosophies of information privacy due to the new unbalanced information relationships, which had made it possible to unpackage and observe clients' personal and private information without their knowledge. Hence, Matingwina (2015) argued that privacy was the most important ethical consideration of this information-

intense century, indisputably the most critical ethical issue affecting the LIS professionals and the profession. However, LIS profession's ethics and intellectual freedom principles call on LIS professionals to desist from collecting, retaining, or disclosing library clients' information to third parties, especially without their consent. Nevertheless, in most cases, due to electronic information resources licence agreements, libraries sacrifice library clients' privacy and access to information for or out of convenience (Cardwell-Stone, 2012). Resultantly,

“if the licence that governs the library's loan of an electronic information resource entailed the library to track and retain user data associated with a particular electronic book and disclose that information to the vendor, the library was obligated to track, retain, and disclose that information, even though such terms conflict with the LIS profession's ethics (para. 7).”

Morrissey (2018) stated that from the onset of making a purchase in libraries, LIS professionals should never forget that the privacy and confidentiality of library clients were not only confined to library services such as reference and circulation, but now also encroached on the traditional areas of collection development. Thus, collection development requests from library clients must be kept in strict confidence, including their interlibrary loan data. Hansen (n.d.) stated that in the United States of America, issues of privacy first attracted LIS professionals' attention in the 1970s when the Federal Bureau of Investigation (FBI) began monitoring the library's foreign clients reading and borrowing interests, through library circulation staff, in order to restrict certain clients from accessing scientific data in government documents that were freely available in public and academic libraries. However, the ALA protested this invasion of privacy by confronting the FBI directly, speaking before a Congressional hearing on the matter, and urging LIS professionals not to cooperate with the FBI unless they had secured a legally binding court-ordered subpoena. Databases and e-readers create records of users' intellectual activities, including search terms, highlighted phrases, and what pages the individuals actually read. Cardwell-Stone (2012) noted that if information searched and used by a library client can be easily collected and/or associated with a particular library client, as the case in this information society, such records can be used against the client as evidence of intent or belief, especially if the records are stored on vendors' servers, where they are subject to discovery by law enforcement.

3.6.3.2 Access in electronic libraries

Academic libraries in this 21st century are no longer mere storehouses of information. They have an obligation to proactively provide library clients with access to their collections regardless of education, age, gender, location and economic status. However, this is a daunting task for information professionals, in light of the economic challenges facing libraries. UNESCO (2013), as cited in Sueur, Hommes and Bester (2013, p. 8) stated that, "Information accessibility encompasses many issues surrounding availability, accessibility, affordability of information" and safe access to information versus access to safe information. According to Britz (2013), ICTs have unbundled access to information to become a socio-economic right that unlocks the opportunity for online participation by various individuals. Accessibility of information in the technological world also stretched to cover issues dealing with multilingualism, metadata, interoperability, open-source software, open content, user-unfriendly website, and special needs of people with disabilities. However, as Hansen (n.d., p. 13) concluded, providing library clients with access to the information they request involved more than simply understanding their information-seeking behaviour, but was impacted by LIS professional ethics and public policy as well. Additionally, what constituted ethical practice depended on the geographical environment from which the information was being requested. Thus, Onoyeyan et al. (2014) stated that LIS professionals were the essential link between information users and the information required, hence occupied a delicate position which necessitated the need for balancing conflicting demands. This was highlighted by the fact that librarianship was a service-oriented profession responsible for serving clients. Hansen (n.d.) stated that providing information access to library clients was not only an act of LIS professionals' personal and professional commitment, but was also a basic human right in an information society (Matingwina, 2015). Thus IFLA (2016) stated that a comprehensive OA framework to scholarly research was vital to reducing information inequality and guaranteed that research would be made available to societies. Thus, it was committed to the principles of freedom of access to information and the belief that universal and equitable access to information is vital for people, communities, and organisations' social, educational, cultural, democratic, and economic well-being.

The development of ICTs has widened the impact of information resources in libraries and placed more emphasis on effective and efficient library services by facilitating quick and timely access to information (Mishra & Mishra, 2014). However, Sueur, Hommes and Bester (2013) noted that although access to information was being promoted by the new developments in the use of ICTs that included remote access to information, it was also being hindered by laws, censorship, archiving processes, and cost (affordability) of obtaining the information. In addition, Matingwina (2015) stated that access to information in Zimbabwe was limited by different laws and regulations imposed by the government, such as:

“Access to Information and Protection of Privacy Act (AIPPA), Public Order and Security Act (POSA), the Broadcasting Services Act (BSA), the Official Secrets Act (OSA) and the Censorship and Entertainment Control Act (CECA), which had been used to systematically limit access to information that the government deems inappropriate (p. 90).”

Cardwell-Stone (2012) noted that digital content’s delivery model did not only place library clients’ privacy at risk, it also facilitated censorship of information and jeopardised access, thereby causing a potential threat to the rights of an individual to read and receive information. According to most electronic information resources licences, vendors and publishers did reserve the right to modify or alter texts and remove digital content without warning, for various reasons, including copyright and contractual issues and a desire to avoid controversial content. Thus, libraries could explore their online collections only to find that a particular electronic book had vanished without a trace. The Amazon case could be cited as an example, when it decided to erase an edition of George Orwell’s 1984 from Kindle devices after a licencing dispute (Cardwell-Stone, 2012, para. 10).

Concerning the IR content that is now prominent in most academic libraries in Zimbabwe, access to the information contained in these repositories is enhanced by LIS professionals’ deliberate application of appropriate information standards. Standards in IRs and digitalisation essentially cover such areas as file formats and metadata. These standards, which support the accuracy of the information, are essential for information sharing, information quality, and information accessibility by any other platform (Anderson, 2006). LIS professionals have long used metadata standards in libraries’ information management processes such as cataloguing,

classification and controlled vocabulary. According to Dashrath (2014), metadata refers to data about data, which LIS professionals have been using for decades, serving them many important purposes like data description, data browsing and data transfer, and representing machine-understandable information that enabled the identification, location and/or description of electronic information resources. Metadata plays a key role in the electronic information system, chiefly by increasing the accessibility of information through resource discovery, searching, information retrieval, preservation, sharing, and intellectual property right management (Dhashrath, 2014, p. 211). These standardised systems of organising ‘information about information’ are probably the best facet of the LIS profession, especially now when the numbers and types of digital objects are becoming increasingly available on the Internet. According to Anderson (2006), access to IR content largely rests upon established standards that LIS professionals systematically embark on that ensure that the usefulness, accessibility and durability of the IR is achieved. Dashrath (2014, p. 213) stated that metadata was the most important ingredient to LIS professionals in the organisation of electronic information as it “facilitated the process of search, identification, choice, sharing, assessment and documentation of network resources that bring about faster and precise recalling.” There were several metadata standards, though the Dublin Core (DC) was the most popular and widely accepted metadata standard proposed to describe almost all categories of networked electronic resources. Its element included the title, creator, subject, description, publisher, contributor, date, type, format, identifier, source, language relation, coverage and rights (Dhashrath, 2014, p. 212). Metadata standards are the backbone of digital libraries, and in its absence, digital resources would be difficult, if not impossible, to retrieve, identify or use. Metadata as descriptive enables the easy identification, location and retrieval of electronic information resources in IRs by library clients through controlled vocabularies for classification and indexing (title, author, and abstract), and links to related resources. Hsieh-Yee (2000) recommended that as ICTs continued to advance, LIS professionals, through on the job training or from library schools, needed to understand electronic information resources metadata standards (for both OA online databases and localised IRs) and how to implement them to keep abreast of the new developments surrounding the world of information.

Lastly, the current models for electronic books lending on online database platforms do not support libraries' fundamental mission to provide access to books and other materials without regard for a user's economic or social status. Cardwell-Stone (2012) noted that using electronic information resources required library clients to own expensive devices, including laptops, ipads, ipods, smartphones, and reliable broadband Internet access, which many of them might fail to have. Whilst most universities were providing hardware, software and bandwidth for their university communities to access information, these have been reported as insufficient. Thus, library clients would end up utilising their resources to contact research online. Resultantly, when most library resources are available as digital content, as the case in most Zimbabwe universities, libraries risk shutting out users who are on the wrong side of the digital divide.

3.6.3.3 Property in electronic libraries

Onoyeyan et al. (2014) stated that property, popularly known as intellectual property, was a broad concept involving multiple categories of legally documented privileges arising from intellectual creativity, copyright included. World Intellectual Property Organisation (WIPO) (2013), as cited by Sueur, Hommes and Bester (2013) defined intellectual property (IP) as consisting of two main branches involving the creations of the mind, namely: industrial property and copyright. Copyright, which is critical in LIS professionals' work, subsists in written, electronic and other forms of information and artistic, photographic and audio-visual creations. According to Charbonneau and Priehs (2014), copyright is a protection provided to creators of original works of authorship or expression. The LIS environment is more concerned with legislation protecting the ownership and distribution rights around copyrighted works, both in print and in electronic format, online database and IR content included. Matingwina (2015) stated that all human beings had the right to property, and LIS professionals had the duty to respect and uphold these rights, including subsequent intellectual property rights. However, several ethical issues arise in using intellectual property.

Though intellectual property was once the domain of lawyers and patent holders, it was sneaked into the LIS profession through the information society. Through the IR and other open or proprietary electronic resources, LIS professionals as electronic collection content

developers are now at the forefront in determining intellectual property ethical issues in libraries. For this reason, Ferreira (2008, p. 46) argued that LIS professionals needed to take note of the role and impact of intellectual property rights in their daily duties, noting, of course, that intellectual property entailed much more than copyright issues. However, copyright under the intellectual property is an ethical issue because at its heart is the question of whether LIS professionals or library clients should copy the intellectual work of others without asking the originator's permission. Apart from copyright issues in the management of electronic information resources, LIS professionals need to be aware of other IP ethical concepts such as information commons, information overload, moral rights, educational use, compilations, digitisation, plagiarism, intellectual property privileges, software licensing, fair dealing, and fair use. Thus, any LIS professional who was not aware and subsequently adopting intellectual property ethical considerations in this information society, in relation to electronic information resources management processes, was treading on thin ice (Ferreira, 2008, p. 47). However, Charbonneau and Priehs (2014) noted that as copyright and intellectual property laws were part and parcel of academic culture, with academic libraries at the centre of it through their provision of information, it was of paramount importance that LIS professionals embarked on copyright education for themselves and their library clients. Nevertheless, despite the centrality of copyright issues in this information society, few studies have examined the awareness of copyright-related policies in higher education, especially in universities (Charbonneau & Priehs, 2014). Additionally, though LIS professionals had limited knowledge of copyright laws, studies that focused on the awareness and adoption of ethical standards concerning intellectual property in academic libraries remained scarce (Charbonneau & Priehs, 2014, p. 229).

Additionally, Ferreira (2008) noted that when creating electronic information resources, both open and proprietary, LIS professionals needed to be aware of legal issues such as licensing agreements, contracts, contractual obligations, contractual penalties and the authentication of users, taking a closer look at mutual understanding with publishers on the interpretation of contractual terms such as 'fair use' and 'educational use'. Thus, Chandel and Saikia (2012) recommended that more cooperation and interaction were required among LIS professionals, publishers, content vendors and library clients to discuss and arrive at a common goal of mutual

interests regarding the creation, organisation, maintenance, management and use of these resources to the maximum benefit of the users. On the IR front, LIS professionals needed to incorporate intellectual property concerns in the IR workflow processes, that is, in creating, organising and disseminating the repository content.

Matingwina (2015) stated that in Zimbabwe, numerous laws were enacted to protect the intellectual property rights of authors and creators, which included: The Patents Act (Chapter 26:03), the Trade Mark Act (Chapter 26:04), Industrial Designs Act (Chapter 26:02), Copyright and Neighbouring Act (Chapter 26:08), Geographical Indications (Chapter 26:06) and Integrated Circuit Layout Design (Chapter 26:07). However, constant and swift developments in information and communication technology have brought about questions and dilemmas concerning the capacity of existing copyright laws to concurrently protect the rights of scholars, while at the same time ensuring that access to information is not hindered. The literature on the awareness and adoption of these laws by LIS professionals in their day-to-day duties in libraries was scarce, thus leaving a gap that needed to be filled.

3.6.3.4 Accuracy in electronic libraries

According to Onoyeyan et al. (2014), LIS professionals were so accustomed to creating, organising, preserving and disseminating print-based information resources, which maintained the integrity of content from the onset to overtime. However, with the coming of electronic information resources, it had inherited the Internet's lack of permanence, instability and volatility of the information content, resulting in a high level of information content inaccuracy, which created reliability concerns (Onoyeyan et al., 2014). Chase, Dygert and Johnston (2000) noted that this posed ethical challenges to LIS professionals as they attempted to describe and organise electronic information resources, as describing a web-based resource was more challenging than describing a print resource. Additionally, online journal features are continuously updated, mostly at unpredictable intervals, thereby affecting the accuracy of metadata and holding information, but a print book on the shelf stayed the same as it was catalogued a year ago (Chase, Dygert & Johnston, 2000, p. 281). In addition, Sueur, Hommes and Bester (2013) explained that information accuracy was a component of information integrity that sought to guarantee the users of information that the information had not been

modified from its original source. It included “the accuracy, relevance, precision, timeliness and completeness of the information and its meta-information for it to be considered ‘fit for human consumption’” (Sueur, Hommes & Bester, 2013, p. 41). According to Adebayo, Akole and Salau (2016), one of the:

“Principles of information service delivery was that accurate information must be supplied to the user regardless of the LIS professionals’ stance to the content or finality of its use at the right time, in the right quantity and in the right format (p. 10).”

In the face of IR content, LIS professionals should ensure that the information that is ‘fit for purpose’ remains consistent and accurate and not accidentally or intentionally changed from the source (Sueur, Hommes & Bester, 2013). LIS professionals should put in place mechanisms that ensure that at receipt of content for the IR, the accuracy of the content is verifiable. Some university libraries have started to check dissertations content against anti-plagiarism platforms such as Turnitin, to ascertain the quality of the work before uploading it. Thus, policies that deal with IR content upload, unauthorised access and alteration and associated ethical standards should be in place (Sueur, Hommes & Bester, 2013, p. 41). According to Matingwina (2015), the information society is characterised by the explosion and use of electronic information and open publishing platforms such as IRs in all human endeavours. However, this has compromised the accuracy and quality of information that reaches the library client, posing several ethical challenges in libraries. Whilst IFLA (2016) recognised the important role that was being played by OA, the adoption of OA ethical principles such as effective peer review processes are of paramount importance to assure the quality and accuracy of scholarly literature, irrespective of the mode of publication. Peer review is a process through which authors' manuscripts are scrutinised, vetted and approved by professional peers before being accepted for publication (Ajuwon & Ajuwon, 2018).

3.7 Adoption of information ethics standards in the management of OAEIR

The LIS profession is service-oriented, as it strives to offer the highest level of relevant and accurate information, in the right format and in a timely manner, to the satisfaction of individual library clients. Onoyeyan et al. (2014) highlighted the fact that the LIS profession was a service-oriented profession designed to link information with the information users, with

the chief responsibility of serving these users. This was enshrined in various libraries' vision, mission and values statements, and it boiled down to the roles and responsibilities of each LIS professional within the establishment. In addition, Adebayo and Mabawonku (2017) stated that the LIS profession's chief mission is to deliver accurate information to the right user at the right time. However, this is becoming very difficult due to the information society. The information society, which has made ICTs infiltrate every information vein of the library, has even empowered users of the libraries. As if this were not enough, the information-seeking behaviour of library clients has also transformed over the years from being passive users to very active users of information, creating a complicated scenario for LIS professionals. Phillips, Oyewole and Akinbo (2018, p. 1) stated that "service delivery was at the core of the establishment of libraries all over the world"; thus, libraries should emphasise the need to provide their clients with access to relevant and accurate information that satisfy their information needs. This was reinforced by Bawack and Nkolo (2018), who stated that contemporary library clients were "highly specific in their needs and were aware of various alternative sources of information", thus requiring LIS professionals to up their games in order to satisfy their clients, who were now requesting information in various formats and from various sources. In addition, Okunnu, Sulaiman, Monu and Ekeh (2022) stated that "... ICTs has changed not only the face of information but also the information seeking behaviour of the library users, thereby evidently affecting the skills and responsibilities of LIS professionals" (p. 44). To effectively achieve this, libraries need to employ and uphold the highest level of integrity in the information provision, from acquisition and organisation, to dissemination. This is achieved through the systematic adoption of information ethics standards in libraries' day-to-day operations. Additionally, LIS professionals need to be responsive and proactive to changes in technology, as ICTs require high levels of practical skill from LIS professionals for them to maximise the use of these platforms and electronic information resources in providing effective and better library services to the users.

However, the LIS professionals first need to learn how to make ethical decisions and be ready to take ethical actions in their day-to-day duties (Onoyeyan et al., 2014). Ethics, and subsequently, information ethics, have received significant attention in the LIS field during the past decade due to the proliferation of OAEIR. However, against this background, Capurro

(2006) observed that not much was known about the study of information ethics in Africa, and the subject was still an open issue. The little research in library ethics available did not emphasise or provide concrete guidance for LIS professionals, just like in the field of business ethics, which conducted specific ethics courses and also addressed concepts and frameworks for ethical decision-making, which LIS professionals could learn from and use in their day-to-day duties (Fallis, 2007). On the other hand, AL-Nuaimi et al. (2017) noted that a considerable number of researchers had displayed an increasing interest in exploring ethical attitudes and practices pertaining to utilising ICTs in our libraries. This was because the LIS profession was at a crucial point, as the roles of libraries and LIS professionals were now more demanding than ever in this information society, due to the ethical implications of the ICTs on libraries (Singh & Mishra, 2017). This was supported by Adebayo and Mabawonku (2017), who noted that a clear understanding of the core principles of LIS professionals in the provision of equal access to information, information accuracy, and intellectual property rights had become imperative in the information society. At the same time, as AL-Nuaimi et al. (2017) noted, the unethical utilisation of electronic information resources and their technologies had captured the interest of researchers, who were keen to explore the reasons attributed to such a phenomenon. Thus, all these developments demand that LIS professionals be equipped with professional ethics skills, which will aid them in taking the right decisions regarding information, particularly in the present digital information landscape.

3.7.1 Ethical awareness in the information society

In this contemporary information society environment, LIS professionals of all levels play an important role in shaping and fostering the ethical climate of academic libraries and must be equipped to deal with the ethical issues that arise from their positions of power (Barsh & Lisewski, 2008). The massive availability of electronic information resources from all angles had put the LIS profession into a precarious position. The management processes of these resources further exacerbated the situation. Thus, Adebayo and Mabawonku (2017) stated that LIS professionals' awareness, perception and level of ethical practices in their day-to-day duties had to be explored. In addition, Phillips, Oyewole and Akinbo (2018) stated that for LIS professionals, by virtue of working in the library and providing various library services to diverse groups of clients in this information society, it was essential to study their level of

awareness and adoption of information ethics standards in their information service delivery. Additionally, Shachaf (2005) noted that it was essential that LIS professionals discovered and recognised the mutual values and theoretical classifications of ethical principles they share with one another around the world, as codes of ethics reflected a profession's customs or standards, which all members ought to be aware of them.

Igbeka and Okoroma (2013) noted that though ethical codes had been in place in the LIS field, in most instances, a reasonable number of LIS professionals was not aware of them, let alone practising them in their professional duties, thereby calling for the need for publicity. Additionally, Onoyeyan et al. (2014) noted that most practising LIS professionals did not have a copy of their professional code of ethics document. Thus, they were unaware of its contents, thus compromising their adoption rate. Onoyeyan et al. (2014) noted that not much was being done to assist LIS professionals in understanding professional ethics and the ethical consequences of their actions to make the best ethical decisions when confronted with ethical dilemmas. This scenario resulted in many LIS professionals ordinarily executing their professional duties without ethical guidelines (Igbeka & Okoroma, 2013). Matingwina (2015) recommended that LIS professionals be exposed to professional codes of ethics through training, awareness and marketing of existing internationally-recognised ethical codes. Mwafuililwa (2017) sought to establish LIS professionals' awareness and knowledge of information ethics and their ethical decisions concerning information ethics. The study was against the background that LIS professionals' lack of awareness and knowledge of information ethics in this information society led to abuse and misuse of information. This also extended to IR content, where LIS professionals were daily faced with potential legal suits from authors due to the digital documents they possessed. Adebayo and Mabawonku (2017) noted that in professional and scholarly circles, both high positive and negative awareness of information ethics resulted in LIS professionals' low practice of information ethics. Thus, in light of the information society, LIS professionals must be accustomed to ethics and ethical decision-making (Mwafuililwa, 2017). Phillips, Oyewole and Akinbo (2018) noted that most of the time, in executing their duties, LIS professionals were not fully aware of the ethical consequences of their day-to-day actions. However, LIS professionals need to be conscious of the many ethical issues in this information society in their library service delivery. Additionally, it was

important that LIS professionals also developed a progressive opinion toward the ethical issues of this society, which would aid them in adopting these professional codes of ethics.

3.7.2 Adoption of ethical standards in libraries

The merging of electronic information resources has amplified LIS professionals' duties in the information society. In turn, this scenario demanded that LIS professionals in university libraries, where much scholarly literature is being generated and exchanged, be aware of, and also practised, ethical considerations in their discharge of official duties. Shachaf (2005) observed that though professional LIS associations worldwide had established professional codes of ethics, their adoption was still in its infancy. Thus, "future research should focus attention on the implementation of these codes of ethics by libraries", focusing on their awareness (adoption) and training, relevance (contextual) and effectiveness, and associated ethical problems (dilemmas) being encountered by LIS professionals (Shachaf, 2005, p. 19). However, as Onoyeyan et al. (2014) noted, the adoption of information ethics by LIS professionals had not been revealed through empirical studies focusing on the African continent and the world, thereby creating a gap in the determination of the status quo regarding the subject matter. Additionally, Adebayo and Mabawonku (2017) noted that not many studies had been executed to determine LIS professionals' level of awareness, perception and adoption of information ethics in Nigeria. Phillips, Oyewole and Akinbo (2018) noted that though LIS professionals 'ethical in practice' had created a lot of interest in various scholars, the availability of literature that focused on the awareness, perception, and adoption of ethical issues by LIS professionals was still scarce.

Igbeka and Okoroma (2013) noted that whilst the LIS profession had not been left out in terms of possessing ethical codes that could assist the LIS professionals in executing their professional duties, interestingly, many LIS professionals continued to carry out their professional duties as though there were no ethical guidelines, this happening in the midst of numerous ethical conundrums. This was against the background that the adoption of information ethics served to assist LIS professionals in understanding contemporary issues arising from the lifecycle of information in the information society (Adebayo & Mabawonku, 2017). Thus, Finks (1991), as cited in Igbeka and Okoroma (2013) stated that a code of ethics

for LIS professionals should not be a hollow statement written to satisfy the clients or library boards, but should represent the values and beliefs that LIS professionals traditionally adored. Thus, understandably, Anderson (2006) noted that historically, ethical standards were one of the greatest cherished obligations of LIS professionals.

However, though the LIS profession had been concerned with ethical issues since the profession's commencement, over the years, ethical concerns within the profession had shifted from LIS professionals' responsibility to their organisations to professional identity and responsibility towards clients and social (Wanda, Jitka & Wallace, 2000, as cited in Igbeka & Okoroma, 2013). This was a direct result of the rapid technological changes and the beginning of the information age, which was compelling the LIS profession to reconsider its mission, responsibilities and values. Additionally, Mutula (2013) noted that the information society environment had created increased concerns about the moral and ethical implications for society, especially concerning people's legitimate rights, due to the irresponsible use of ICTs in the information society. Adetimirin (2017) noted that the unethical use of technology-based information by students and staff in academic institutions was a major challenge. The primary reason cited was a lack of awareness of ethical behaviour in the cyber-world. This poses the great question of whether LIS professionals were aware of the ethical framework they were supposed to police in the electronic world.

Onoyeyan et al. (2014) observed that LIS professionals' adoption of information ethics was low, especially on issues that involved users' privacy, access to information and intellectual property rights, and called for information ethics to be taught to student librarians, just like other library skills. This scenario called for LIS schools to have a significant role in the ethical development of LIS professionals so as for them to remain professionally competent. Additionally, LIS professionals must keep themselves well-informed of their professional code of ethics and ethical issues confronting them in this information society, to protect their mission of providing library clients with access to the information they need. Matingwina (2015) found out that there were many challenges LIS professionals faced in the adoption of ethical values in their day-to-day duties. Some of the main challenges cited in the study were conflicting interests between key information stakeholders, lack of reading resources, and complex

information requests from library clients, resulting in failure by the library to provide them with access to information. Adebayo, Akole and Salau (2016) noted that adoption of information ethics practices by LIS professionals was low in academic libraries, and major ethical challenges were lack of respect for library clients' privacy, retrieving and using library clients' information without their consent, and restricting library clients' access to information, including providing inadequate assistance to library clients in their information quest. Though Adetimirin (2017) noted that LIS professionals needed awareness of ethics due to the nature of their responsibilities of accessing and retrieving information from different online platforms such as OA journals, online databases and IRs, especially in this contemporary world, Adebayo and Mabawonku (2017) concluded that there was a need for further research on this issue, emanating from the fact that practically the level of adoption of information ethics was generally lower than its awareness by LIS professionals. So, awareness of information ethics by LIS professionals did not constitute its adoption. This was also observed by Igbeka & Okoroma (2013), who stated that the existence and awareness of ethical codes alone without measures to enforce these ethics was as good as having none. Thus, LIS professionals needed to take and value ethics seriously, which would result in their adoption at the individual, professional and organisational levels. Adebayo and Mabawonku (2017) confirmed this finding and underscored that there had not been any case of confrontation and sanction related to the violation of ethical values. Adetimirin (2017, p. 12) noted that LIS professionals' "knowledge of the four issues in the PAPA framework which comprise property, accuracy, privacy and access" was now invaluable in this information society. Though Phillips, Oyewole and Akinbo (2018) noted that LIS professionals' awareness of the ethical issues in LIS service delivery had improved over the years, adoption of the PAPA ethical framework in this contemporary library environment had not been fully established.

3.7.2.1 Privacy to information

Anderson (2006) stated that LIS professionals' ethical advocacy for OA to information, though proper, opened another problematic ethical issue, that is, the protection of privacy of authors whose scholarly work is published to the general masses, as well as the protection of library clients' privacy in this cyber world. Additionally, Cardwell-Stone (2012) noted that in this contemporary technological environment, libraries were anxious to provide their clients with

the most popular in-demand service, but in some cases, without carefully evaluating the service's impact on user privacy. Resultantly, through gathering, organising and disseminating electronic information content, both proprietary and IR resources, LIS professionals were now faced with privacy concerns that they have to deal with daily.

Cardwell-Stone (2012) stated that as libraries move to include online content in their collections, the profession must take proactive steps to ensure that the addition of online content does not compromise professional values, which called on libraries to protect user privacy, oppose censorship, and ensure access, no matter the status, age, or income of the user. In order for LIS professionals to achieve these goals within the prevailing framework of electronic information resources, it would involve challenging the status quo and standing up for library clients' rights. This would entail re-negotiating favourable electronic information resources content licence terms and working with publishers and content vendors at another level. Thus, when negotiating the acquisition of content, LIS professionals need to balance their library clients' access rights to electronic materials against the privacy rights of the individuals who may be mentioned in the content, who should be consulted before access is made available to the world. Hansen (n.d.) argued that, for instance, LIS professionals created circulation records to document the whereabouts of library materials, but not to track library clients' reading interests. As such, their privacy should be protected by all stakeholders. Thus, integrated library management databases intentionally break the continuous connection between patron and bibliographic records to protect library clients' privacy. Mwafuililwa (2017) stated that the expansion of electronic information resources in libraries had posed a significant threat to the privacy and confidentiality of library clients and information, due to the enhanced capacity of ICTs in surveillance, communication, storage and retrieval (Mason, 1986).

Electronic mail also creates privacy concerns due to its ability to distribute information to and from library clients (Onoyeyan et al., 2014). Thus, the challenge is in its potential for invasion of library clients' privacy should the library decide to use it for transmitting information queries from clients and conveying search results to clients. However, as Stueart and Moran (2007) observed, balancing conflict that arises between the rights of the individual and the

rights of the institution were the top two ethical issues identified by LIS professionals as a cause for concern in this information society. Sueur, Hommes and Bester (2013) stated that information privacy looked at the link between collection, management and dissemination of personal data, especially now due to the use of ICTs. Personal library clients' data that LIS professionals come across within libraries in their day-to-day execution of duties includes information relating to the race, marital status, ethnic or social origin, age, religion, research habits, email address, physical address, and telephone number. Additional ethical situations that arise in the LIS profession concerning privacy include monitoring of library clients' electronic information resource usage data and disclosure of clients' print information resource usage through library circulation transactions (Matingwina, 2015).

Cardwell-Stone (2012) stated that LIS professionals should be aware of their country's confidentiality laws, library privacy policies, and the profession's longstanding commitment to preserving library users' privacy. This was seen as the first step toward LIS professionals adopting ethical standards involving library clients' privacy issues. However, Onoyeyan et al. (2014) observed that though LIS professionals were aware of their professional code of ethics and their ethical privacy obligations, in some cases they unethically abused their positions and confidential information for personal advantage. This was against the background that protection of library clients' privacy and confidentiality had long been an integral part of the mission and values of LIS professionals in libraries, as enshrined in various LIS institutions and professional associations' code of ethics statements (Mwafulilwa, 2017). For instance, the ALA (2008) supported the confidentiality of library clients regarding access to information, which was crucial to freedom in the inquiry for information library clients. Additionally, the IFLA (2012) code of ethics for librarians and other information workers valued the privacy, secrecy and transparency of library clients and information. In addition, Ngu-War (2019) suggested that as the relationship between the library and the user was confidential, LIS professionals needed to take appropriate measures to ensure library users' privacy and the protection of personal data, necessarily shared between individuals and institutions, was upheld.

3.7.2.2 Access to information

Academic libraries are much more than storehouses of stacks of information. They should strive to make the information accessible to all clientele. With the current information explosion, it is essential and of paramount importance for LIS professionals to provide specific, exhaustive and expeditious information to library clients as information access and retrieval was the core duty that they were expected to perform diligently. Accessibility of information is divided into two segments as enshrined in different library vision and mission statements. The first involved carefully identifying, selecting, organising and providing access to rich information as required by library clients. This was an information service the LIS professionals had been providing to library clients from time immemorial. Additionally, LIS professionals had an ethical duty to ensure that IRs remained a regular part of the library infrastructure and, thus, should ensure the continuous gathering, organisation and preservation of IR content (Anderson, 2006). The second segment involved sharing knowledge with library clients on effectively and efficiently accessing the needed information. This is done through carefully prepared library instruction programmes such as information literacy skills, user education programmes, and library orientation. Effective online database searches and retrieval of electronic information resources required specialised knowledge beyond the ability of many library clients. The above programmes greatly assisted them in having meaningful access to electronic information so that they could execute academic research on their own. Thus, the skills to use information effectively may be a profound and fundamental part of library clients' academic practice, and information literacy skills have the potential to take centre stage in information access and dissemination (Forster, 2013). The teaching of information literacy skills in universities by LIS professionals should be viewed in the context of ethical professional behaviour, as it necessitates the effective and efficient use of electronic information resources (Forster, 2013; Ngu-War, 2019). In providing access to information, the goals of academic libraries could not be achieved without concerted effort in connecting with library clients in the process of information provision, thereby demanding that LIS professionals understand current trends in information creation, organisation and dissemination, flavoured with appropriate information ethics standards (Adebayo, Akole & Salau, 2016). Thus, LIS professionals should be keen to assist library clients in effectively accessing information, especially with the new ICTs in the current information explosion

environment. Mwafulilwa (2017) stated that LIS professionals in academic libraries must learn to use the new technologies to fully access the electronic information resources and then educate library clients on the same. Thus, should LIS professionals fail to have these skills, this would be tantamount to denying library clients access to information in this information society, which is unethical.

According to Anderson (2006), access to IR content largely rested upon established standards that LIS professionals systematically embarked on, ensuring that the usefulness, accessibility and durability of the IR were achieved. However, “though the greater good was being served by opening up access to knowledge, it did not necessarily need to be at the expense of personal harm to the living people” (Anderson, 2006, p. 42). Mullen (2011) noted that many libraries were adding their IR contents to federated or integrated search products to improve their usage and accessibility. Additionally, LIS professionals were integrating IR content in library instructional programmes such as library orientation, user education, and information literacy skills programmes to increase access to the resources. Thus, library instruction programmes “which only included subscription resources missed the opportunity to provide awareness of and access to open materials” (Mullen, 2006, p. 7). Sinh and Nhung (2012) noted that it was important for LIS professionals to teach information literacy skills in their universities. Most university students and teaching staff did not have the skills and habit of using online databases as one of their main information resources. Information literacy skills assist library clients in utilising the abundant online resources at their disposal. According to Forster (2013), information literacy acted as a facilitator of ethical practice by library clients, and the LIS professionals should ensure that it is well-integrated into the fabrics of library services. Additionally, teaching information literacy skills has an ethical value, which should encourage LIS professionals to prioritise this service in their academic libraries (Forster, 2013, p. 27). Thus, academic libraries should campaign by advocating and establishing information literacy skills training backed by more confident and competent LIS professionals, as it plays a key role in library clients’ academic lives.

Herman (2003) was concerned that many studies that have been carried out on the digital divide tended to look at the phenomenon from a conceptual, statistical, and policy perspective. He

argued for studies that look at the ethical perspective of the digital divide. His study concluded that the concept of the digital divide is indeed an ethical issue and should be looked at from an ethical perspective. The new technological means for information storage and transmission exacerbate the differences between information “haves” and “have-nots” in the world (Rubin & Froehlich, 2011). Matingwina (2015) also reinforced that the digital divide was another ethical issue created by the current digital environment. Thus, if libraries failed to provide appropriate technological hardware and software for easy access to information by library clients, they would risk perishing in this information society.

3.7.2.3 Property rights of information

According to Charbonneau and Priehs (2014), academic libraries were becoming increasingly involved in copyright issues through LIS professionals’ involvement in scholarly publishing activities. As libraries were getting increasingly involved in building IR collections, such as staff research literacy and student dissertations, as well as increasing their licenced library resources, ethical questions regarding the intellectual property of those resources started to rise significantly. Onoyeyan et al. (2014) noted that intellectual property rights issues were one of the biggest ethical dilemmas confronting LIS professionals in the 21st century, as the information explosion was coming from both the proprietary electronic information resources and the publishing involvement of LIS professionals through OA IRs. In institutions of higher learning such as universities, academic staff as authors, editors, or producers of both print and electronic information content had the legitimate right to benefit economically and professionally from their intellectual output (Matingwina, 2015). Through IRs, LIS professionals had been gathering, indexing, and disseminating scholarly information content in electronic OA format that was entitled to intellectual property and copyright protection (Mwafulilwa, 2017). Thus, LIS professionals, as the custodians of academic information in institutions of higher learning, had the duty to protect against intellectual property infringements for both the IR content and proprietary electronic resources collections.

Senapati and Singh (2012) noted that LIS professionals' concern in this information society environment was centred on the legal complications surrounding the use and misuse of information, copyright issues associated with the provision of digital or online services, and

setting up and offering of IR services. As both open and proprietary electronic information resources continued to increase significantly, it was necessary that LIS professionals, especially those in academic libraries, increased their knowledge and understanding of copyright laws and other intellectual property issues such as plagiarism (Charbonneau & Priehs, 2014). This would enable them to perform their duties effectively and efficiently and also provide assistance and guidance to library clients in this contemporary library environment where the importance of copyright education continues to grow (Charbonneau & Priehs, p. 228). Therefore, Adetimirin (2017) noted that LIS professionals and library clients must know about the ethical use of electronic information resources so as to avoid violating their terms of reference by acknowledging the author and source from which they got the information, thereby avoiding plagiarism and copyright infringement. Only when the LIS professionals and library clients were aware and possessed the cyberethics knowledge guiding these electronic information resources, would they use these information resources legally and morally. Senapati and Singh (2012) noted that LIS schools should also take up their part by producing up-to-date trained manpower that is able to take an interest in the adaptation of the library based latest information gathering, organisation and dissemination technologies together with their ethical responsibilities.

Olaka and Adkins (2012), as cited in Charbonneau and Priehs (2014) observed that LIS professionals in academic libraries had moderate knowledge of copyright issues. There was a need to deliberately increase their knowledge of copyright laws. Thus, deliberate on the job training and/or infusing more content on copyright issues in specific copyright courses at LIS schools was necessary to wrestle to control the LIS professionals' copyright ethical challenges in this information society. Oppenheim and Woodward (2004), as cited in Charbonneau and Priehs (2014) also had the same findings. Additionally, in libraries that had adopted copyright framework in their workflows, with responsibility for copyright activities being distributed across library positions, very few such libraries had an individual LIS professional serving as a dedicated copyright officer (Charbonneau & Priehs, 2014).

3.7.2.4 Accuracy of information

Diamond and Dragich (2001), as cited in Matingwina (2015) stated that the growth in technology and overabundance of electronic information resources had led to the need for LIS professionals to be aware of how to authenticate online information resources. Accuracy of information resources had been a cause of concern in this OA to the information environment, which had put LIS professionals in a precarious ethical position. The divorce of the library institution from the creation and organisation of OAEIR had placed LIS professionals at the peripheral of proceedings, leaving a huge gap in the evaluation of appropriate content. Thus, the accuracy of information from publishers and vendors of OAEIR was now becoming difficult to ascertain for LIS professionals, especially before the information eventually reached the library clients.

Additionally, according to Matingwina (2015), in this contemporary library environment, most of the academic library LIS professionals' duties involve conducting high-level research services, such as information access and retrieval for library clients. This was reinforced by Mwafuilwa (2017), who stated that LIS professionals in academic libraries had the chief responsibility of searching and retrieving information for their clientele from valid and reliable sources. Thus, this had to be done in a framework that ensured that the accuracy of information was absolutely maintained, with the opposite being unethical. However, as Matingwina (2015) noted, this duty presented some ethical challenges for LIS professionals due to a lack of in-depth knowledge about the discipline being searched. In university libraries, most of the deployed subject librarians did not have the qualifications in those subject areas, other than an LIS qualification. In some cases, this resulted in inaccurate information as LIS professionals failed to separate between correct and incorrect subject-based information, against library clients' expectations of accurate and reliable information. Ajuwon and Ajuwon (2018) stated that though the advent of the Internet had created the opportunity for researchers to publish book chapters and journal articles online, thereby increasing global access to research findings, with the same research finding its way into the library circles, this was causing a lot of ethical challenges for LIS professionals.

3.8 Information ethical dilemmas associated with the management of OAEIR

Since the turn of the decade, ethical questions related to library and information science have increasingly become an ever-present phenomenon in LIS professionals' working life cycle (Carbo & Almagno, 2001). In this contemporary information society, LIS professionals, in their day-to-day work errands, encountered and had to deal with many contemporary information ethics decisions emanating from the life cycle of information that involves the creation, organisation, dissemination, and provision of access to electronic information (Hoq, 2012). Contemporary trends in library information generation and service delivery have, on a daily basis, been affected by technological developments, which have created more serious ethical challenges for the LIS professionals in the information society. Further complicating the LIS professionals' ethical dilemma was the fact that the information-seeking behaviour of library clients had fluctuated over the past few years, mainly because of ICTs, which had penetrated every sphere of the human life and library landscape. Chandel and Saikia (2012) supported this notion and stated that the impact of ICTs on library user behaviour and attitude had been tremendous, resulting in a huge uptake of electronic information resource usage. These ICTs, which had ignited a plethora of information explosion in the information society, had made the legal as well as illegal use of information by library clients more and more possible than ever before. The above scenarios had put extra pressure on LIS professionals to be armed with information ethics skills, which would enable them to make the correct choices in their day-to-day interaction with information and library clients. Stueart and Moran (2007) observed that LIS professionals frequently encountered ethical situations in which their day-to-day professional duties often conflicted with their individual values. In most cases, both sides of the decision would be appropriate. However, as LIS professionals confronted many types of ethical problems on the job, understanding and adopting ethical guidelines would greatly assist them in solving these situations. Fallis (2007), as cited in Adebayo and Mabawonku (2017) stated that for 21st century LIS professionals to fully understand, adopt and deal effectively with ethical dilemmas that arise from their day-to-day execution of library duties, they had to command a good working awareness of information ethics. Mwafuilwa (2017) noted that LIS professionals faced serious ethical dilemmas in the electronic information resources management cycle against ethical awareness challenges. This was supported by Munigal (2018), who stated that with the increasing complexity of

communicating and sharing information in modern society, LIS professionals faced many ethical dilemmas in their work. Additionally, Phillips, Oyewole and Akinbo (2018) noted that LIS professionals might fail to recognise that they were encountering an ethical dilemma in the course of executing their duties. This scenario pointed to the LIS professionals' lack of awareness of the ethical issues in information service delivery in this information society.

Additionally, as Stueart and Moran (2007, p. 348) noted, ethical standards in the LIS field were “not codified like laws and were not uniform across time and place”, thus, often causing problematic moments for LIS professionals in the making of ethical decisions when confronted with such scenarios. Thus, more often than not, LIS professionals made ethical decisions “based on their judgments rather than on unquestionable facts”, thus entangling themselves in ethical dilemmas (Stueart & Moran, 2007, p. 348). An ethical dilemma is a situation where there is a conflict between principles and a choice of action that needs to be determined (Onoyeyan et al., 2014). Hoq (2012) defined ethical dilemmas as occurrences that LIS professionals encountered when their values conflicted with those of others or their organisations, making decisions between two potential ethical obligations difficult, neither of which is unquestionably standard or appropriate. Onoyeyan et al. (2014), as cited in Phillips, Oyewole and Akinbo (2018, p. 2) defined an ethical dilemma as a conflict between values and a choice of action that needs to be determined in a particular situation. Ethical dilemmas involved situations where there seemed to be no one right ethical solution to a problem but alternative choices instead, with all of which were imperfect. This was reinforced by McConnell (2010), as cited in Sueur, Hommes and Bester (2013), who stated that ethical dilemmas occurred when one had to make an ethical decision where whichever choice resulted in doing something morally wrong or contesting principles or values were equally important in a particular situation. Ignoring one choice was unethical in one way, while ignoring the other choice was unethical in another, and hence, both options could be unethical in some way or the other.

However, dilemmas regarding ethics and how LIS professionals should act when confronted with ethical issues still persist today, as LIS professionals often encounter conflicts when their values differ from those of others or with those of the library or of the organisation for which

they work (Carbo & Almagno, 2001). Miltenoff and Hauptman (2005) noted that over the past two decades, LIS professionals' ethical dilemmas have dramatically increased due to the information society. While in the print revolution ethical challenges were simple and had clear-cut solutions, the situation now appears to be the opposite. Whilst ethical codes provided LIS professionals with a framework to work upon in determining ethical situations and "a means of identifying the most important ethical consideration, they often did not provide clear-cut solutions", rather occasionally providing different and frequently opposing solutions to problems (Stueart & Moran, 2007, p. 356). This has provided LIS professionals with ethical dilemmas in an information playing field where there are often no absolute right and wrong solutions in ethical situations. Pankowska (2009) noted that information ethics dilemmas had gradually positioned themselves in the information society; this comes as the life cycle of information had greatly been altered by ICTs. Matingwina (2015) stated that the development of the Internet had transformed how LIS professionals managed and provided access to information, resulting in the role of LIS professionals becoming more complex than ever. Adebayo, Akole and Salau (2016) noted that ethical dilemmas always appear wherever LIS professionals create, organise, and disseminate information in this contemporary library environment. Maner (1996), as cited in AL-Nuaimi et al. (2017) noted that integrating ICTs into individuals' everyday and professional practices had transformed regular ethical issues and generated new ethical problems. This wave had not spared the LIS profession. In actual fact, it had presented a major ethical shift in the profession, as electronic information resources were popping up from all angles and directions. This led to many ethical dilemmas LIS professionals face in their day-to-day interaction with information and library clients. Therefore, "strict adherence to professional codes of ethics, through campaigns, training, and orientation, had to be ensured" by various LIS associations in Africa, Zimbabwe included (Adebayo & Mabawonku, 2017, p. 28).

Problematic ethical situations or ethical dilemmas often consist of a conflict between the needs of a part and the needs of the whole. These may be the conflicts between the needs of an individual employee and the organization as a whole or between the needs of an organization and society as a whole. As Stueart and Moran (2007) noted, ethical dilemmas were unavoidable in any type of organisation, libraries included. Tan (2017) noted that there were always

challenges for ‘LIS professionals’ facing other conflicting ideas as a result of dissonance between personal beliefs and professional values in the workplace. Thus, LIS professionals needed to understand the field of ethics and how to relate ethical values during the course of their day-to-day decision-making process. However, one of the remedies was to implement solid supporting corporate network culture that simultaneously empowered the employees as well as the managers to cooperatively navigate ethical conflict situations. Stueart and Moran (2007) noted that LIS management was the top factor of how LIS professionals handled ethical situations and subsequent dilemmas in their organisations. Thus, it was paramount for LIS managers to be clear and guide ethical procedures and expectations within the library. Additionally, whilst several ethical issues **confronting** LIS professionals in this information society, such as privacy, accuracy, intellectual property, and accessibility had been raised (Mutula, 2013), the new ICTs largely relied on the trust of the information users for compliance, thus presenting LIS professionals with a practical ethical dilemma to think about (Sueur, Hommes & Bester, 2013). Resultantly, ethical dilemma situations being encountered by LIS professionals in the information society were being generated by both the information side of the coin as well as the users of this information, the library clients. Thus, there was a need to look at information ethics and associated dilemmas peculiar to the information society that LIS professionals were likely to encounter (Mwafuililwa, 2017).

3.8.1 Dilemmas associated with information privacy

The new ICTs finding their way into the LIS profession in this information society are proving to be unfriendly to privacy (Cardwell-Stone, 2012). Resultantly, privacy issues in libraries had been compromised by ICTs, often unintentionally, and LIS professionals had to be constantly vigilant to prevent the erosion of the library client’s legal right to privacy. Yelton (2012), as cited in Reinsfelder, (2014, p. 161), stated that as “electronic books continued to advance, LIS professionals needed to remain aware that electronic book subscription models made libraries choose between which values to advance and which to sacrifice.” In most cases, library clients’ values, if there were in the minority, would be sacrificed over providing information to the larger group. In addition, Hansen (n.d.) highlighted that an ethical dilemma also occurred to LIS professionals if the information one library client was pursuing was, or resulted in, an invasion of another client’s privacy. However, employing a duty-based approach would solve

most of the dilemmas LIS professionals would likely face in these situations. The duty-based ethics approach subscribes to the notion that some actions were wrong or right in themselves, regardless of the good or bad consequences that may be produced, and LIS professionals have a duty to act accordingly. Library clients' privacy and confidentiality, which includes research choices, reference interviews, reference sources they consult, electronic sources they explore, and the books they check out, was a significant component of ethical dilemmas and practised in this information society (Hansen, n.d, p. 10). Kernaghan and Langford (1990), as cited in Stueart and Moran (2007) listed several types of conflict situations that LIS professionals might be confronted with in their day-to-day duties. Privacy was cited as one of the types of conflict confronted by LIS professionals. LIS professionals might use confidential information of library clients using information that they become privy to as part of their position. One such situation involved "a reference librarian who becomes aware of confidential information about a person by means of a reference interview and reveals that information in a way that advantages the librarian" (Langford, 1990, as cited in Stueart & Moran, p. 354). This scenario was also highlighted by Onoyeyan et al. (2014) who stated that LIS professionals' conflict of interest might be exposed in reference work situations. Resultantly, good awareness and adoption of ethical standards, especially those that are peculiar in the information society environment, would go a long way in assisting LIS professionals in the daily execution of their duties and management of electronic information resources.

Additionally, Chmara (2012), as cited in Reinsfelder (2014) highlighted that as LIS professionals now depended on third parties to provide electronic content, thereby losing control over library clients' data, the privacy of clients was now difficult to contain. This resulted from the privacy policies of publishers that would most likely not match the privacy policies and practices of libraries. Privacy ethical issues, such as library clients' electronic bookmarking, highlighting and downloading, are now difficult to control in the electronic information environment as it is now possible, and for any reason, for publishers to track pages that library clients would have actually read and content modified. Bailey (2012), as cited in Matingwina (2015) stated that the current digital content rights management had the potential to seriously undermine personal privacy. On the other hand, Rubin and Froehlich (2011), as cited in Matingwina (2015) argued that as libraries were public institutions, those records were,

thus, public records, and the privacy rights of individual library clients were outweighed by the rights of society, causing an ethical dilemma dimension for LIS professionals of whether to withhold or disclose information held by them. This gives demonstrates the ethical dilemmas concerning access to information in libraries.

3.8.2 Dilemmas associated with information access

Though human beings had a fundamental right to information access, the ‘right of access’ and ‘equal access for all’, had created ethical dilemmas for LIS professionals (Fallis, 2007). Reinsfelder (2014) noted that electronic information resources could provide LIS professionals with ethical dilemmas as they tried to balance the information access interests of library clients on the one hand, and the interests of rights holders (both the publishers and the authors) on the other hand. One of the ethical dilemmas faced by LIS professionals, as Chandel and Saikia (2012) stated, was that in the electronic resources environment, accessibility of information was the prime target, not the ownership. This scenario had its own problems, as access to electronic information resources was subscription-based, which would be denied soon after the expiry of the subscription period, a problem that was not encountered with the content ownership model in print information resources. Additionally, the ability of libraries to keep providing content access in the near future will remain undefined due to various reasons, ranging from budgetary constraints to access issues such as the volatility of websites. Thus, Capurro (2013) stated that library clients’ general information literacy, access to electronic information resources, and dwindling budgets for library educational resources were some of the information access ethical dilemmas confronting LIS professionals in Africa. Additionally, LIS professionals have an ethical duty to ensure that IRs remain a regular part of the library infrastructure, thus they should ensure continuous gathering, organisation and preservation of IR content (Anderson, 2006). However, Reinsfelder (2014, p. 151) stated that though the code of ethics concerning access to information and intellectual property worked flawlessly in the print environment, the same could not be said when it came to OAEIR, as several “ethical dilemmas were now prevalent as a result of competing values.”

Chandel and Saikia (2012) stated that electronic information resources were not visible to the library clients as print resources in traditional libraries, where resources were physically

available for browsing and use. This provided access challenges to library clients in their pursuit of electronic information access. Chase, Dygert and Johnston (2000) noted that the disintegration of access points to information was one of the greatest ethical dilemmas facing LIS professionals in the electronic information environment as library clients could no longer rely upon the catalogue to provide them access to the bulk of resources held by the library. In addition, Chandel and Saikia (2012) stated that academic libraries were subscribing to different electronic resource bundles from different publishers, resulting in such information sources remaining scattered around the web. This presented library clients with challenges accessing such information, as it was not easily convenient for browsing and/or searching. These multiple access points, which included the library's online public access catalogue (OPAC), the library website, web lists of resources and the IR, have created a great deal of confusion and frustration for library clients and ethical dilemmas involving providing access to information by LIS professionals (Chase, Dygert & Johnston, 2000). Single access to web-based resources through the traditional gateway, the OPAC, had many advantages. The OPAC was a specifically well-developed tool for providing access and getting users connected to information and worked flawlessly in the print environment. As such, all these electronic information resources needed to be integrated into one access point within a single stroke of a key, as library clients were impatient in visiting numerous access points to access web-based information (Chandel & Saikia, 2012).

Additionally, though ICTs, through the Internet, had made remote access to online databases possible without a time limit, university libraries had found themselves in a time of tremendous challenge in trying to cope with this and also ethical issues associated with the provision of information (Mishra & Mishra, 2014). Hansen (n.d.) stated that ethical dilemmas were most obvious when it came to providing electronic information services, and some of them included which level of service to give to library clients, based on gender, age and status, and whether to charge access fees for services, especially in the context of library approved readers. Reinsfelder (2014) stated that although electronic books were configured in such a way that they could be accessed from anywhere, library clients still needed to log in with their authentication details, meaning those clients who did not have them, such as alumni, visiting staff and students, and approved readers, had challenges in having access to the resources. LIS

professionals had long struggled to adequately determine the responsibility and extent to which they could provide service to individuals who are not current students or faculty and whether it could be at the same level of service with their core library clients (Reinsfelder, 2014, p. 152).

Libraries were established to serve all clients in terms of information content access. However, LIS professionals were often faced with ethical dilemmas regarding censorship of information and the provision of quality services. To this end, Hansen (n.d.) stated that LIS professionals should avoid censoring information at all cost, as they were expected to acquire library resource that represents all viewpoints. However, Anderson (2006, p. 42) stated that though the greater good was served by OA to knowledge, it did not necessarily need be at the expense of personal harm to the living people. Thus, as LIS professionals open up access to information, they must be guided by principled provisions. Additionally, Hansen (n.d.) noted that LIS professionals were also confronted with ethical dilemmas regarding collection development and intellectual freedom. Electronic information resources also provided ethical dilemmas for LIS professionals through their bundling of content under their licencing structure. Some titles might not be culturally, socially or politically correct to be included in the collection, but through this bundling arrangement, libraries would end up with no choice but to allow library clients to have access to these titles simultaneously with other bundled titles. Thus:

“Ethical tensions are bound to arise when selection goes against the interests and values of certain segments of the community, or will cause controversy and generate negative publicity for the institution, or will be offensive to the LIS professional, or may have the potential to harm others particularly children (Hansen, n.d., p. 9).”

LIS professionals’ capacity to provide effective access and subsequent accuracy of information had also been shattered by technology, as online databases were now routinely made externally accessible, thereby allowing more and more library clients to execute their own searches away from the library walls but in the comfort of their offices, dormitories, homes, or virtually anywhere wirelessly (Miltenoff & Hauptman, 2005). However, they might not have this information society’s information literacy skills to adequately access various sources and evaluate the information for accuracy. Thus, providing OAEIR in university libraries poses an

automatic requirement for LIS professionals to infuse various library instruction programmes to assist library clients with accurate information access. Though Forster (2013) noted that information literacy was central to ethical practice by library clients, further work was required in order to establish the ethical parameters of information literacy as library clients experience it. Thus, research clearly shows the central role of information literacy skills in library clients' research activities, and the ethical issues which arise from the lack of those skills are still being called for (Miltenoff & Hauptman, p. 27).

Electronic information 'webridges' also offered LIS professionals' ethical dilemmas in terms of the library's ability to provide extra online content to its clientele. This challenge is caused by online database content, which the library has access to, that links to other information resources external to that resource and of which the library does not have access to (Chase, Dygert & Johnston, 2000). Libraries are then faced with having to turn down multiple clients' requests for access to these external resources, which the library cannot provide due to budgetary constraints. Additionally, Chandel and Saikia (2012) noted that the bundling of electronic resources content, which proprietary publishers were in favour of, had its own ethical challenges. Firstly, one ethical challenge was that libraries had to cancel other individual titles that might be more useful to unveil bundled content to their clients. Secondly, evaluating electronic information resources in terms of usability, authoritativeness, accuracy, and completeness was difficult to execute in this kind of set-up. Thirdly, it was difficult for LIS professionals to track the usage statistics of individual titles in the bundled content to enable the right decision-making in assessing titles. These scenarios posed many ethical dilemmas to LIS professionals, and they sometimes ended up not adopting any ethical consideration in the above processes. However, Forster (2013) noted that the ethical aspects concerning the management of information indirectly required that it be easily accessible to those individuals who might want to access and use it for their day-to-day errands and avoid information incompleteness.

This new digital format also posed many ethical and legal challenges to the historical Inter-Library Loan (ILL) facility and threatened to rebuild the walls that the library predecessors worked so hard to tear down. Electronic information content publishers had been putting

frantic efforts to use licensing contracts to abolish ILL services across the LIS field, thereby limiting access to information in electronic formats (Frazier, 1999). These ‘licences to kill’ had made LIS professionals contract the demise of the ILL facility against their mission of circulating resources from their collections. This came about as publishers moved to ring-fence current subscribers from potential subscribers for economic gains, thereby controlling the primary and secondary markets for their information databases, including the occasional and rare users of the library’s information such as approved readers (Frazier, 1999, p. 42). The ethical dilemma for LIS professionals emanated from the fact that database licences that prohibited interlibrary loans had little or no immediate effect on their primary clientele. Thus, resisting these ‘contracts to kill’ would also mean denying their own primary clientele access to information (Frazier, 1999, p. 44). Electronic information resource licences also interfered with libraries’ archival roles and responsibilities, such as restrictions on photocopying, excessive downloading and user copying, and hosting of the resource on library local platforms such as the IR. These licence conditions were difficult for the library to enforce, creating an ethical dilemma.

3.8.3 Dilemmas associated with information property rights

In this contemporary information world, LIS professionals are faced with many ethical dilemmas regarding the use of information and intellectual property issues. Hansen (n.d.) stated that the role of the information professional was to provide access to information at the lowest cost, while respecting authors’ copyrights. ICTs have further complicated the management of copyright issues in libraries, resulting in LIS professionals facing ethical dilemmas in their day-to-day duties, as electronic information resource collections now constituted over 80 per cent of most academic libraries’ total collection. Thus, Reinsfelder (2014, p. 154) observed that “LIS professionals were pulled between the competing values of providing the highest level of library service to all users and the desire to respect intellectual property rights and the interests of rights holders.” Matingwina (2015) also noted that ethical dilemmas always arose when the information being requested by library clients became difficult or impossible to acquire and provide access to them efficiently without violating copyright restrictions. LIS professionals also faced challenges on how far they could protect or control library clients’ use and misuse of electronic information. Against the background that library clients were able to

download multiple electronic journal articles and electronic book chapters in PDF format and even send them to anybody via email and other electronic platforms such as social media, Senapati and Singh (2012) were concerned that this practice violated the copyrights and intellectual property rights law of authors and publishers. Due to the swiftness of the exercise, where information could easily be disseminated anywhere globally, LIS professionals in university libraries were facing ethical dilemmas, especially against the background that sharing information was one of their *raison d'être*.

According to Matingwina (2015), LIS professionals used a variety of information sources that appear in a variety of formats, and copying or transferring such information often arises as a necessity. Resultantly, LIS professionals got entangled in an ethical dilemma to protect the rights of both authors and library clients, where on the one hand they wanted authors to gain commercial value of their works, and on the other hand not to unnecessarily restrict and control the flow of information. The ability of OAEIR to allow remote access where library clients were able to access them from virtually anywhere and at any time, with it not tied to a physical location and operating hours of a traditional library, was now a source of potential ethical challenges. Resultantly, Senapati and Singh (2012) noted that it was now complicated for LIS professionals to protect the intellectual property and interest of publishers, especially in this age of digital and online publications. Zwass (2012), as cited in Matingwina (2015) argued that the intangibility of information, especially in the digital environment, was also a source of many ethical dilemmas, as copyright laws protected the form of expression and not the idea itself.

According to Senapati and Singh (2012), it was the moral duty of LIS professionals to upload their academia's published papers in their respective IRs for OA to library clients and the general populace. However, digitising items still under copyright and putting them on a public website violated copyright law, and now the challenge LIS professionals face arises due to copyright protection. Infringement of the copyright law takes centre stage if LIS professionals or the authors themselves download their published papers from the respective journal website in PDF format and upload them to the IR (Senapati & Singh, p. 67). The ethical dilemmas discussed above have led to the need to balance the interests of the user or information

intermediary, such as LIS professionals, with the copyright owner's interest through the concept of 'fair use' or 'fair dealing'. However, the concept of fair dealing poses further ethical dilemmas because of its elusive, complex, and rigid nature (Brenncke, 2007).

3.8.4 Dilemmas associated with information accuracy

The coming in of the OA movement to bolster access to electronic information resources had presented ethical dilemmas for LIS professionals, chiefly from inaccuracy of content. The publishing revolution had enabled many scholars to seek for platforms to publish their research manuscripts, and in some cases, it had ended up in the hands of unscrupulous publishers who were after making money more than anything else. Beall (2014, p. 23) noted that "while OA publishing has opened up research for many library clients, it had also created some very negative consequences, chiefly among them predatory publishers that exploit researchers through a reduced peer-review process and poisoned scholarly communication." One way or the other, this content had ended up in the hands of LIS professionals and, subsequently, library clients. Ajuwon and Ajuwon (2018) noted that questionable publications through the OA channels without proper peer review had hit at the core and credibility of legitimate scientific publication accomplishments and had left LIS professionals at their messy. This was so as a lack of in-depth knowledge on different subject areas library clients request on a daily basis had presented some ethical challenges for LIS professionals as far as information accuracy is concerned (Matingwina, 2015). Adebayo and Mabawonku (2017) concluded that in the face of many ethical dilemmas infesting the LIS professionals in the information society, there was a need for professional education and training to enlighten LIS professionals in higher institutions on handling ethical dilemmas while providing OA electronic information services. Ajuwon and Ajuwon (2018) noted that although the OA movement was originally designed to promote this 'public good', concerns were now being raised about this mode of publishing because of the emergence of dubious practices by publishers whose primary interest was profit and not the promotion of access to scientific knowledge, thereby being termed 'predatory publishers'. This practice, which was widespread in developing countries, had affected the accuracy of information found on the OA electronic library information resources. Additionally, Beall (2013), Shen and Bjork (2015), Mouton and Valentine (2017) as cited in Ajuwon and Ajuwon (2018, p. 2), raised questions about the quality of the articles published

in predatory journals because of the relatively large number of articles that were being published in a short period. This short period was somehow suggesting a rather weak or complete absence of the peer-review process, which, when done properly, would take much longer for researchers to publish accurate manuscripts.

Additionally, as Chase, Dygert and Johnston (2000) noted, keeping up with accurate electronic library holdings was proving difficult for libraries as the resources themselves were not being held by libraries but on remote serves owned by publishers. Thus, LIS professionals faced ethical dilemmas as they tried to keep their catalogues for electronic information resources as much a reflection of what was being offered from the source records. This was because publishers would willy-nilly remove or add resources per their policies, not the libraries' collection development policies.

3.9 Contextual information ethics standards associated with the management of OAEIR

Interactions between scholars of Western and non-Western countries have brought significant differences to light in how they approached issues in information ethics. Brey (2007) noted that though information ethics has mainly been a topic of research and debate in Western countries and scholars, increased interest in information ethics in non-western countries has surfaced, where there have been recent attempts to raise cross-cultural issues in information ethics. Resultantly, various scholars have raised questions about whether information ethics was culture-relative. Additionally, questions of whether the concepts and principles of information ethics had universal validity or whether concepts and approaches in Western information ethics could be validly applied to the moral dilemmas of non-western cultures had also been raised (Brey, 2007, p. 12). Thus Hansen (n.d.) noted that in dealing with the collection development of electronic information resources, LIS professionals needed to balance their professional ethics of providing materials representing all points of view with the needs and values of the information communities they worked within. This required LIS professionals to have acquisition guidelines that were both in conformity with their profession's ethical standards and their society's contextual ethical expectations. Thus, every library ought to own a detailed collection development policy that guides electronic

information resources acquisitions decisions that would also serve to defend a library's acquisition decision in a conflict situation where a library client challenges an item in the collection (Hanse, n.d., p. 9). Mwfulilwa (2017) noted that in the face of ICTs, the duties and responsibilities of LIS professionals should be re-branded to reflect their contemporary roles as content custodians and experienced information navigators in this super information-intensive information society.

Additionally, to effectively deal with ethical dilemmas involving intellectual property, the accuracy of electronic information, access to information, and particularly the privacy of library clients in the information society, LIS professionals had to embark on a paradigm shift involving accessing and licensing electronic information resources. This would mean slowing down libraries' continued move to digital content until appropriate methods and processes that enabled libraries to efficiently and effectively provide access to digital content were identified (Cardwell-Stone, 2012). Some of the actions that would be embarked on by LIS professionals in the assurance of upholding the respect and protection of the profession's core values would include:

- Undertaking a thorough examination of the technologies, platforms, and agreements that control the delivery of digital content to identify problematic features and inform changes in library policy and standard operating procedures;
- Updating existing LIS professional standards and policy statements to ensure that they address concerns emanating from the library's use of new technologies and online content;
- Developing LIS professional guidelines, tool kits, and frequently asked questions that will help LIS professionals in the field assess vendor agreements and developing and proposing alternative agreements to protect user rights;
- Committing to protecting user rights when libraries are entering into agreements with vendors;
- Working with vendors and content providers to assure that LIS professional values are weaved into the ICTs and platforms that deliver online content to library clients, and
- Working with legislators, regulators, and library clients to ensure that the laws protecting against censorship and preserving clients' privacy are fully customised and

contextualised so that they fit in well and apply to online information resources content (para. 14).

3.9.1 Ethical dimensions in electronic information management

Every major decision has an ethical dimension and, thus, the United Nations Educational, Scientific and Cultural Organization World Summit on the Information Society (UNESCO-WSIS, 2006), through the Action Line C10, recognised the importance of ethical dimensions as a key factor for developing an information society. The Action Line C10 defined several areas of action that were essential to the ethical dimensions of the information society, namely: promotion of respect for fundamental values and principles, increasing awareness of information ethics and contribution to the formulation of strategies and policies promoting the protection of privacy, personal data and illegal use of ICTs. Thus, the fundamental principle was that the information society should be subject to universally held values and promote the common good by upholding information privacy, access, property and accuracy. Rhee et al. (2010) stated that various ethical dimensions involving PAPA and cultural traits existed in this information society. Resultantly, conflicts were bound to arise at an individual, collective, and societal level in the process of handling electronic information resources. Professional ethics, culture, norms and socioeconomic conditions influenced an individual's ethical consciousness and decisions (Shachaf, 2005). In addition, Adebayo and Mabawonku (2017) stated that LIS professionals' adoption of information ethics had different dimensions, including understanding the core values of librarianship. According to Rhee et al. (2010), ethics was a relative concept with dimensionality over culture, situation, and personal interests. Rachels and Rachels (2010) stated that ethics differed in every society and that different cultures had different moral codes, such that "if one assumed that ethical concepts were shared across and by all cultures, it was merely naïve (p. 15)." Gyekye (2010) also observed that the ethics of any given society was implanted in the ideas and beliefs members of society shared about what was right or wrong, good or bad. These characteristics of ethics shared a lot of resemblances with the characteristics of culture, if not being interchangeable. Obasola (2014) noted that the ethics of individual members of society was embedded in the ideas and beliefs of the society in which they belonged and focused on what was right or wrong. It also involved behaviour patterns that were considered to bring about social harmony and cooperative living, justice,

and fairness. Additionally, ethics was said to be the projection of culture onto societies, and, in a society where diversity of culture was prevalent, it was difficult to have a standardised ethical practice and dimensions across individuals and societies (Obasola, 2014, p. 1). Rhee et al. (2010, p.1) noted that “some societies considered using some resources on the internet as unethical while others considered it as ethical.” This has led to ethical challenges in the management processes of electronic information in libraries, that is, the creation, organisation and dissemination of such resources. Matingwina (2015) observed that one of the dimensions of ethics was context and culture-specific, in the sense that what might have been ethical in one society might not have been ethical in another. Thus, this ethical characteristic affected the management of electronic information resources from the LIS professionals (creation, organisation and dissemination) and library clients’ perspectives (dissemination, use) in this information society. The current study will narrow down to focus on the cultural dimension of PAPA. Thus, it will contextualise PAPA towards the African cultural dimension perspective and concerning the management (creation, organisation and dissemination) of OAEIR in academic libraries.

Culture is the characteristic feature of the everyday life of a group of people living in one geographic area. This includes the normative behaviour patterns, customary beliefs and social forms shared by people in a particular place or time. Awoniyi (2015) noted that though culture was a concept recognised globally, its application by individuals varied from society to society and embraced religious beliefs, languages, dresses, style of living, political organisation, and all other aspects of life. African culture refers to “the totality of the way of life of African people including their tangible and intangible products, habits, customs, thoughts as well as the arts, technology, music, literature, theatre, health, drama and education” (Awoniyi, 2015, p. 4). Additionally, other characteristics of culture were that it was “both stable and dynamic, shared and learned, such that an African person inherited a cultural heritage from the preceding generation which they use, add to and pass on to the succeeding generation” (Awoniyi, 2015, p. 4). Ayantayo (2011) noted that one of the African cultural heritages that were yet to receive adequate attention in academic scholarship was the traditional African ethics. This was reinforced by Obasola (2014), who stated that the ideas and beliefs of the African society, which bore on ethical conduct, had not been given detailed investigation and clarification, thus

were in real need of extensive analysis and interpretation. This was against the background that although values differed from person to person and from one society to another, African values seemed stable across individuals and societies (Awoniyi, 2015). These African values stemmed from attitudes, beliefs, behaviours, and actions that were cherished and acceptable standards of behaviours that each society expected the members to abide by (Awoniyi, 2015, p. 4).

While one part of moral philosophy, ethics, was preoccupied with what was right or wrong and provided the remedies for an individual's action, morality referred to how things were actually done in real life. Britz (2013) highlighted that morals spoke to individuals' and societies' customs and traditions and that ethics and its practice were the critical reflections of these morals. Thus, LIS professionals working in different countries would differ in terms of morality, which would impact their actions regarding ethics adoption and dilemmas (Shachaf, 2005). Rhee et al. (2010) acknowledged that individuals with different cultural diversity and cultural backgrounds had different ethical dimensions, which presented difficulties in agreeing on ethical determinations across borders. Gyekye (2010) stated that African societies, as organised and functioning human communities, had developed ethical systems that guided the members' social and moral behaviour. However, these ethical systems had not been subjected to elaborate research and interpretation, calling for the need for such. Additionally, Capurro (2010) observed that sensitivity to a diversity of cultural traditions and local contexts was needed when considering the impact of ICTs in information delivery. Though the UNESCO had outlined the common values and principles of individuals in this information society, Rhee et al. (2010) noted that:

“These values and principles could only be harmoniously promoted across societies only when there was supportive common information ethics, as common information values without common information ethics, were likely to be stained with conflicts (p. 7).”

Mullen (2011) suggested that in this contemporary information society setting, academic libraries were in a transitional phase due to the great impact of ICTs on library services and workflow practices. However, Mutula (2013) observed that the current information ethics system prescribed ways that privileged Western cultural traditions because of the origin of

computers in these cultures, while marginalising the cultural traditions of others. Nevertheless, Obasola (2014) noted that of late, the persistence of the traditional ethical component, where cultural identities were constantly enhanced, had presented practical dilemmas in the contemporary information society. Synthesising the two schools of thought, that is, modern society ethical thought existing together with the European ethical tradition and the traditional ethical thought, clearly presented apparent conflict on how one could proceed out of an ethical dilemma situation. Igbeka and Okoroma (2013), in their study on the awareness and practice of professional ethics amongst librarians in Nigeria, concluded that due to the dynamic requirements of the LIS profession and to suit the information society and the 21st library user, the LIS professional codes of ethics needed to be rebranded and articulated in measurable behavioural declarations. Munigal (2018) highlighted that a comprehensive and standardised universal set of codes could not be devised alone to regulate the entire LIS profession at the international, continental, regional and country levels, as it risked becoming irrelevant for some LIS professionals in different social and cultural settings. Thus, while a shorter international version code with core values could be developed, it was important to devise detailed country-specific codes applicable to various contextualised social and cultural variations (Munigal, 2018, p. 71).

Additionally, deontology subscribed to the notion that normative ethics came from the ideology of norms which may be different among various societies. Norms are standards of a society's culturally accepted behaviour (Sueur, Hommes & Bester, 2013). Shachaf (2005) noted that in cross-cultural studies of code of ethics, culture strongly influenced ethical issues. However, some ethical issues were independent of cultural practices, though there were instances where views of information ethics seemed to converge with cultural beliefs. Brey (2007) noted that the discussion of privacy, intellectual property rights and access to information, which were central in information ethics, had shown that a good case could be made for the descriptive culture-relativity of these values. Information ethics, as it had developed in the West, has a strong emphasis on rights, and little attention was paid to uncovering cultural differences that might exist in systems of morality. Thus, values that were central in Western information ethics were not the values that were of central concern in many non-western systems of morality, making information ethics a product of descriptive moral

relativism (Brey, 2007, p. 17). Furthermore, Rachels and Rachels (2010) argued that cultural relativism challenged the belief in objectivity and universality of moral truth, and there was no such thing as universal truth in ethics but various cultural codes. To this end, various scholars made the following claims on cultural relativism, “different societies had different moral codes; the moral codes of a society determined what was right within that society, and there was no objective standard that could be used to judge one society’s as better than the other, and individual societies had no special status but were one among many” (Rachels & Rachels, 2010, p. 16). This was reinforced by Gensler (2013), who stated that cultural relativism was based on the connotation that the good and bad in a society were relative to culture, that is, what was ‘good’ was what was ‘socially approved’ in a given culture. The same also applied to what was ‘bad’ in a society, which was strongly condemned within the whole society. To this end, when someone pronounces an occurrence as wrong, that means that their society disapproved of it. Thus, the ethical principles of individuals and groups in society were based on unified social resolutions and, thus, on the norms and values of that particular society.

Rhee et al. (2010) observed that although cultural diversity seemed to be prevalent in communities across borders, cultural discrepancy within communities themselves also existed, causing conflicting ethical challenges. This was attributed to the fact that people from different cultural backgrounds had different ethical dimensions and harmonious resolutions were not easy. Kibugi (2014) stated that cultural and linguistic diversity within African communities also contributed to inequitable access to information, as Africa had more than hundreds of languages and ethnical and cultural diversity. The migration of staff and students now visible in universities has also stretched this issue of ethnic and cultural diversity in Africa. Thus, various ethical dimensions existed in the African context, where “people of diverse and heterogeneous norms, cultures, languages, religions, and governance systems that answer to different ethical and moral interpretations” (Mutula, 2013, p. 29). Resultantly, as LIS professionals make ethical decisions in the course of their duty, they need to be guided by a culturally contextualised ‘deontological’ ethical framework for it to be relevant and easy to implement and at the same time, not cause harm to themselves and, or their library clients. Matingwina (2015) recommended that LIS professionals develop locally relevant ethical codes to improve their contextualisation and subsequent adoption. This is also because “an

individual's behaviour was dependent on an individual's ethical dimension, and at a societal level, the common principles and values were likely to be interpreted differently across societies bringing about conflicts" (Rhee et al., 2010, p. 1-2). This was supported by Fernandez-Molina (2000), as cited in Phillips, Oyewole and Akinbo (2018), who stated that LIS professionals' behaviour was often shaped most significantly by their customs and habits as they encountered ethical situations, thus contextualising ethical practices was going to go a long way in improving their adoption rate. Similarly, Igbeka and Okoroma (2013), in a study focusing on the awareness and practicability of librarianship ethics among librarians in Nigeria, noted that awareness of the ethical values by LIS professionals was quite low, and it largely pointed to the fact that the degree of feasibility and practicability of many ethical codes was very questionable. Kibugi (2014) argued that information ethics was a good discipline and practical way forward solution to deal with issues of this information society affecting all countries, but it had to be contextualised to suit the local needs of societies. However, it should be noted that some ethical values were being shared by all cultures as there were some moral rules that all societies should embrace for them to function properly (Rachels, 2010). Cultures might differ in what they regard as legitimate exceptions to the rules, but this disagreement existed against a broad background of agreement. Thus, overestimating the number of differences between cultures was inaccurate as not every moral rule would vary from society to society (Rachels & Rachels, 2010, p. 24).

3.9.1.1 Information ethics in the African cultural context

Contextualising information ethics to suit the African roots, ideologies, and culture has been on the cards since the first African Conference on information ethics in 2007. Since then, several scholars, such as Britz (2013), Capurro (2013), Kawooya (2013), Mutula (2013), and Ocholla (2013), have mooted the idea of information ethics in an African context, bankrolled by increasing awareness and formal research about information ethics in Africa, in addition to teaching the topic in formal courses at universities (Bothma, 2013). Froehlich (2004, para. 12) noted that from "a truly intercultural information ethics, one must take the diverse cultures of the world and their historical traditions seriously." Gyekye (2010, para. 2) stated that during the "past decades, attempts had been made by contemporary African philosophers to give sustained reflective attention to African moral ideas with the view making contribution to the

understanding of African ethical thinking.” Therefore, current efforts by African scholars to entrench information ethics in the education curriculum, founded on African traditions, were well-intentioned and could go a long way in re-validating indigenous ways of thinking (Mutula, 2013). Kibugi (2014) argued that whilst information ethics was concerned with the creation and use of information, it was evident that the ability of the North’s dominant media to set the agenda on what issues were important and how these issues should be framed has been a source of its soft power for many years. Britz (2010), as cited in Kibugi (2014), stated that African research publications contributed very little to the global scholarly literature output, and information was generally travelling from the north to the south and hardly vice versa. Resultantly, information ethics in the north had a longer history than in the south, and the little activity concerning information ethics in the south had not been properly documented. Thus, most of the available information ethics literature came from the north scholarly literature (Britz, 2010, cited in Kibugi, 2014, p. 56). In 2003, WSIS addressed the question of bridging the ‘digital divide’ gap and adopted a declaration that inspired Africa to start addressing the issue of information ethics from a formal point of view. The first evidence of this inspiration for information ethics was the 1st African conference on information ethics held in Tshwane/Pretoria, South Africa, in 2007 under the theme ‘Ethical Challenges in the Information Age’ (Britz, 2010, cited in Kibugi, 2014, p. 57). Additionally, the second evidence of this inspiration for information ethics was the establishment of ANIE and subsequently ACEIE “in order to give African scholars a platform to exchange and realise their ideas in the field of information ethics (p. 58).” Since their establishment, ACEIE and ANIE have made some efforts towards contextualising information ethics in Africa. In support of the Africa information ethics agenda, ANIE and ACEIE were structured to further support the UNESCO activities of the WSIS on the African continent, particularly the Action Line C10 (Bothma, 2013).

Though, during the past decade, the LIS profession had developed various ethical frameworks to guide individual LIS professionals and associations on policies and handling dilemmas, one decade after, great work was still pending, involving formal research on the topic, teaching the new knowledge in formal courses at universities, and providing transparency to library patrons and society in general. Additionally, these codes did not prevent the formulation of country-

specific ethical standards which, though peculiar to a particular country they belong, would complement rather than contradict the application of universally-conceived ethical standards. Mutula (2013) noted that there had been efforts to institutionalise information ethics in Africa on the background that “the diverse ethical systems embedded in other cultures of the world all derived from their local histories and customs and were unlikely to be applicable worldwide (p. 38).” Capurro (2013) stated that objects of ethical enquiry pointed not only to the basis of universal rights and principles, but also to cultural, historical and geographical differences in the implementation of ethics by individuals, demanding special attention to different kinds of theoretical foundations and practical options when crafting ethical considerations. This was reinforced by Mutula (2013), who stated that African cultural practices formed part of the daily norms of people in society and, consequently, affected their new technologies' ethical decisions. This was supported by Sueur, Hommes and Bester (2013), who observed that one of the top causes of ethical dilemma incidences was different cultural values that did not allow an individual to honour one value without dishonouring the other value. Thus, the ethical concerns and issues needed to be peculiar and be founded on the diversity of African values, cultures, languages and people while remaining sensitive to the international information ethics needs (Mutula, 2013). Britz and Capurro (2010), as cited in Kibugi (2014), highlighted that though information ethics in Africa was a young academic discipline, Africa had a rich cultural legacy of different kinds of information and communication based on cultural practices. This cultural legacy emanated from the fact that Africans used oral and written traditions for centuries. Moreover, Obasola (2014) observed that as organised and functioning human communities, African societies had evolved ethical systems, ethical values, principles and rules that were intended to guide the social and moral behaviour of individual members in a given society. It is also because social groups or human societies had various beliefs, attitudes and standards that formed their value system, and African values and ethics were one such (Awoniyi, 2015, p. 4).

Froehlich (2004) noted that though living in a global information society, it was problematic to proclaim that the framework for ethics, ethical values and ethical reasons lay solely in the Western tradition, particularly concerning information ethics. Thus, there was a need to “create

a genuine dialogue about ethics in the multicultural internet world” and not be entirely restricted to one particular traditional viewpoint. This is so as,

“ethical thought and ethical reasoning and the approach towards ethical dilemmas resolution may or may not be the same as those offered in Western society, and one may need to seriously take the diverse cultures of the world and their own historical traditions, from a truly intercultural information ethics viewpoint (Froehlich, 2004, para. 12).”

Shachaf (2005) observed that in the implementation of ethics, the socio-cultural context of LIS professionals contributed to the decision-making process, as their situations differed from one another due to the level of uncertainty avoidance. Uncertainty avoidance is “the level of tolerance for uncertainty and ambiguity within a society, wherein a high uncertainty avoidance ranking country, there will be a low tolerance for uncertainty and ambiguity” (Shachaf, p. 15). This speaks well to the difference between African and Western countries in terms of their perception, morals and subsequent uncertainty avoidance of ethical issues in their domain, which might not be the case in another setup. Additionally, Stueart and Moran (2007) observed that although many of the problems relating to ethics that were confronted in libraries were similar to those in other organisational settings, each type of organisation encountered some problems that were unique to that type of setting, and the context ought to be considered. Thus, practices considered ethical in some countries would not necessarily be considered ethical in others; what was acceptable in one society might be a disgrace in another society (Awoniyi, 2015). Thus, Rhee et al. (2010) stated that cultural diversity was an ethical dimension frequently used to explain various people’s ethical behaviours across societies and countries, as it was passive and firm. Mutula (2013) stated that:

“The dominance and use of Eurocentric ethical traditions in studying African philosophy were being challenged by African scholars who realise that African ethical and moral traditions could not adequately be investigated or studied through an exotic lens (p. 37).”

Igbeka and Okoroma (2013) stated that the declarations and content of codes of ethics needed to be re-addressed so that they would be spelt out in more concrete behavioural terms and touch on more concrete issues encountered by LIS professionals in their day-to-day management of the library. Mutula (2013, p. 38) suggested that information ethics should have broader

applicability and validity beyond national, regional and continental boundaries without necessarily isolating African values from the global culture. Information ethics is a field that critically reflected the moral values and practices regarding information creation, organisation, dissemination and access through ICTs. Because information ethics reflected on moral values and practices, it was necessary to reflect on these norms from the perspective of emerging information societies in Africa (Kibugi, 2014), and academic research on information ethics in Africa was crucial. In this challenging information society, it was paramount to interrogate the impact of the use of information and modern information communication technologies on the African continent to formulate specific perspectives on African information ethics. International, national and inter-cultural dialogue on information ethics issues was crucial for creating conditions for mutual respect and understanding (Kibuki, 2014, p. 57). Matingwina (2015) noted that the lack of localised ethical principles and the complexity of ethical codes were some of the top ethical challenges LIS professionals faced in upholding ethical values in this information society. For example, Zimbabwe's LIS professionals relied on international codes to determine ethical situations in their day-to-day duties.

3.9.1.2 PAPA in the African cultural context

The concepts of privacy, access, intellectual property, and accuracy of information have been a cause of ethical concern regarding the creation, organisation and dissemination of academic information resources in libraries. LIS professionals' conduct in this matter still needed to be explored, especially in any environment where duty-based principles are being called for, with cultural forces being an equal critical ingredient in the whole process. Brey (2007) investigated the descriptive cultural relativity of privacy, intellectual property and access to information, three values that were the area of focus in many contemporary information ethics research. The study noted that arguments had been made that these values were definitely Western and were not universally accepted across different cultures of the world, in support of the following three kinds of evidence which looked at the concept of privacy in different cultural settings:

- Conceptual: the extent to which there were moral concepts across cultures with similar meanings;

- Institutional: the extent to which there was a similarity between codified rules that expressed moral principles and codified statements that expressed moral judgments about particular types of situations; and,
- Behavioural: the similarity between customs and behaviours that appeared to be guided by moral principles. This included tendencies to avoid immoral behaviours regarding a moral principle, to show disapproval to those who engaged in such behaviours and to show disapproval to those who did not, and to show remorse or guilt when engaging in such behaviours (Brey, 2007, p. 13).

Shachaf (2005) observed that some ‘collectivistic’ countries structured their LIS professionals’ codes of ethics frameworks along social responsibility lines that needed to be maintained, thereby emphasising the group's needs over individual needs, and everyone took responsibility for fellow members of their group. On the other hand, some countries emphasised high individualism in structuring their LIS professionals’ codes of ethics framework, where “individuality and individual rights were dominant within the society” (Shachaf, 2005, p. 16). Other ‘individualistic - collectivistic dimension’ countries underscored relationships over task achievement, focusing on the degree to which the society reinforced individuality or collectivism in achievement and interpersonal relationships. However, in the African culture, ethics takes the form of humanistic morality, not individualistic, whose central focus is the concern for the welfare and interest of each member of society (Gyekye, 2010). African social ethics expresses and emphasises the importance of the values of mutual helpfulness, collective responsibility, cooperation, interdependence, and reciprocal obligations, hence the African proverb, ‘The well-being of man depends on his fellow man’ (Gyekye, 2010, para. 74). Thus, this social morality is the nature of African morality, which prescribed a social ethic rather than the ethic of individualism. Individualistic ethics that focused on the welfare and interests of the individual was hardly regarded in African moral thought. Additionally, Rhee et al. (2010) highlighted that ethics was a reflection of a society’s cultural values and, therefore, could not be standardised ethical dimensions across individuals and societies due to the diversity of culture and societies. African ethics was aligned to a humanitarian ethics philosophy, the kind of ethics that placed a great deal of emphasis on human welfare and not individualism, and Gyekye (2010) termed it ‘the ethics of duty, not of rights.’ In addition,

Capurro (2013) contended that whilst personal privacy could be an important ethical principle in Western countries, it could be of little value in the African context because of different cultural perspectives. The African culture emphasises *ubuntu*, an African worldview that subscribes to the notion that ‘a person is a person through other persons’ and is based on caring for one another, respect and associated societal values. Dolamo (2013) stated that *ubuntu* was the ideal of being human, derived from a worldview principle of ‘I am a person through other persons’, and the concept symbolised an understanding of what it meant to be human and was an ethical concept of what was valuable and worthwhile in the African lifestyle. Thus, personal privacy “could be considered as less important from an *ubuntu*-based perspective, even though it could be accepted that there were several conceptions of privacy in both the West and the East” (Capurro, 2013). The information society and the coming in of ICTs have led to the erosion of some of the values and norms of African *ubuntu* (Dolamo, 2013).

Urbanisation and industrialisation have also uprooted people from their close-knit traditional village relationships. They have, for example, abandoned their communal way of life in favour of the individualised way of life in order to survive in towns and cities. Africa is a melting pot of cultures – it is African, Western, and Asian. Brey (2007) concluded that access to information and the concept of freedom of information as an ethical issue was culturally-relative, and in many non-western countries, it was not a guiding principle or part of the established discourse in society. In such societies, the national interest took precedence, and the independent right to freedom of information either was not recognised or was made so subordinate to national interests. In these non-western countries like Africa, access to information hardly resembled the Western right to freedom of information and widespread state censorship practices, libraries, databases, and the Internet were censored, and mass media were largely government-controlled (Brey, 2007, p. 15). Many non-Western countries had traditionally not included recognition of intellectual property rights in their value system and were currently struggling with this concept (Brey, 2007, p. 17). Thus, intellectual property rights were culturally relative.

3.10 Summary of the chapter

The chapter reviewed existing literature on the awareness and adoption of information ethics standards by library and information science (LIS) professionals and ethical dilemmas and contextual ethical standards they could use as they create, organise and disseminate OAEIR. The discussion from the literature first focused on those electronic information resources which are now being made available to library clients by LIS professionals, that is, online databases of book and journals, and information resources being provided by libraries through the IR content of staff publications and student dissertations. It then focused on the above resources concerning the OA movement and its impact on libraries and LIS professionals' work. Code of ethics frameworks used by LIS professionals in the execution of their duties and associated ethical issues peculiar to the information society libraries were also discussed from the global LIS profession codes, other benchmark international codes and continental codes of ethics perspective. The above analysis spilt into the discussion on information ethics, regional efforts towards the information ethics field, and contemporary ethical standards associated with managing OAEIR. Later, the researcher reviewed literature that focused on the privacy, access, property, and accuracy ethical issues associated with the management of OAEIR by LIS professionals from the adoption and associated dilemmas perspective. A look at the literature on the contextual information ethics standards from the cultural dimension perspective was also explored by unpacking the privacy, access, property and accuracy concepts in the African cultural context. This was meant to put the literature review into the research question's themes' perspective, including infusing key variables of the underlying research theory (deontology) into the literature review and broader issues on the research problem. The following chapter will discuss in detail the research methodology adopted by the study.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.0 Introduction

The purpose of research methodology in a study is to provide a framework for the approaches used to solve the research problem, from the choice of a research paradigm, research approach and research design, to the sampling methods, data collection, data analysis and research ethics considerations used. According to Magwa and Magwa (2015), although other factors can be taken abroad, different research approaches are selected depending primarily on the objective and purpose of the study. This chapter discusses the research methodology that was used to examine the information ethics standards in the management of OAEIR by Zimbabwean university libraries, which set the blueprint for the collection, measurement and analysis, and interpretation of data. The study used a pragmatic research paradigm because it is flexible to use multiple ways to address all the research questions adequately and is a more reflexive approach to research design. Additionally, a mixed-methods approach was used as it best suited the nature of this study which involved human behaviour, and also allowed multiple ways to explore the research problem. For the research design, the study adopted a sequential explanatory research design to bring out the best results, as quantitative and qualitative data were collected in sequence. The population was sampled by combining a census survey (quantitative approach) for operational level LIS professionals and purposive sampling (qualitative approach) for managerial level LIS professionals. The combined sampling procedure increased the gathering of similar findings, thereby making the study replicable as well as strengthening the validity of results, together with grounds for generalisability (Gray, 2018). A methodological triangulation, through the use of questionnaires, interviews and document analysis research instruments, was implemented for data collection to give the study a more detailed and balanced perspective which was necessary due to the complexity of human behaviour. Lastly, the study used thematic content analysis and descriptive statistics, together with the Statistical Package for Social Science, to analyse data.

4.1 Research paradigm

Research paradigm, also referred to as philosophical worldview, refers to a basic set of beliefs that guide action and will often lead to a researcher embracing a qualitative, quantitative, or

mixed-methods research approach (Creswell, 2014). Thus, the research paradigm serves “as a general philosophical orientation about the world and the nature of research that a researcher brings to a study, and are based on discipline orientations”, among other factors (Creswell, 2014, p. 6). In addition, Kaushik and Walsh (2019) explained that the term ‘paradigm’, introduced by Thomas Kuhn (1970), refers to the philosophical assumptions, shared generalisations or basic set of beliefs and values of a community of specialists that guide the actions and define the worldview of the researcher. Additionally, paradigms are conceptual and practical “tools” that are used to solve specific research problems; in other words, paradigms function as heuristics in social research (Kaushik & Walsh, 2019, p. 2). Although several paradigms or worldviews structure and organise modern social work research, the bottom line is that they are all philosophical in nature. Thus, the main components of a paradigm include ontology, epistemology and methodology. According to Gray (2018), ontology is the study of being and/or the nature of existence and what constitutes reality. On the other hand, epistemology provides a philosophical background for deciding what kind of knowledge is legitimate and adequate, and assists the researcher in clarifying research design issues. The methodology serves as a means of selecting a data-gathering method and getting on with the job. Kaushik and Walsh (2019) added that axiology constitutes beliefs about the role of values and morals in research, whilst ontology is assumptions about the nature of reality. On the other hand, epistemology is assumptions about how we know the world, how we gain knowledge, and the relationship between the knower and the known, whilst methodology is a shared understanding of the best means for gaining knowledge about the world (Kaushik & Walsh, 2019, p. 1). Figure 4.1 below gives a detailed diagrammatic illustration of how the paradigm position itself within a research methodology framework:

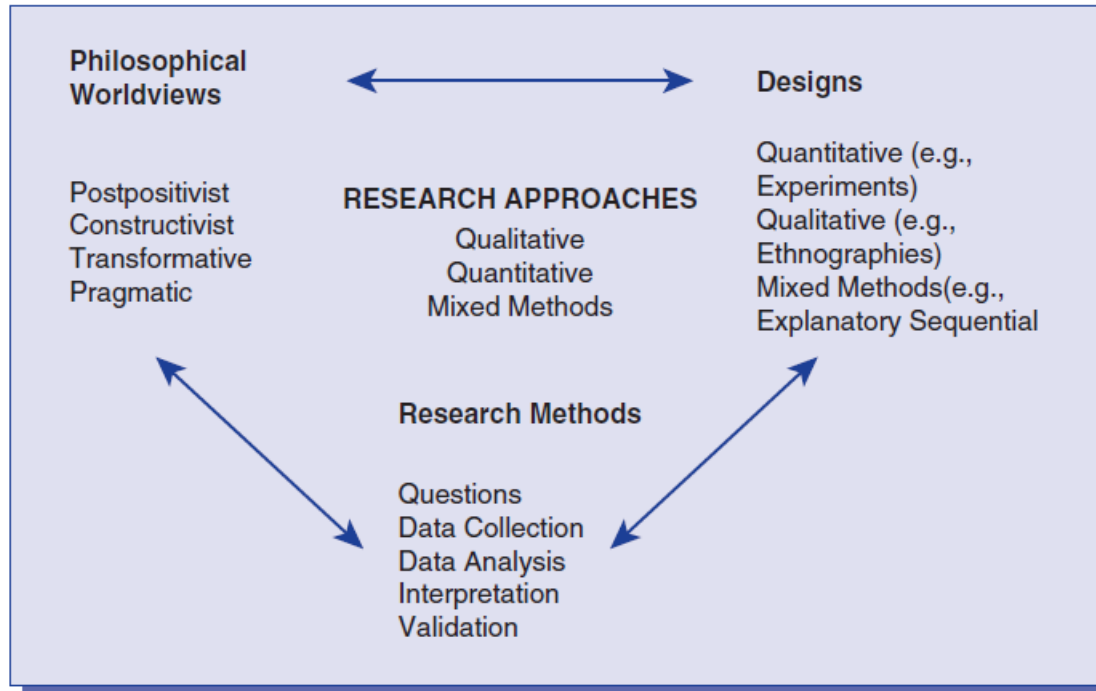


Figure 4.1: A framework for research - the interconnection of worldviews, design, and research methods

Source: Creswell (2014, p. 5)

There are many research paradigms, but four are widely discussed in the literature: post-positivism, pragmatism, constructivism, and transformativism (Creswell, 2014). According to Kaushik and Walsh (2019),

“Each of the above paradigms has a different perspective on the axiology, ontology, epistemology, methodology, and rhetoric of research. Post-positivism, one of the older approaches of social research, is often associated with quantitative methods, and post-positivist researchers view inquiry as a series of logically related steps and make claims of knowledge based on objectivity, standardisation, deductive reasoning, and control within the research process. Constructivism is typically associated with qualitative methods and literary and informal rhetoric in which the researcher relies as much as possible on the respondents’ views and develops subjective meanings of the phenomena. Thus, constructivist research is shaped from the bottom up, from individual perspectives to broad patterns, and ultimately too broad, thus anchoring on two opposite ends, post-positivism. Pragmatism is a paradigm that claims to bridge the gap between the scientific method and

structuralist orientation of older approaches and the naturalistic methods and freewheeling orientation of newer approaches (p. 2).”

The post-positivist paradigm, which is sometimes called the scientific method, or doing scientific research, empirical science, positivist or post-positivist research, provides a more encompassing way to examine real-world problems, thereby emphasising meanings, and seeks to explain social concerns, bringing together theory and practice (Karla, 2011). The post-positivist tradition comes from 19th century scholars, such as Comte, Mill, Durkheim, Newton, Locke, and more recently, Phillips and Burbules, and represents the thinking after positivism (Creswell, 2014). It challenges the traditional notion of the absolute truth of knowledge and recognises that individuals cannot be positive about their claims of knowledge when studying the behaviour and actions of humans (Creswell, 2014, p. 7). Gray (2018, p. 24) clarified that post-positivism, which is “sometimes also known as anti-positivism, is a research tradition that rejects the belief that human behaviour can be investigated through the use of the methods of scientific inquiry.” In post-positivism, society shapes individual actions. Thus, people’s actions can generally be explained by the social norms they have been exposed to through their socialisation and social class. Additionally, the problems studied by post-positivists reflect the need to identify and assess the causes that influence outcomes; hence, studying individuals’ behaviour becomes paramount for a post-positivist. (Creswell, 2014). Gray (2018) explained that the post-positivism paradigm argues that reality exists external to the researcher and must be investigated through the scientific research process. The post-positivist paradigm places paramount importance on developing numeric measures of observations and studying the behaviour of individuals so that the world can be better understood through testing or verifying, and refining laws or theories that govern the world tests (Creswell, 2014). The approach to research used by post-positivists includes beginning with a theory, then collecting data that either supports or disproves the theory, and then making necessary revisions and conducting additional research.

Constructivism or social constructivism (often combined with interpretivism) is typically seen as an approach to qualitative research and can be traced back to Mannheim, Berger and Luekmann (1967), Lincoln and Guba (1985), Lincoln et al. (2011), Mertens (2010), and Crotty

(1998), among others (Creswell, 2014). Social constructivists believe that individuals seek an understanding of the world in which they live and work and develop varied and multiple subjective meanings of their experiences. This leads the researcher to look for the complexity of views rather than narrow meanings into a few categories or ideas, thereby enabling the researcher to design broad, general and open-ended questions so that the respondents can construct the meaning of a situation (Creswell, 2014, p. 8). Constructivist researchers often address the processes of interaction among individuals, focusing on the specific contexts in which people live and work so as to understand the respondents' historical and cultural settings. In contrast to post-positivism, Gray (2018) stated that constructivism rejects the view that human knowledge, truth and meaning exist in the external world, as subjects create and construct their meaning in different ways as they interact with the world.

The transformative paradigm arose during the 1980s and 1990s from individuals who felt that the post-positivist assumptions imposed structural laws and theories that did not fit marginalised individuals in our society (Creswell, 2014). The paradigm includes groups of critical theorists and participatory action researchers who needed to provide a united voice for reform and change to tackle issues of power and social justice, discrimination, race, and oppression that needed to be addressed (Creswell, 2014, p. 9). Transformative researchers feel that the constructivist approach does not go far enough in advocating for an action agenda to help marginalised peoples. Thus, the paradigm seeks to provide a voice for these respondents, raising their consciousness or advancing an agenda for change to improve their lives.

4.1.1 Pragmatism

The study used the pragmatist research paradigm, a paradigm which originated in the late 19th century in the United States and a term given to a particular 'worldview' which derives from the works of Peirce, James, Mead, Dewey, Murphy, Patton, and Rorty, among others (Creswell, 2014; Gray, 2018; Kaushik & Walsh, 2019). The term 'pragmatism', a Greek word which means action, was first used by William James in 1898 in a public speech, acknowledged to Charles Sanders Pierce, who himself borrowed the word "pragmatic" from Kant's 'Critique of pure reasons' (Kaushik & Walsh, 2019). The pragmatist worldview, a philosophical underpinning for mixed methods studies, conveys its importance for focusing attention on the

research problem in social science research and then using pluralistic approaches available to understand the problem and derive knowledge about the problem. Though it struggled to maintain its influence in the latter decades of the 20th century, pragmatism has regained popularity in the 21st century. This is attributed to its involvement in modern management and organisations' research and also being able to provide an epistemology justification for mixing approaches and methods in a single study (Gray, 2018).

The pragmatist paradigm best suits this study, as the research seeks to uncover the societal laws that govern human behaviour, in this case, LIS professionals' ethical involvement in the OAEIR management cycle. Additionally, pragmatism was appropriate for the study as the researcher was flexible in using multiple ways to adequately address all the research questions, including mixing quantitative and qualitative data and triangulation of study results. This allowed the researcher to cross-check the data collected for consistency and also for data validation. In addition, Creswell (2014) explains that pragmatism has been identified as providing a rationale for mixed-methods research, and rejects the traditional conception that the paradigms underlying quantitative and qualitative approaches (positivism and constructivism, respectively) are essentially incompatible and in conflict. According to Gray (2018), the pragmatist ideology is true only if it promotes equity, freedom and justice, and a belief is true if it opens an opportunity for better ways of democracy, a cause that the study also advocated. Whilst post-positivism typically supports quantitative methods and deductive reasoning, and constructivism emphasises qualitative approaches and inductive reasoning, pragmatism embraces the two extremes and offers a flexible and more reflexive approach to research design (Feilzer, Morgan & Pansiri, as cited in Kaushik & Walsh, 2019). Thus, pragmatism's philosophical foundation embraces a plurality of methods, is based on the proposition that researchers should use a methodological approach that works best for the research problem being investigated, and is often associated with mixed or multiple methods (p. 2).

4.2 Research approach

Different scholars have reported the research approach differently, and it has sometimes been used to refer to the research paradigm or the entire research methodological framework

(Creswell, 2014; Kumar, 2014; Grove, 2015; Gray, 2018). The research approach involves philosophical assumptions and distinct methods or procedures. The broad research approach is the plan or proposal to conduct research involving the intersection of philosophy, research designs, and specific methods (Creswell, 2014). Accordingly, “research approaches are plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation” (Creswell, 2014, p. 3). It is, therefore, based on the nature of the research problem being addressed. Gray (2018) suggested that whatever approach is used, it is important that together with the methodology adopted, a researcher should be able to justify the combination in relation to the study’s research philosophy and research questions. To this end, the research approach is essentially divided into two categories, namely, the approach of data collection and the approach of data analysis or reasoning. A researcher can use any of the three research approaches in a study: qualitative, quantitative, or mixed methods (also referred to as combined methods). However, Creswell (2014, p. 3) stated that “unquestionably the three approaches are not as detached, rigid and opposite as they appear, and a study may tend to be more qualitative than quantitative or vice versa.” Thus, mixed-methods research positions itself in the centre and integrates both elements of qualitative and quantitative research approaches.

4.2.1 Quantitative approach

According to Jupp (2006), the quantitative approach is a research process that involves collecting data in numerical forms, such as durations, scores, counts of incidents, ratings, and scales for quantitative analysis, and it is mostly associated with the positivist tradition. It is closely linked with experimental and non-experimental designs, such as surveys.

“Quantitative data can be collected in either controlled or naturalistic environments, in laboratories or field studies, from special populations or from samples of the general population. The defining factor is that numbers resulting from the process are subsequently converted to numbers as part of the analysis process, as in content analysis (Jupp, 2006, p. 250).”

Researchers who engage in a quantitative inquiry have assumptions about testing theories deductively, thereby protecting against bias. The quantitative approach allows the researcher

to control alternative explanations and generalise and duplicate the conclusions. According to Creswell (2014), strategies of inquiry associated with quantitative research, during the late 19th and throughout the 20th century, invoked the post-positivist worldview and originated mainly in psychology.

4.2.2 Qualitative approach

The value of qualitative research in a variety of settings, including and applied social research, has increasingly been recognised (Jupp, 2006). This is against the background that the research process entails the researcher asking evolving questions and procedures, interrogating data collected in the participant's natural setting (data analysis) and making interpretations of the meaning of the collected data, thereby supporting an inductive style (qualitative) way of looking at research. The qualitative approach is associated with a variety of theoretical perspectives and entails research that investigates aspects of social life which are not amenable to quantitative measurement. It is an approach for exploring and understanding the meaning of individuals or groups assigned to a social or human problem. Thus, "qualitative research approach uses a range of methods to focus on the meanings and interpretation of social phenomena and social processes in the particular contexts in which they occur" (Jupp, 2006, p. 249). According to Creswell (2014), a qualitative research approach is closely associated with narrative research, phenomenology, grounded theory, ethnographies, and case study.

Jupp (2006, p. 250) stated that quantitative and qualitative as research approaches have certain strengths and weaknesses and differences. The major difference between the above two approaches is that

"quantitative research produces 'facts' about the world and behaviour, and these are viewed as adding to the sum of human knowledge. That is, the data thus collected tend to be accepted as they stand, and as valid measures of the variables they purport to indicate. Qualitative researchers tend to criticise these methods on the basis that most sources of data are not quite what they appear to be. They do not pay attention to social meanings and the ways in which the world is socially constructed. Also, from the viewpoint of critical researchers, the data are obtained using methods where the person or group under study are given no status, being subject to unequal power relations."

On the other hand, qualitative research is sometimes seen as lacking the rigour of quantitative research, producing ‘soft’ data that is subjective and not easy to replicate, often based on small samples or case studies.

4.2.3 Mixed-methods approach

Historically, the evolution of quantitative and qualitative research approaches has seen the former dominating research in the social sciences discipline from the late 19th century to mid-20th century, whilst the latter has gained a lot of interest from the latter half of the 20th century to date. In recent years, more social researchers have been using the mixed-methods approach for their studies, with,

“the rationale for mixing both kinds of data within one study grounded in the fact that neither quantitative nor qualitative methods are sufficient by themselves to capture the trends and details of a situation (Ivankova, Creswell and Stick, 2006, p. 3).”

This development later led to the birth of the mixed-methods research approach, and currently a number of researchers across a range of disciplines in the social and behavioural sciences are utilising and further refining mixed-methods approaches (Creswell, 2014). According to Kumar (2014), as both qualitative and quantitative approaches have their strengths and weaknesses and since neither is superior to the other in all aspects, many studies combine these approaches for greater research benefit. According to Ivankova, Creswell and Stick (2006), when quantitative and qualitative methods are used in combination, they complement each other and allow for more robust analysis, thereby taking advantage of the strengths of each approach and overcoming weaknesses of each of them. Thus, the mixed-method approach combines the strengths of both paradigms and also overcomes the weaknesses of a particular design in order to best achieve the objective of the research (Ivankova, Creswell & Stick, 2006, p. 17). Magwa and Magwa (2015) explained that the main principle is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than does either approach alone. Thus, the mixed-methods research approach is used to effectively explain and interpret data, as well as address a research question at different levels.

Although qualitative and quantitative research approaches have traditionally been seen as opposed in terms of the underlying philosophical approaches, of late many studies have used a combination (mixture) of qualitative and quantitative methods (Jupp, 2006). According to Creswell (2014), pragmatists argue that both quantitative and qualitative approaches have their own distinctive strengths and weaknesses and can be usefully combined to complement one another. Essentially, pragmatism, which works as a form of methodological pluralism, advocates using whatever ‘works best’ in any particular research context and, thus, opens the way for mixed-methods approaches. There are many reasons for choosing mixed-methods rather than ‘traditional’ approaches. From the research purpose perspective, these include:

“The research purpose and research questions might require a combination of qualitative and quantitative methods; research questions can be formulated to either provide testable results (quantitative) or to describe and characterise a phenomenon of interest (qualitative), but individually they do not address the primary purpose of the study; and there might be insufficient information available in the literature, and there is a need for exploratory research (Andrew & Halcomb, 2009, p. 32).”

Creswell (2014) stated that more frequently than not, the distinction between qualitative and quantitative research is that the former, just as in its name, deals with words rather numbers, which the latter fully embraces. Additionally, the qualitative research approach uses open-ended questions mainly through interviews, while the quantitative research approach uses closed-ended questions.

Against the above background, the study will use a mixed-methods approach, where elements of both quantitative and qualitative methods are combined in various ways within different stages of a research study. Mixed-methods research draws upon both quantitative and qualitative methodological approaches to answer a particular research question. It is a research approach to an inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks (Creswell & Plano, 2011). The core assumption of this form of inquiry is that the combination of qualitative and quantitative approaches provides a more complete understanding of a research problem than either approach alone. According to Jupp

(2006), the mixed-methods approach involves combining the use of both quantitative and qualitative methodologies within the same study in order to address a single research question, which is a specific kind of triangulation (Aurini, Heath & Howells, 2016). However, they remain relatively independent until the interpretation stage. This was corroborated by Tashakkori and Teddlie (2003), and Creswell (2005), as cited in Ivankova, Creswell and Stick (2006, p. 3), who stated that mixed-methods is a procedure for collecting, analysing, and ‘mixing’ or integrating both quantitative and qualitative data at some stage of the research process within a single study, for the purpose of gaining a better understanding of the research problem. Creswell, Fetters and Ivankova (2004), as cited in Romm and Ngulube (2015) defined mixed-methods as a research approach that collects, concurrently or sequentially, quantitative and/or qualitative data in a single study, as well as analysing and interpreting the collected data at one or more stages in the process of research. Newman et al. (as cited in Andrew & Halcomb, 2009, p. 33) devised a typology of research purposes in the social sciences, all of which could be achieved within the context of the mixed-methods research approach. The typology included the following nine research purposes in the social sciences: prediction, adding to knowledge base, personal, social, institutional and/or organisational impact, measurement of change, understanding complex phenomena, testing of new ideas, generation of new ideas. informing constituencies, and examining the past.

However, as with any other research approach, mixed-method research embodies a number of advantages and disadvantages. Reams and Twale (2008), as cited in Cohen, Manion and Morrison (2011, p. 22) argued that the mixed research approach is ideal for a study that needs to expose viewpoints in a less biased and more accurate conclusion after validation of the data. The mixed research approach combines the two forms of data collection and analysis, where “both forms of data provide different types of information, open-ended data in the case of qualitative and closed-ended data in the case of quantitative” (Creswell, 2014, p. 215).

“Among the advantages is the potential for gaining a fuller, richer and more complete understanding of a research question by combining both quantitative and qualitative perspectives. Secondly, the results from using one approach, strategy or method may help to guide and inform another approach or method, as in the case where the results of a semi-

structured interview provide a useful basis for devising more specific questions for a structured survey (Jupp, 2006, p. 180).”

However, Ivankova, Creswell and Stick (2006) noted that despite its popularity and straightforwardness, the mixed-methods design is not easy to implement, as the researcher has “to consider certain methodological issues. Such issues include the priority or weight given to the quantitative and qualitative data collection and analysis in the study, the sequence of the data collection and analysis, and the stage/stages in the research process at which the quantitative and qualitative phases are connected, and the results are integrated (p. 4).” “Another potential disadvantage of mixed-methods approaches is the often-lengthy data collection and analysis phases required (especially in sequential designs) leading to heavy demands on both time and funding resources. A further possible disadvantage is a demand placed on the researcher to be expert in the use of both quantitative and qualitative approaches (Jupp, 2006, p. 180).”

While these theoretical debates are ongoing, the researcher concluded that the mixed-methods (combined) research approach best suited the nature of this study, as multiple ways were used to explore the research problem. It was also ideal for the study as a qualitative research approach best outlined LIS professionals’ personal experiences and behaviour in information ethics in their natural job settings (Denzin & Lincoln, 1994). In contrast, the quantitative research aspect collected numerical data to obtain the views of LIS professionals (Babbie, 2010). Thus, the mixed-method approach eliminated the limitation of one approach as well as strengthening the understanding of the problem or questions (Creswell, 2014). Thus, “mixed-method research provided strengths that offset the weakness of both qualitative and quantitative research” (Magwa and Magwa, 2015, p. 24). The specific strategies and methods used in conducting the mixed-methods research depend on how the research question is formulated. “A mixed-methods study may have an overarching question that encompasses all aspects of the study, or there may be sub-questions which separately guide the qualitative and quantitative components of the data collection” (Andrew & Halcomb, 2009, p. 33). This study was divided into sub-questions which separately and collectively guided the qualitative and quantitative components of the data collection. The quantitative aspect of this study involved the adoption of information ethics standards, whilst the qualitative aspect of the study involved

dilemmas and contextual information ethics standards. The quantitative approach was primarily used in the first phase of data collection, whilst a qualitative approach fitted-in mainly from the second and third phase of data collection. The following table mapped the research questions to the requisite research approach of the study.

Table 4.1: Mapping research questions with sources of data and research approach

Questions	Source of data	Research approach
i. What is the LIS professionals' level of adoption of information ethics standards in the management of open access electronic information resources?	Questionnaires	Quantitative
	Interviews	Quantitative and Qualitative
	<ul style="list-style-type: none"> Document analysis (policies and Standard Operating Procedures - SOPs) Literature review 	Qualitative
ii. What are the information ethics dilemmas encountered by LIS professionals in the execution of open access electronic information management processes?	Questionnaires	Quantitative
	Interviews	Qualitative
	<ul style="list-style-type: none"> Document analysis (policies and Standard Operating Procedures - SOPs) Literature review 	Qualitative
iii. What are the contextual information ethics standards that LIS professionals could implement in the management processes of open access electronic information?	<ul style="list-style-type: none"> Interviews Literature review 	Qualitative

Source: Researcher (2020)

4.3 Research design

Different research designs or approaches are available in today's research due to the diversity of research problems. Additionally, different scholars refer to research design as the research approach, and vice versa (Creswell, 2014; Kumar, 2014, Gray 2018). Nevertheless, Andrew and Halcomb (2009) argue that 'designing' research, like raw materials needed to build a house, is not simply a process of assembling an array of data collection methods but, rather, should be a carefully selected and systematically applied process and, thus, a good research

design sets out the specific details of a researcher's enquiry (Kumar, 2014). In a research set-up:

“Research design involves transforming research questions into a framework of strategies and methods that will enable the researcher to systematically answer these questions. In other words, the research design links a research purpose or question to an appropriate method of data collection and a set of specific outcomes (Kumar, 2014, p. 33).”

Kumar (2014) stated that the main function of a research design is to decide, describe, justify and explain how the researcher found answers to the research questions. A research design is a plan of procedures for collecting research data and how one is going to analyse them, thereby creating a general plan of how the research questions are answered (Magwa & Magwa, 2015). As a conceptual structure or a blueprint for the collection, measurement and analysis of data, the research design is the overall strategy that the researcher chooses to integrate the different components of the study of the research problem (Magwa & Magwa, p. 46). Aurini, Heath and Howells (2016) stated that a good research design is one in which all the research components work harmoniously together. In addition, Gray (2018) stated that a research design is the overarching plan for the collection, measurement and analysis of data, and is essential in enabling the researcher to arrive at valid findings, comparisons and conclusions.

Though there are about 40 mixed-methods research designs reported in the literature, six most often used designs being applied in both social and behavioural sciences research were identified from three concurrent and three sequential designs (Ivankova, Creswell & Stick, 2006, p. 4). Kumar (2014) stated that because there is an enormous variety of research designs, and that the researcher needs to be well conversant with the most common ones in quantitative, qualitative and mixed-methods approach to be able to select a design that is most suited to the study. Creswell (2014) identified that sequential explanatory, sequential exploratory, sequential transformative, concurrent triangulation, concurrent nested, and concurrent transformative, are the six research design strategies used in today's mixed-methods research design.

4.3.1 Sequential explanatory design

Among the six research designs mentioned above, the mixed-methods sequential explanatory design is highly popular among researchers (Ivankova, Creswell & Stick, 2006), and is popular in fields with a strong quantitative orientation, hence the project begins with quantitative research (Creswell, 2014). The study used a sequential explanatory research design, as the researcher first conducted quantitative research, analysed the results and then built on the results to explain them in more detail with qualitative research. The sequential explanatory design "... is considered explanatory because the initial quantitative data results are explained further with the qualitative data, and sequential because the initial quantitative phase is followed by the qualitative phase" (Creswell, 2014, p. 16). Therefore, the sequential explanatory research design implies collecting and analysing quantitative data and then collecting and analysing qualitative data in two consecutive phases within one study. Driscoll et al. (2007) stated that sequential mixed methods data collection strategies involve collecting data in an iterative process whereby the data collected in one phase contributes to the data collected in the next. This design allows the researcher to collect and analyse quantitative data (through questionnaires) then followed by a collection and analysis of qualitative data (through interviews and document analysis). Qualitative data would be used to "put flesh on the bones of quantitative results, bringing results to life through in-depth case elaboration" Patton (1990, p. 132). The qualitative results would be used to assist in explaining and interpreting the findings of a quantitative study. Creswell and Plano (2007), as cited in Driscoll et al. (2007, p. 21) stated that data collected in this design provides more information about results from the earlier phase of data collection and analysis, which will enable the researcher to select respondents who can best provide those data, or to generalise findings by verifying and augmenting study results from members of a defined population. A researcher may start by conducting closed-ended survey questions and then use the results from this phase to formulate specific semi-structured interviews, an illustration of what has been termed sequential mixed-methods research (Creswell, 2014), whereby quantitative data collection and analysis are undertaken first, followed by qualitative data collection and analysis (or vice versa).

4.4 Population of the study

According to Creswell (2014), the goal of a research is to rely as much as possible on the respondents' views of the situation being studied. The population represents the totality to which study findings are generalised and, thus, represents all members that meet a set of specifications or a specified criterion for a particular study. It is the entire group of persons or set of objects and events the researcher wants to study (Magwa & Magwa, 2015). Gray (2018) also explained that a population of the study is the total number of possible units or elements that are included in the study.

The population of the study was drawn from LIS professionals serving in nine Zimbabwean universities, which represented 50% of the chartered universities in Zimbabwe. The above universities were selected based on their stable electronic information platforms over the past decade, in addition to a large pool of LIS professionals involved in OAEIR processes. The period defined has seen the emerging of more and more OAEIR and LIS professionals' steadfast involvement in their management. The researcher found these attributes relevant to the nature of study where experience in handling electronic information resources collections over time is vital. It was then expected that one way or the other, these LIS professionals engaged ethical issues in their handling of OAEIR, thus providing a rich source of solid information for the study.

4.5 Sampling procedures

The accuracy of any research findings largely depends upon the way the researcher selects a sample for the study. According to Kumar (2014), the main objective of adopting any sampling method is to minimise the gap between the values obtained from the sample and those prevalent in the study population. Thus, the underlying premise is that the sample genuinely represents a fairly true reflection of the study population. The researcher chooses this sample against the background that it is a representation of the whole population of the study. Magwa and Magwa (2015) defined sampling as a research technique used by a researcher to gather information about a population without having to measure the entire population by choosing a proportion or subset of the population for participation in a study. In addition, Gray (2018) stated that because it is not possible to evaluate the entire population due to size and resources, a sample

is rather selected for the study for evaluation, thus a good sample should be a miniature of the population. It is referred to as a sample when only some elements are selected from a population, and a census when all elements are included for a study. In research, there are generally two categories of sampling, that is probability sampling, which involves random selection, and non-probability sampling, which does not involve random selection (Magwa & Magwa, 2015). Thus, when every member of the population has an equal chance of being sampled, it is referred to as probability sampling. On the other hand, when every member of the population does not have an equal chance of being sampled, it is referred to as non-probability sampling. Examples of probability sampling include simple random sampling, systematic sampling, stratified sampling, and cluster sampling, while convenience sampling, purposive sampling, snowball sampling, and quota sampling belong to non-probability sampling group (Kumar, 2014; Magwa & Magwa, 2015; Aurini, Heath & Howells, 2016).

The study used the census survey sampling technique for quantitative sampling and purposive sampling for qualitative sampling. Given the relatively small size of the population, a census was used for survey operational level LIS professionals involved in the OAEIR management cycle at each university. These included all para-professional and professional LIS professionals not at managerial level. However, Palinkas, Horwitz, Green, Wisdom, Duan and Hoagwood (2015, p. 1) stated that “combining sampling strategies may be more appropriate to the aims of implementation research and more consistent with recent developments in quantitative methods.” Combining sampling strategies improves the reliability and/or generalisability of the study (Gray, 2018). Generalisability, which is also known as external validity, is a measure and the extent to which the findings of a study are useful to a broader situation or applicable to a particular group. In a census survey sampling, the entire population is studied. Thus, the sample equals the population and is an example of non-sampling-based methods, and belongs to quantitative research sampling. However, whilst a census survey is theoretically simple for a researcher, it is practically complicated and expensive to execute in a study. Purposive sampling, which is a type of non-random sampling or non-probability sampling, seeks to identify information-rich informants which the researcher can prioritise to study in greater depth. The researcher selects the subjects to be included in the sample based on their potential to answer research questions, provide essential and relevant data, and

specifically qualified to assist in meeting the objectives of the study (Magwa & Magwa, 2015). According to Gray (2018, p. 174), purposive sampling is ideal for qualitative research as it seeks to obtain particular practices that are explicit to specific informants and “are known to enable the exploration of a particular behaviour or characteristic relevant to the research.” Though numerous purposeful sampling strategies are available, criterion sampling is the most used in executing research, especially when considering quality assurance issues (Palinkas et al., 2015). Therefore, the researcher additionally used criterion sampling to select from each university library managerial level members. The researcher used information gathered from deputy librarians from participating universities through email, to determine census survey sample sizes per institution and purposive sampling size.

Table 4.2: Institutional sample frame

Institution	Questionnaires (OAEIR operational level LIS professionals)	Interviews (OAEIR managerial level LIS professionals)	In-post (library management staff)
University A	6	4	DL, TSL, CSL, SL
University B	4	4	DL, TSL, CSL, SL
University C	4	4	DL, TSL, CSL, SL
University D	3	3	DL, TSL, CSL
University E	8	4	DL, TSL, CSL, SL
University F	24	4	DL, TSL, CSL
University G	27	4	DL, TSL, CSL, SL
University H	2	2	TSL, CSL
University I	8	3	DL, TSL, CSL
Total	86	32	

Source: Field Data

Key

- DL - Deputy Librarian
- TSL - Technical Services Librarian
- CSL - Client Services Librarian
- SL - Systems Librarian

4.6 Data collection instruments and procedures

Data collection is an essential part of any research process, and most data collection methods fall across quantitative, qualitative, and/or mixed-methods. According to Kumar (2014, p. 40) “anything that becomes a means of collecting information for a study is called a research tool or research instrument, and is the first practical step in carrying out a study.” Examples of research instruments include questionnaires, interview schedules and guides, field observations and field documents. The data collection exercise, which aims to capture quality evidence that then translates to rich data analysis, can be implemented either quantitatively, qualitatively, or using both research approaches. Methods of data collection vary and include interviews, questionnaires, observation and document analysis (Magwa & Magwa, 2015). The use of these research instruments largely depends on the nature of the research, objectives and its merits to the study.

Two concepts closely associated with mixed-methods research are triangulation and pragmatism. Methodological triangulation was used by the researcher to gather data using structured questionnaires, semi-structured interviews and document analysis. According to Creswell (2014), triangulation refers to a research strategy that involves approaching a research question from two or more angles to converge and cross-validate findings from several sources. A researcher may assemble self-report data derived from interviews with observational data. In combining both quantitative and qualitative approaches, mixed methods research embodies the notion of triangulation. Triangulation in human research aims to explicitly and in greater depth, explain human behaviour by studying it from various angles, thereby giving the study more detail and a balanced situation (Magwa & Magwa, 2015). Aurini, Heath and Howells (2016) explained that as triangulation incorporates multi-methods of data collection, it also reduces the deficiencies of a one-method approach, thereby strengthening the research design and allowing a deeper understanding of the issues being studied. Thus, triangulation enables the cross-checking of the reliability of data across settings and at various intervals.

Harris and Brown (2010) stated that structured questionnaires and semi-structured interviews are frequently used in mixed-method research, as a methodological triangulation, to confirm

results, despite differences in methods of data collection, analysis, and interpretation. Kendall (2008), as cited in Harris and Brown (2010, p.1) observed that while questionnaires can provide evidence of patterns amongst large populations, qualitative interview data often gather more in-depth insights on participant attitudes, thoughts, and actions. On the other hand, document analysis is a form of qualitative research method, which is an invaluable part of methodological triangulation. It allows the researcher to interpret documents to give voice and meaning around the research topic themes (Bowen, 2009).

4.6.1 Questionnaires

The structured questionnaire administered to operational level LIS professionals consisted of four subsections, namely; demographic data, awareness and adoption of information ethics, information ethics dilemmas associated with management of OAEIR, and contextual information ethics standards associated with the management processes of OAEIR, all with thirty-seven combined questions (Appendix 15). Questionnaires are written research instruments with a series of either open-ended or closed-ended similar questions, with the answers recorded by respondents in a less expensive and more significant anonymous way (Kumar, 2014; Magwa & Magwa, 2015; Gray, 2018). The questions in the questionnaire instrument focused on the awareness, application and adoption of ethical standards theme, emanating from the first research question. Additionally, the questions focused on the information ethics dilemmas encountered by LIS professionals in the execution of OAEIR management processes, and contextual information ethics standards that LIS professionals could implement. These later questions emanated from the second and third research questions.

4.6.2 Interviews

The semi-structured interview guide for managerial level LIS professionals was divided into three sub-sections, namely; adoption of information ethics, information ethics dilemmas associated with OAEIR management processes, and contextual information ethics standards associated with the management processes of OA electronic information, all with twenty-nine combined questions (Appendix 16). Interviews as a data collection instrument involve the use of personal contact, between the researcher and the respondents, through face-to-face means or through electronic media such as phone and web chats applications. Thus, the interviewer

and the interviewee interact in a live setting, interchanging views on a topic of mutual interest (Magwa & Magwa, 2015). The interview instrument is one of the main qualitative data techniques alongside with document analysis (Aurini, Heath & Howells, 2016). Interview questions can be structured, unstructured, or semi-structured. The advantages of using interviews as a research instrument include its ability to yield rich data in detail, opportunity to explore topics in-depth, which will allow for obtaining new insights, allowing flexibility and recording of non-verbal responses, and its ability for high response rates and establishing rapport (Magwa & Magwa, 2015; Kumar, 2014; Aurini, Heath & Howells, 2016). Disadvantages of using interviews as a research instrument include bias, expense, time-consuming, and an enormous volume of data to transcribe. The questions in the interview guide instrument focused on the awareness, application and adoption of ethical standards theme, emanating from the first research question. Additionally, the questions focused on the information ethics dilemmas encountered by LIS professionals in the execution of OAEIR management processes, and contextual information ethics standards that LIS professionals could implement. These later questions emanated from the second and third research questions.

4.6.3 Document analysis

The document analysis checklist of the study had ten questions which focused on main policy considerations associated with the ethical management of OAEIR (Appendix 17). The researcher was primarily interested in the policies and standard operating procedures (SOPs) associated with the management of OAEIR. Document analysis, as a research instrument, is a non-reactive method of data collection, as the researcher does not directly interact with respondents but through the gathering of documents that are essential to the study (Magwa & Magwa, 2015). Thus, document analysis eliminates bias and attachment and can provide rich insights as well as comprehensive and historical information relevant to the study. According to Gray (2018), document analysis is an example of secondary data, as opposed to questionnaires and interviews, which involve the use of existing data.

4.6.4 Validity and reliability of the instruments

Reliability of the instruments used in the study was achieved through pre-testing the instruments in order to minimise errors as well as eliminate vagueness and confusion.

Reliability refers to the stability and consistency of the measuring instruments to produce the same measurements over a period of time (Magwa & Magwa, 2015). Eight LIS professionals from a non-participating university were selected for this exercise, and thereafter the instruments were revised. According to Kumar (2014), pre-testing in quantitative research refers to a practice where a researcher tests the instrument intended for the study before actually using it, in order to critically examine the clearness of each question as it relates to respondents' understanding of them and removing possible complications. Magwa and Magwa (2015) stated that pre-testing the instrument uncovers deficiencies which would not be otherwise apparent by simply reviewing or scanning through the instruments.

Validity in the study was ensured through methodological triangulation for data collection and analysis. Validity refers to the appropriateness of each step in the research process (Kumar 2014), and the degree to which the measurement used by the researcher actually measure what was intended and, or claim to have measured - which is also a product of reliability Magwa and Magwa (2015). Thus, to ensure validity in a study, the research instruments selected must measure precisely what it was intended to measure without going astray (Gray, 2018).

4.6.5 Administration of research instruments

In the first phase of data collection, the researcher engaged research assistants to distribute questionnaires to all the selected respondents involved in the OAEIR management cycle at each university. In the second phase of data collection, the researcher personally administered semi-structured interviews to the following four key (informants) managerial level librarians: Deputy Librarian (DL), Technical Services Librarian (TSL), Client Services Librarian (CSL) and Systems Librarian (SL), or their equivalent positions at the selected institutions. The researcher selected these informants because they were more involved in the management processes of OAEIR at managerial, operational and policy level, thus they were more engaged in the determination of the ethical considerations of such processes. In the third phase of data collection, the researcher, using a checklist, analysed documents such as OAEIR related policies and standard operating procedures.

During the fieldwork, respondents for the study were recruited using two main criteria. Firstly, a survey was used for sampling identified operational level LIS professionals involved in the OAEIR management cycle at each university. The researcher used information gathered through deputy librarians from participating universities. Through a network of such individuals, all respondents were invited to participate in this study. The researcher first distributed informed consent forms to all respondents, and then later distributed questionnaires to all participating individuals at each respective institution (Appendix 13). Lastly, the researcher moved around participating universities to collect the questionnaires. Purposive sampling was also employed to select all library managerial level members (key informants) from each university as interviewees. This involved selecting Deputy Librarians (DL), Technical Services Librarians (TSL), Client Services Librarians (CSL) and Systems Librarians (SL), or their equivalent positions at the selected institutions. The researcher first distributed informed consent forms to all these respondents, and then made appointments with them before proceeding to conduct interviews (Appendix 14).

4.7 Data analysis procedures

The process of data analysis, which involves organising data and breaking them down into easily understandable and presentable parts, brings order and understanding of the research topic (Magwa & Magwa, 2015). It allows the researcher to answer the research questions of the study in a useful and purposeful manner. The study used thematic content and descriptive statistics analysis, together with the Statistical Package for Social Science (SPSS) to analyse the data collected. Thematic content analysis is befittingly used with the qualitative data analysis procedure, while descriptive statistics analysis works well with the quantitative data analysis procedure. These two represent how the researcher used the mixed-method approach in data analysis.

4.7.1 Quantitative data analysis

Quantitative research provides essential statistical information for a study, and when used, the most appropriate data analysis procedure would be in quantitative form. The most frequently used quantitative data analysis method is the descriptive statistics form, which commonly uses descriptive data such as mean, representing the numerical average of a set of values,

percentage, expressing how a value or group of respondents within the data relates to a larger group of respondents, and frequency, representing the number of times a value is found. Descriptive statistics data analysis procedures describe the basic features of the data in a study, providing simple summaries about the sample and the measures, and thereby forming the basis of virtually every quantitative analysis of data (Trochim, 2006). Thus, descriptive statistics data analysis procedures are used to present quantitative descriptions in a manageable form (Trochim, 2006, para. 3). According to Kaur, Stoltzfus and Yellapu (2018), descriptive statistics are used to condense research data collected into a more straightforward summary, in an organised manner and by describing the relationship between variables in a sample or population. Descriptive statistics provide total numbers, without explaining the basis behind those numbers. Descriptive statistics, which enable the researcher to assess specific populations in a more manageable form, are a critical part of initial data analysis and provide the foundation for comparing variables with inferential statistical tests (Kaur, Stoltzfus & Yellapo, 2018, p. 63). Once the questionnaires were returned, the researcher coded the data and then used SPSS version 20 to analyse and generate frequency tables, graphs and charts. Statistical Package for Social Science is a software package used for interactive, or batched, statistical analysis.

4.7.2 Qualitative data analysis

As opposed to quantitative data analysis, qualitative data analysis involves the use of words, images, symbols, and observations. There are several methods to analyse qualitative data, with the most commonly used being content analysis, narrative analysis, discourse analysis, and grounded theory. Thematic content analysis, which is usually used to analyse responses from interview transcripts, and literature, is used to analyse documented information in the form of texts, media, or even physical items. In using thematic content analysis, the researcher carefully scrutinises the data collected to identify common themes that come up repeatedly across the data. According to Marshall (2015), thematic analysis emphasises pinpointing, examining, and recording patterns within data. The researcher generated themes from the research questions of the study, from reviewed literature, and from the collected data.

4.8 Ethical considerations

Ethical consideration is an essential aspect of any research purpose. It involves a relationship with respondents, informed consent, confidentiality, connection with other researchers, following channels and procedures, and rights and responsibility of researchers (Magwa & Magwa, 2015). Permission to undertake the study was first sought from all the universities involved in the study and granted before the researcher embarked on the data collection exercise (Appendix 1, 3-12). The researcher then swore to uphold the anonymity of respondents and confidentiality of responses. Additionally, data collected were presented, interpreted and analysed as per the research ethics guidelines of the University of KwaZulu-Natal (Appendix 18). The researcher sought informed consent from all respondents through an introduction letter explaining the purpose of the study (Appendix 2). The researcher informed respondents that participation was voluntary, where necessary recordings would be done, and that they could withdraw their consent at any time of the study. The researcher appropriately referenced all materials cited in the study.

4.9 Summary of the chapter

This chapter presented, in detail, the methodology adopted by the study, as it sought to generate information and understanding on the level of adoption of information ethics standards in the management of OAEIR by LIS professionals, together with the information ethics dilemmas encountered and contextual information ethics standards that were applicable to OA electronic information management processes. The study used pragmatism as the research paradigm, the mixed-methods approach and the sequential explanatory research design in which quantitative and qualitative data were collected in sequence. The population emanating from university libraries and sampling procedures were also described, including instruments used in the collecting data, that is, questionnaires (for quantitative approach), interview transcripts and document analysis (for qualitative approach). The validity and reliability of the research instruments were achieved through pre-testing the instruments. Quantitative and qualitative data analysis procedures were employed through descriptive statistics analysis and the SPSS, and thematic content analysis, respectively. Ethical considerations were observed as per the research ethics guidelines of the University of KwaZulu-Natal. The following chapter will present, in detail, the research results of the study.

CHAPTER FIVE: DATA ANALYSIS AND PRESENTATION OF RESULTS

5.0 Introduction

This chapter presents the research results obtained from the respondents through a methodological triangulation of instruments. The study examined the adoption of information ethics standards in the management of OAEIR by Zimbabwe University Libraries. The study sought to address the following questions:

- What is the LIS professionals' level of adoption of information ethics standards in managing OAEIR?
- What are the information ethics dilemmas encountered by LIS professionals in the execution of open access electronic information management processes?
- What contextual information ethics standards could LIS professionals implement in the management processes of open access electronic information?

The previous chapter presented the methodology adopted by the study, in detail. The study sought to generate information and understanding on the level of adoption of information ethics standards in the management of OAEIR by LIS professionals, together with the information ethics dilemmas encountered and contextual information ethics standards applicable to OA electronic information management processes.

This chapter presents the research results from the quantitative and qualitative data collected from the respondents through survey questionnaires, purposive sampling interviews and a document analysis checklist. The structured questionnaire research instrument was administered to operational level LIS professionals in selected Zimbabwean universities. The semi-structured interview schedule research instrument was administered to managerial level LIS professionals in the selected Zimbabwean universities. Lastly, the document analysis research instrument analysed the selected Zimbabwe universities' policies. As mentioned in the methodology chapter, this study employed a mixed-methods research approach in which the two mixed approaches will remain relatively independent until the data interpretation stage. The researcher used this approach to improve the understanding of the research problem. The study was underpinned by the deontological and PAPA ethics frameworks. The researcher

used descriptive statistics to analyse quantitative data from questionnaires, using the SPSS version 20. Thematic content analysis was also used to analyse qualitative data from interviews and a document analysis checklist.

The chapter starts by presenting the response rate from all three instruments used. After that, the chapter presents integrated research results guided by themes that emanated from the study's objectives and research questions. Quantitative results from questionnaires are presented first with frequency tables, figures, charts, and graphs, followed by interviews and document analysis corresponding qualitative results. Though quantitative data is dominant, qualitative data is used to put flesh on the bones of the quantitative results, bringing results to life through comprehensive explanation. This is done in order to consolidate the study and avoid it looking like two different studies when one presents only quantitative results and then repeat another section on qualitative results. Again, most questions in the three instruments used correspond to one another, making it easy to analyse the questions one after the other.

5.1 Response rate

Data were gathered from 68 operational level LIS professionals through a structured questionnaire and 23 managerial level LIS professionals through semi-structured interviews. Additionally, data were collected through administering a document analysis checklist in all the institutions sampled. From a sample of 86 operational level LIS professionals, 68 completed the questionnaire, giving a response rate of 79.07%. From a sample of 32 managerial level LIS professionals, 23 were interviewed, giving a response rate of 71.88%. The researcher administered the document analysis checklist in all the institutions sampled, giving a 100% response rate. Thus, the overall response rate was 100, representing 78.74%, as reflected in Table 5.1.

Table 5.1: Response rates (N=100)

Targeted respondents	Expected respondents	Actual respondents	Response rate (%)
Interview schedule for managerial level LIS professionals	32	23	71.88%
Self-administered questionnaire for operational level LIS professionals	86	68	79.07%
Self-administered document analysis checklist for library policies	9	9	100%
Total	127	100	78.74%

The high response rate was attributed to the fact that the researcher was in the university system and had colleagues who assisted with distributing and collecting the questionnaires. As a senior university library member, the researcher found it easier to collect the research data from peers, using interviews. However, COVID-19 pandemic-induced lockdown measures from April 2020 through the better part of the year restricted the responses from a much higher projected response rate. Nevertheless, the collected 78.74% response rate from all institutions that participated in the research was satisfactory for the study.

5.2 Demographic data analysis

The sub-units below will present demographic data obtained from the questionnaire results. The researcher found this data helpful in interrogating some aspects of the research, as shall be deliberated later.

5.2.1 Distribution of LIS professionals by age

The selected respondents in this study had different age-groups. The summary percentages of the respondents' age groups are shown in Figure 5.1.

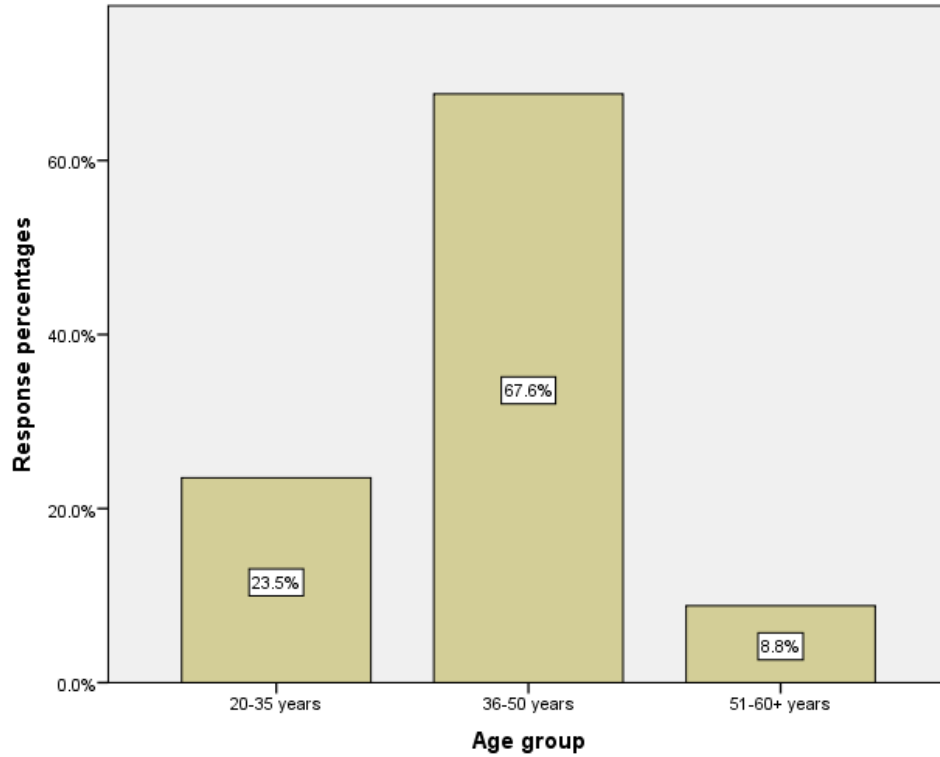


Figure 5.1: Age group of respondents (N=68)

Figure 5.1 shows that most respondents (46) were between 36 and 50 years old, recording a dominant 67.6%. However, a significant number (16) were in the age category of 20 to 35 years, registering 23.5%. Those in the fifty-one years and above age category were the least, (6) with 8.8%. The results suggest that most of the respondents were in the most active working age range.

5.2.2 Distribution of LIS professionals by gender

The gender of the respondents was considered and is an important variable when someone is researching a subject that tries to establish behaviour patterns. The summary percentages of gender are shown in Figure 5.2.

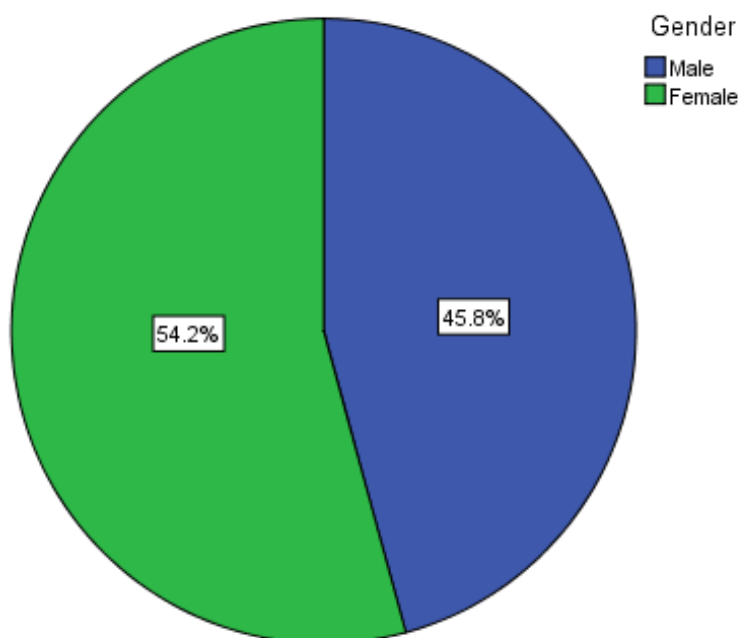


Figure 5.2: Gender statistics (N=68)

Figure 5.2 shows that female respondents constituted a more significant percentage of the research subjects than their male counterparts. This means that the institutions had more females staff (37) 54.2%, than males (31) 45.8% in the sampled staff category.

5.2.3 Distribution of LIS professionals by academic qualifications

Qualifications of the respondents matter most when it comes to research of this nature. Table 5.2 illustrates the educational qualifications of the respondents.

Table 5.2: Educational qualifications (N=68)

Qualification		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Masters	28	41.2	41.2	100.0
	Degree	24	35.3	35.3	58.8
	Diploma	16	23.5	23.5	23.5
	Total	68	100.0	100.0	

Table 5.2 results indicate that most of the respondents were Master's and Bachelor's degree holders. It can be noted that diploma holders were very few. These results suggest that the study generally considered educated respondents. Qualified respondents are productive in research and serve as good research informants.

5.2.4 Distribution of LIS professionals by post-qualification experience

Table 5.3 shows the summary statistics for the experience of the respondents.

Table 5.3: Experience of respondents (N=68)

Experience		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	11 years and above	36	52.9	52.9	100.0
	6-10 years	20	29.4	29.4	47.1
	0-5 years	12	17.6	17.6	17.6
	Total	68	100.0	100.0	

It can be noted, from Table 5.3, that the majority of the respondents had the experience of more than 11 years, and this constituted 52.9% of the respondents. Respondents with 6 to 10 years in-service experience constituted 29.4%, while those with 0 to 5 years' experience constituted 17.6%. The results suggest that the study focused on experienced respondents, thus was expected to produce quality results.

5.2.5 Distribution of LIS professionals by job level

The selected respondents consisted of three different job-level categories. Figure 5.3 is a summary of the occupation of the respondents.

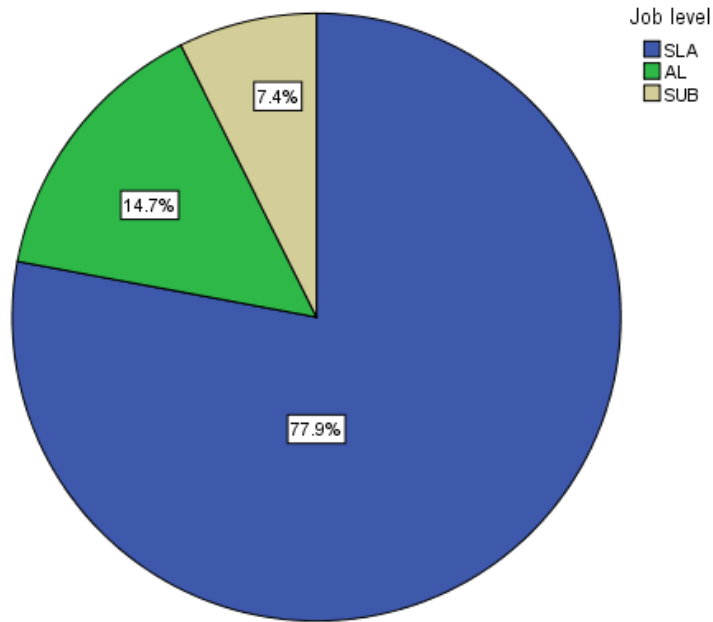


Figure 5.3: Job level statistics (N=68)

According to the results displayed in Figure 5.3, it can be noted that most respondents (53) were Senior Library Assistants as represented by 77.9%, followed by the Assistant Librarians (10) as represented by 14.7%, and then Sub Librarians (5) as represented by 7.4%. This suggests that most of the respondents were operational level LIS professionals who interacted with clients on a day-to-day basis and were involved with information processing duties.

5.2.6 Distribution of LIS professionals by role in the library

The role played by the respondents in the library ranged from Client Services (Reader Services), Content Management (Technical Services) and Library Systems (Library IT) duties as presented in Table 5.4.

Table 5.4: Role played in the library (N=68)

Library Role		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Client Services	36	52.9	52.9	52.9
	Content Management	23	33.8	33.8	86.8
	All Sections	6	8.8	8.8	100.0
	Library Systems	3	4.4	4.4	91.2
	Total	68	100.0	100.0	

It can be noted, from Table 5.4, that the Client Services section of the library had more respondents (52.9%), followed by the Content Management section 33.8%. LIS professionals in the Library Systems section (4.4%) and those who were involved in more than one section (8.8%) constituted the least respondents in this study. This suggests that more than half of the respondents were involved in the dissemination of OAIER (52.9%), followed by Creation and Organisation with a combined total of 47.1%.

5.2.7 Distribution of LIS professionals by duration at the institution

The respondents who participated in this study were from various institutions and had diverse institutional experiences. Figure 5.4 presents the different employment durations of the respondents in multiple institutions.

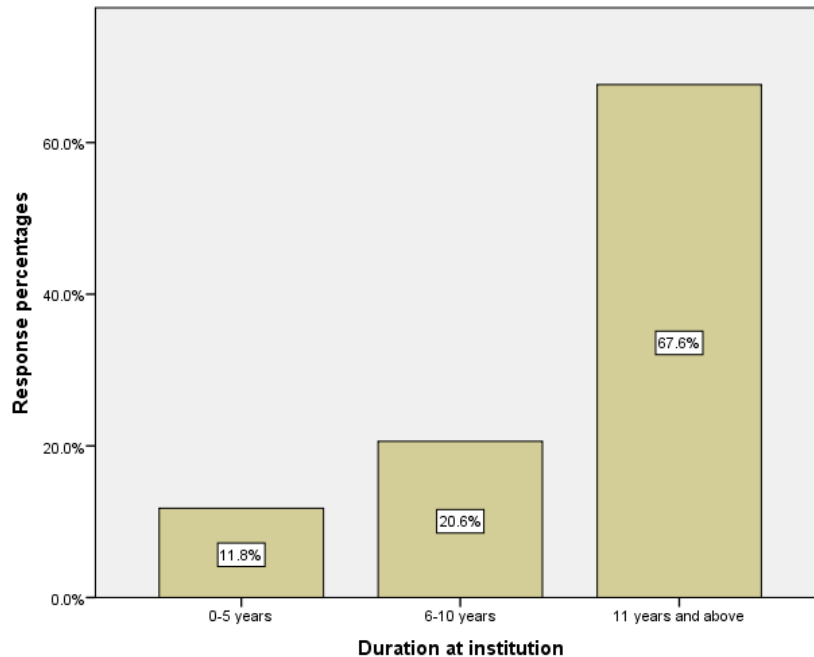


Figure 5.4: Duration at the institution (N=68)

The results in Figure 5.4 suggest that most respondents had been in their institutions for 11 years and above, constituting (46) 67.6%. This was followed by 6 to 10 years of experience (14) 20.6%, and then 0 to 5 years (8) 11.8%. The results suggest that the selected respondents had well-established university library experience.

5.3 Data analysis based on research questions

The sub-units below will analyse data from the questionnaire, based on the research questions of the study.

5.3.1 Adoption of information ethics in OAEIR management

One of the study's objectives was to determine the level of adoption of information ethics standards in the management of OAEIR by LIS professionals. The research questionnaire revealed this by asking respondents various questions about awareness and adoption of information ethics in their institutions. Additionally, the interview schedule and the document analysis checklist sought to reveal the same. The sub-units below will present such results obtained from the three instruments above.

5.3.1.1 Awareness of LIS ethical standards

The first sub-unit analysed data based on the awareness of ethical standards theme. This theme emanates from the first component of the first research question.

5.3.1.1.1 Staff role within the OAEIR management processes

The questionnaire asked several related questions to establish the level of awareness and/or adoption of information ethics by LIS professionals in the management of OAEIR. Firstly, the researcher asked LIS professionals' roles within the management processes of OAEIR, and Table 5.5 presents a summary of the responses.

Table 5.5: The role within the management processes of OAEIR (N=68)

Role in OAEIR Management		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dissemination	31	45.6	45.6	64.7
	Two options	12	17.6	17.6	89.7
	Organisation	10	14.7	14.7	19.1
	Three options	7	10.3	10.3	100.0
	Not sure	5	7.4	7.4	72.1
	Creation	3	4.4	4.4	4.4
	Total	68	100.0	100.0	

The responses suggest that dissemination (45.6%) was a common role executed by many LIS professionals within the management processes of OAEIR. The organisation role, with 14.7%, followed this, and then the creation role with minimal LIS professionals involved (4.4%). About 27.9% of LIS professionals were involved in at least two or all roles (creation, organisation, and dissemination). 7.4% of respondents were not sure of their involvement in the management lifecycle of OAEIR. Question 2 on the interview schedule sought to review and expand on the issue above, by asking categories of staff involved in the management of OAEIR. The majority of staff involved in OAEIR was designated as Faculty Librarians, then followed by System Librarians, Research or Information Services Librarians, Client Services

Librarians and, lastly, Content Management Librarians. The results suggest that primarily senior library staff managed OAEIR processes assisted by Senior Library Assistants.

5.3.1.1.2 LIS professionals' code of ethics awareness

The respondents were asked about their awareness of the LIS code of ethics that were in existence. Table 5.6 presents the results.

Table 5.6: Awareness of LIS code of ethics (N=68)

Awareness of LIS Codes of Ethics		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	37	54.4	56.1	56.1
	Not sure	15	22.1	22.7	100.0
	No	14	20.6	21.2	77.3
	Total	66	97.1	100.0	
Missing	System	2	2.9		
Total		68	100.0		

The above results indicate that slightly more than half of the respondents were aware of the LIS code of ethics (56.1%), with 21.2% not aware, and 22.7% not sure. This response suggests that about half of LIS professionals were aware, and just another half ($21.2 + 22.7 = 43.9\%$) was in the dark as far as the LIS code of ethics were concerned.

Clarification was sought from the respondents who had indicated that they were aware of the LIS code of ethics if they knew any specific ones. From the results, only four (66.7%) of the respondents stated that they only knew the IFLA code of ethics framework. A further two (33.3%) were aware of more than one code of ethics framework: ZIMLA, ALA, and IFLA. The results are presented in Figure 5.5 below.

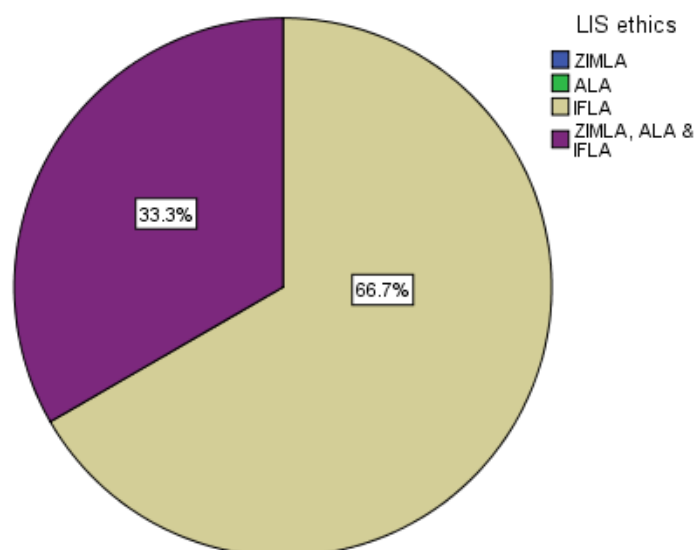


Figure 5.5: Code of ethics framework awareness (N=68)

However, a very high number of the respondents, 62 (91.2%) did not specify any, suggesting that they were unaware of any existing LIS codes of ethics standards. Table 5.7 below presents the responses.

Table 5.7: Code of ethics framework awareness (N=68)

Codes Awareness		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	IFLA	4	5.9	66.7	66.7
	ZIMLA	2	2.9	33.3	100.0
	ALA, IFLA				
	Total	6	8.8	100.0	
Missing	System	62	91.2		
Total		68	100.0		

A related follow-up question on the interview schedule sought to reveal if the information ethics codes of conduct documents were accessible to all library staff and in what forms. Some LIS professionals did have access to these codes which were distributed through email or hard copy on file. Others, primarily junior staff members, did not have the codes as they were not

easily accessible due to distribution problems, such as being shelved in someone's office, thus not being used for day-to-day decision making.

5.3.1.1.3 Affiliation to code of ethics standards

Institutional affiliation to the LIS code of ethics stood at 27.4%, based on the valid percentage category. Table 5.8 presents the statistics.

Table 5.8: Institutional affiliation to code of ethics (N=68)

Codes Affiliation		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not sure	29	42.6	46.8	100.0
	Yes	17	25.0	27.4	27.4
	No	16	23.5	25.8	53.2
	Total	62	91.2	100.0	
Missing	System	6	8.8		
Total		68	100.0		

Of those who responded to the question, LIS professionals who were not sure constituted the most significant percentage (42.6%), and 8.8% did not respond. A straight Yes answer (25%) and No (23.5) shared similar percentage marks. The above response suggests that most respondents ($42.6\% + 23.5\% + 8.8\% = 74.9\%$) had directly or indirectly indicated that their institutions were not affiliated with any LIS code of ethics. A follow-up question on the interview schedule (question three) revealed the same result that most respondents were not affiliated to any LIS code of ethics. The results from the questionnaire reported in Table 5.8 above are further presented in Figure 5.6 below.

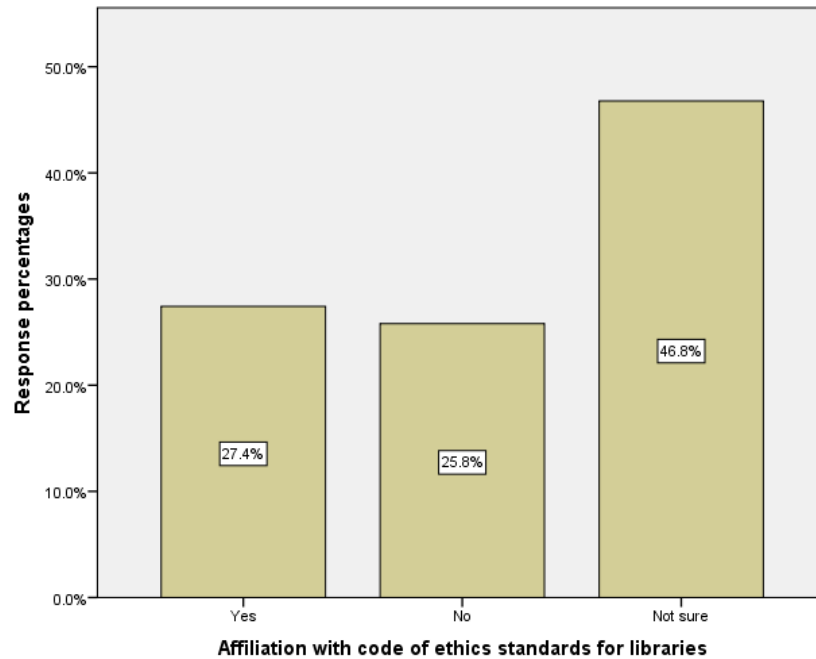


Figure 5.6: LIS code of ethics affiliation (N=68)

For respondents who answered Yes to their institutions being affiliated to the LIS code of ethics, the researcher sought clarification on the specific codes. Figure 5.7 presents the results.

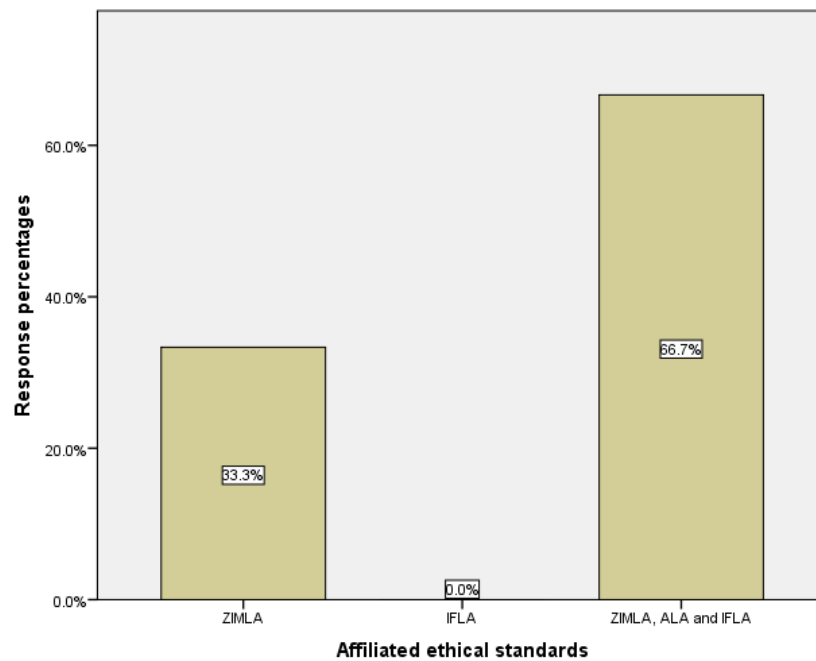


Figure 5.7: Affiliated ethical codes (N=68)

According to Figure 5.7 above, most institutions (66.7%) were affiliated to more than one set of ethical codes: ZIMLA, ALA, and IFLA. Institutions that were affiliated with the ZIMLA code of ethics constituted 33.3%. However, most respondents (91.2%) did not state the codes their institutions were affiliated to. This response suggests that most of the respondents were not even aware of any LIS code of ethics framework, which they stated they was part of in Table 5.8 and in Figure 5.6. Table 5.9 tabulates the results.

Table 5.9: Affiliated ethical codes (N=68)

Affiliated Ethical Codes		Frequency	Percent	Valid Percent	Cumulative Percent
	ZIMLA, ALA and IFLA	4	5.9	66.7	100.0
	ZIMLA	2	2.9	33.3	33.3
	Total	6	8.8	100.0	
Missing	System	62	91.2		
Total		68	100.0		

From the follow-up question on the interview schedule (question 4) on whether these codes of ethics were informing or influencing practice in the management of OAEIR, and in what forms, the majority of the respondents indicated Yes. For professional librarians, the codes informed them in the creation, organisation, and dissemination of information, and by observing privacy issues in information access.

5.3.1.1.4 PAPA ethical standards awareness

The importance that LIS professionals attached to ethical standards during the management processes of OAEIR, that is, creation, organisation, and dissemination, underlined their awareness of these standards and their subsequent adoption. The importance that LIS professionals attached to PAPA ethical standards in the management of OAEIR is shown in Table 5.10.

Table 5.10: Ethical standards in the management of OAEIR (N=68)

OAEIR Ethical Standards	Unimportant	Little importance	Moderate	Important	Very important
Privacy of clients	3.1%	0.0%	7.8%	20.3%	68.8%
Accuracy of information	1.6%	0.0%	3.1%	18.8%	76.6%
Property (intellectual) of information	1.6%	0.0%	6.2%	20.3%	71.9%
Access of information by clients	0.0%	1.6%	3.1%	23.4%	71.9%

The above responses suggest that LIS professionals considered the application of PAPA ethical standards as very important in the management of OAEIR. Accuracy of information topped, with 76.6%, followed by property, and access with 71.9% each. Privacy of clients was the least, with 68.8%. A follow-up interview schedule question (seven) asked on whether respondents were aware of PAPA ethical framework, and the majority of respondents indicated that they knew the framework.

5.3.1.1.5 ZimLA and ZULC in ethics

National associations and other professional bodies play a significant role in the awareness and adoption of a profession's ethical standards. The American Library Association (ALA), the African Library and Information Associations and Institutions (AFLIA), and the International Federation of Library Associations (IFLA) are good examples of such bodies (as discussed in unit 3.5 under Literature Review). Thus, it was essential to establish the role of the Zimbabwe Library Association (ZimLA) and Zimbabwe University Libraries Consortium (ZULC) in the awareness and adoption of the code of ethics in university libraries. Question 17 on the interview schedule sought to unearth this.

Many respondents saw information ethics as still a new area and were not sure if ZimLA and ZULC were currently doing anything on that subject area. However, it was generally agreed that the role of these two bodies should be immersed in the advocacy, awareness and adoption of ethical codes in Zimbabwe. A significant number of respondents was of the view that ZimLA and ZULC should involve themselves in developing ethical codes and standards in Zimbabwe, then vigorously engage themselves in the training of LIS professionals. Thus, they should be at the forefront and hold information ethics workshops and webinars for LIS professionals in Zimbabwe.

5.3.1.2 Application of ethics in libraries

This sub-unit analysed data based on the application of the ethical standards theme. This theme emanates from the second component of the first research question, “adoption”.

5.3.1.2.1 Ethical obligation in print versus electronic information

Applying ethics in electronic information has been considered a new fundamental in recent literature. How LIS professionals considered their ethical obligation regarding the information presented in the ‘new’ electronic format, as opposed to print, was one of the *raison d’être* of this study. A summary of the responses is presented in Table 5.11.

Table 5.11: Ethical obligation regarding information (N=68)

Ethical Obligation		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	49	72.1	72.1	72.1
	Not sure	14	20.6	20.6	100.0
	No	5	7.4	7.4	79.4
	Total	68	100.0	100.0	

The majority of LIS professionals responded that the library had the same ethical obligation regarding the information presented in print and electronic format, which was represented by 49 (72.1%). Only five (7.4%) of respondents did not think so, while 14 (20.6%) were not sure. The response suggests that LIS professionals were applying the same ethical obligations they

were implementing in the print era to this electronic information revolution era. The same question above was asked on the interview schedule (question 27) to obtain more meaningful insights. Most respondents indicated that though the ethical obligation was the same in print and electronic content, users of information needed to trust electronic content; therefore, there was a need for more ethical obligation effort. Additionally, policy-wise ethical obligations in electronic content were still lacking or not clear. A fraction of respondents indicated that the obligations were not the same and more ethical obligation effort was needed. This is against the background that print resources had little ethical concerns than electronic resources, which had big ethical issues.

5.3.1.2.2 OAEIR ethical consideration in library policies

The availability of laid down procedures enforces the adoption of duty-based principles. Policies and standard operating procedures support uniformity and consistence in adopting certain professional principles. Respondents were asked about the availability of ethical considerations within their library policies or within their standard operating procedures. Table 5.12 below presents the findings from the research questionnaire.

Table 5.12: OAEIR ethical consideration in library policies (N=68)

OAEIR Ethical Policy Consideration		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	36	52.9	54.5	54.5
	Not sure	19	27.9	28.8	100.0
	No	11	16.2	16.7	71.2
	Total	66	97.1	100.0	
Missing	System	2	2.9		
Total		68	100.0		

It can be noted that 36 (54.5%) of libraries had ethical considerations within their library policies. A total of 11 (16.7%) of respondents responded that their libraries did not have ethical considerations within their policies, and a further 28.8% was not sure if that existed. The results

suggest that, on average, slightly more than half of the libraries had ethical conscience, whilst another (slightly less than half: $16.7\% + 28.8\% = 45.5\%$) did not have.

To add flesh to the above quantitative responses from the questionnaire research instrument, an interview schedule (question 13, 14, 15) was administered to unveil more insights into OAEIR ethical considerations in library policies. The majority of respondents indicated that ethical considerations were already in place in library policies. In contrast, a significant number indicated that there were currently no such considerations, but they were considering updating their policies to reflect such. The nature of the considerations was in various policies, such as social media, circulation policy, computer use policies (not electronic information resources though), general procedure manuals, and covered such issues as not divulging clients' privacy in terms of information access. A document analysis checklist was also administered to scrutinise policies and standard operating procedures that were in existence in institutions. Table 5.13 below presents document analysis results that sought to unveil OAEIR ethical considerations in library policies.

Table 5.13: Document analysis results (N=9)

Question No.	Themes	Response
1, 2, 10	OAEIR collection development policies	All the institutions under study had various policies and standard operating producers (SOPs) that guided the development and management of OAEIR. These ranged from the library, and electronic resources use policy, circulation policy, collection development policy, IR policy, OA policy and special collections policy. Most policies were developed or updated in the last five years, that is, from 2017 to 2021, and are due for an update in 2023 and 2024. The policies were easily accessible to LIS professionals through distribution by email and, or hard copy document.
3	OAEIR policy coverage	The majority of the policies and SOPs were speaking to the management workflow of OAEIR, that is, the creation, organisation and dissemination. Major aspects covered were dissemination, facilitating access, intellectual property, accuracy.
4, 9	LIS professionals' ethical obligations within policies	Most of the policies and SOPs did not have spelt-out LIS professionals' ethical obligations.
5, 9	Library policy coverage on privacy ethical obligations	Half of the policies had coverage on privacy ethical obligations, while the other half did not. Areas covered included privacy of personal information and data accessed.
6, 9	Library policy coverage on accuracy ethical obligations	Half of the policies had coverage on accuracy ethical obligations, while the other half did not.
7, 9	Library policy coverage on intellectual property ethical obligations	Half of the policies had coverage on intellectual property ethical obligations, while the other half did not. Areas covered included copyright issues, a guide to licensing and agreements enforcement.
8, 9	Library policy coverage on access ethical obligations	The majority of the policies had good coverage on access ethical obligations. Areas covered include OA, selective dissemination of information, user instructions that enhance access to information, such as user education and information literacy skills training.

The above document analysis results suggest that half of the library policy documents included OAEIR ethical considerations. However, the majority of those policies were not specific to the

PAPA framework as a whole, while others just highlighted them. Most policies and SOPs did not have spelt-out LIS professionals' ethical obligations.

5.3.1.2.3 Ethics requirements within libraries

The statistics for those libraries that required LIS professionals to observe ethical considerations in their everyday duties are presented in Figure 5.8.

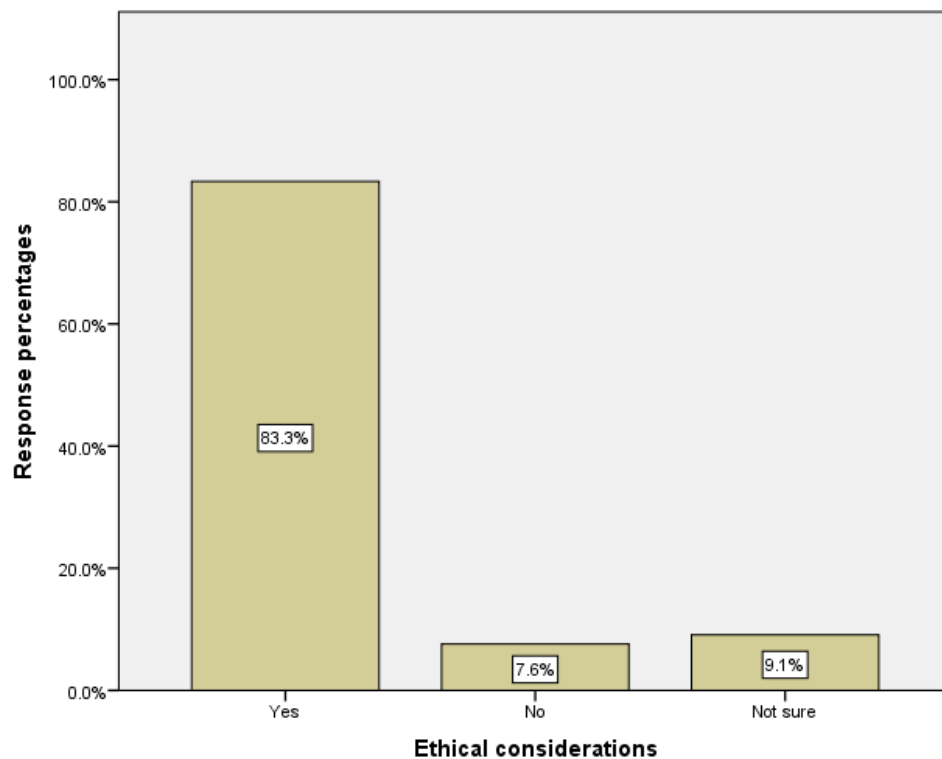


Figure 5.8: Ethics requirement (N=68)

It can be noted that around 57 (83.3%) of the respondents indicated that their libraries required them to observe ethical considerations in their everyday duties, whilst five (7.6%) did not. A total of six (9.1%) of respondents did not know whether this was a requirement or not. The responses suggest that ethical considerations were getting attention from libraries.

Follow-up questions on the interview schedule sought to reveal LIS professionals' on-the-job information ethics training (question six), available information ethics skills enhancement opportunities (question eleven), and whether there was any enforcement of code of ethics

practises by LIS managers (question ten). On the issue of on-the-job training, this was mostly done through webinars at an individual level and hands-on training sessions. The nature of the training mostly involved imparting skills on privacy ethical issues in information management and dissemination.

5.3.1.2.4 OAEIR ethical encounters

Respondents encountered situations that required ethical judgement in their handling of OAEIR. Its frequency was sought, and Figure 5.9 presents the statistics.

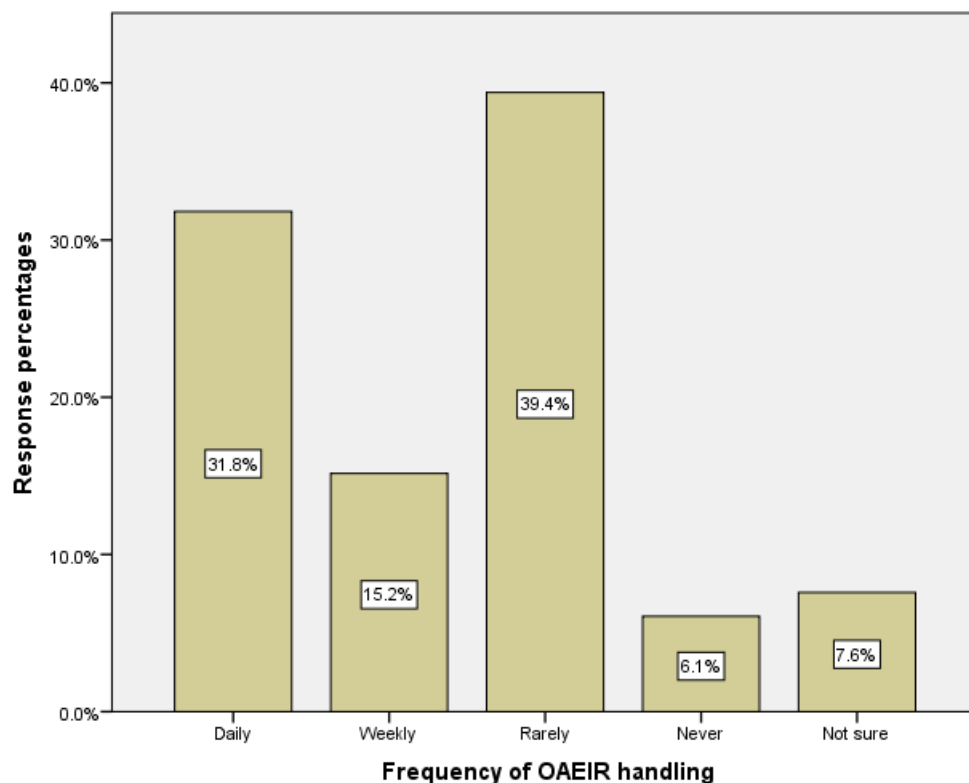


Figure 5.9: OAEIR ethical encounter frequency (N=68)

Almost half of the respondents, 32 or 47%, indicated that they were encountering situations that required ethical judgment in their handling of OAEIR. Respondents who encountered them daily constituted (22) 31.8% and weekly (10) 15.2%. However, 36 (53%) of respondents did not encounter any ethical situations in their handling of OAEIR. This was represented by those that rarely encountered ethical situations, 27 or 39.4%, those that never encountered ethical

situations, 4 or 6.1%, and those that were not sure if they encountered ethical situations, 5 or 7.6%. This suggests that most LIS professionals were either not aware of the required ethical practice or were not implementing it in the management of OAEIR.

5.3.1.2.5 Ethics accountability within libraries

Ethical accountability is the foundation of its implementation. Respondents were asked whether their libraries held them accountable for not implementing ethical standards in their day-to-day management of OAEIR. Information about accountability is presented in Table 5.14 and Figure 5.10 below.

Table 5.14: Ethical Accountability (N=68)

Ethical Accountability		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	42	61.8	66.7	66.7
	No	21	30.9	33.3	100.0
	Total	63	92.6	100.0	
Missing	System	5	7.4		
Total		68	100.0		

Most of the respondents indicated that their libraries held them accountable for not implementing ethical considerations in their day-to-day management of OAEIR. This was represented by 66.7% of respondents. On the other hand, 33.3% stated that they were not held accountable. The results suggest that libraries held their LIS professionals accountable for not implementing ethical considerations in their day-to-day management of OAEIR. Question 8 on the interview schedule asked the same question above to reveal more information on the matter. The majority of respondents stated that library supervisors monitored their staff's ethical implementation as part of quality control duties. Additionally, staff were aware of the need to maintain a client's privacy in circulation transactions by not revealing these to third parties. About a third of respondents highlighted that they were not yet enforcing ethical accountability issues.

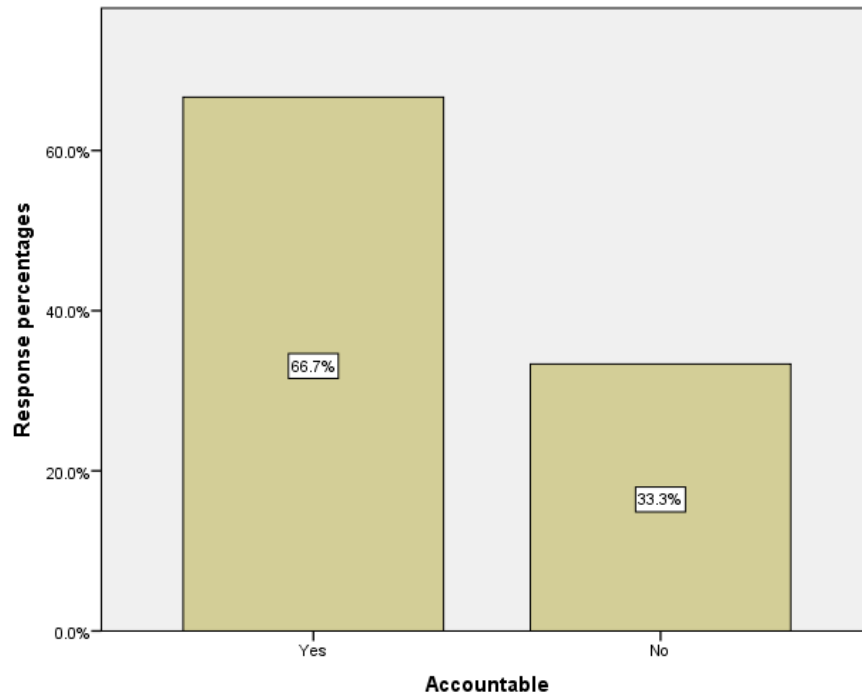


Figure 5.10: Ethical Accountability

Respondents who had indicated that they were held accountable for not implementing ethical considerations in their day-to-day management of OAEIR stated various actions taken as shown in Table 5.15 and Figure 5.11 below. According to the study results, libraries took varying actions for holding LIS professionals accountable for not applying ethical considerations in their day-to-day management of OAEIR. Actions taken ranged from reprimand, re-training, quality assurance application and rules, standard operating procedures (SOPs), and policy enforcement. Of the respondents, 32.4% indicated actions taken, whilst 67.6% did not specify any action taken. The result suggests that most LIS professionals were not being held accountable for not implementing ethical considerations in the management lifecycle of OAEIR.

Table 5.15: Ethical accountability enforcement implemented (N=68)

Ethical Accountability Enforcement		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Reprimand	10	14.7	45.5	45.5
	Quality assurance Rules, SOPs, Policy	9	13.2	40.9	86.4
	Training	2	2.9	9.1	95.5
	Reprimand, Training, Quality assurance Rules, SOPs, Policy	1	1.5	4.5	100.0
	Total	22	32.4	100.0	
Missing	System	46	67.6		
Total		68	100.0		

Table 5.15 above and Figure 5.11 below shows that the majority of the respondents noted that actions taken were reprimand (45.5%) and through quality assurance, rules, standard operating procedures, and policy (40.9). Actions taken through staff training constituted 9.1%, whilst all of the above actions constituted 4.5%.

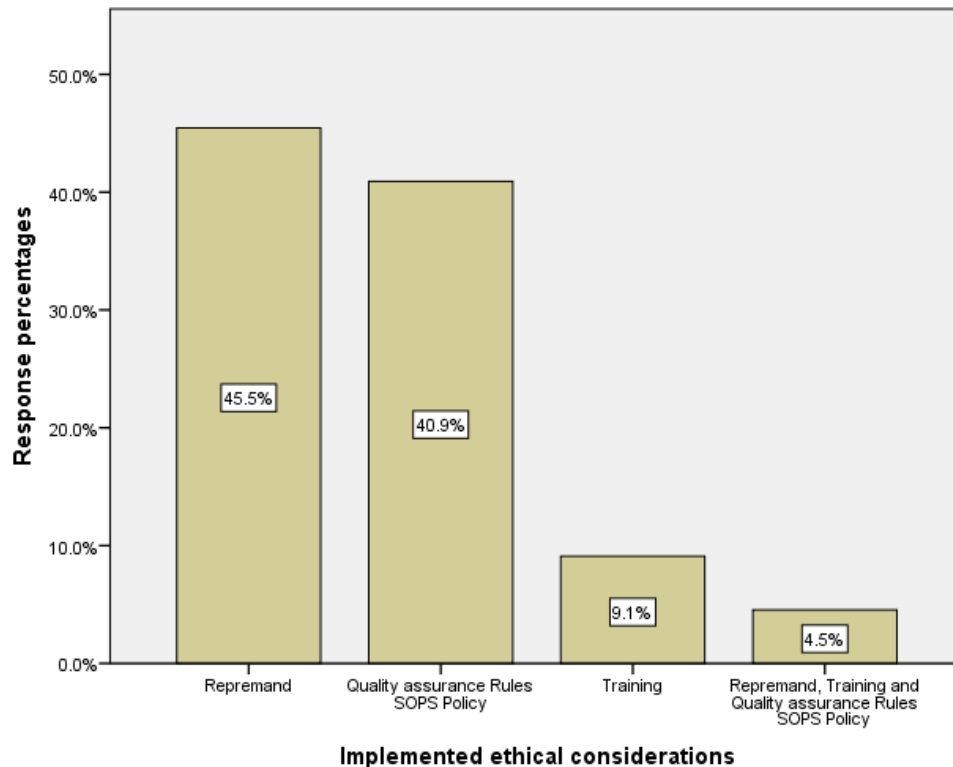


Figure 5.11: Ethical accountability enforcement implemented

As a follow-up to the above question numbers 13 and 14 from the questionnaire instrument, question nine on the interview schedule sought to further reveal the enforcement of information ethics standards in the management of OAEIR, this time from the library management perspective. Just above half of the respondents indicated that enforcement of information ethics standards was being done by section heads such as Client Services Librarian, Content Management Librarian, Information Services Librarian, and Systems Librarian, as supervised by the University Librarian. This was mainly through the strategic plan document, policies and standard operating procedures. However, there was a general consensus that the above-mentioned documents were not yet specific on PAPA issues, more so information ethics in general. Slightly less than half of the respondents highlighted that the enforcement of information ethics standards in the management of OAEIR was not yet in existence, as their policies and procedure manuals were silent on that.

Question 12 on the interview schedule sought to reveal the implications of fully adopting information ethics standards in the management (creation, organisation and dissemination) of

OAEIR in libraries. The implications sought were in terms of staffing levels and workflow procedures. All of the respondents indicated that the adoption of information ethics standards in the management of OAEIR would affect libraries one way or the other. Major issues highlighted were the need for additional staff, especially for monitoring and evaluation purposes. Additional staff for quality assurance, whose duties will include ethical compliance, would be needed and changes on the workflow procedures. Additionally, it was noted that there was a need to employ additional professional librarians, as most libraries were relying on para-professionals at the Senior Library Assistant level. A small number of respondents thought that the current staff could handle ethical concerns in libraries, as they were recruited in the digital era. However, there was a need for re-training this staff on ethics through on-the-job training and workshops. Libraries also needed to create new job titles and duties to address ethical standards issues.

5.3.1.3 PAPA ethical encounters in OAEIR management

This last sub-unit of the first research question will analyse data based on adopting the PAPA ethical standards theme. Privacy, accuracy, property and access (PAPA) are ethical considerations associated with managing OAEIR. Respondents were asked whether they encountered PAPA ethical situations in their everyday work with OAEIR. The summary statistics for the responses are presented in Table 5.16.

Table 5.16: PAPA ethical encounters (N=68)

PAPA Ethical Encounters		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	46	67.6	71.9	71.9
	No	10	14.7	15.6	87.5
	Not sure	8	11.8	12.5	100.0
	Total	64	94.1	100.0	
Missing	System	4	5.9		
Total		68	100.0		

The majority of respondents (71.9%) indicated that they encountered PAPA ethical situations in their day-to-day management of OAEIR. A small number of respondents (15.6%) stated that they were not facing PAPA ethical situations, while 12.5% was not sure. The results suggest that LIS professionals encountered ethical concerns in their everyday work, particularly privacy, access, property, and accuracy ethical situations.

Respondents who had indicated that they encountered PAPA ethical situations were asked to specify which OAEIR management process they were facing these ethical situations. Table 5.17 below highlights various OAEIR management processes and PAPA ethical situations faced.

Table 5.17: Ethics in OAEIR management (N=68)

Ethics in OAEIR management	Creation	Organisation	Dissemination	Two options	All three options
Privacy	8.6%	8.6%	57.1%	17.1%	8.6%
Accuracy	18.6%	4.7%	18.6%	23.3%	34.9%
Property	16.7%	22.2%	27.8%	16.7%	16.7%
Access	6.8%	6.8%	40.9%	25.0%	20.5%

Table 5.17 shows that when it comes to privacy ethical framework, most LIS professionals encountered information dissemination ethical problems (57.1%). This was followed by those that encountered ethical problems in two OAEIR management processes, as represented by 17.1%. Respondents who experienced ethical problems during creation (8.6%), organisation (8.6%) and in all three management processes (8.6%) constituted the other results under privacy. Under accuracy ethical framework, most LIS professionals were facing challenges during the creation and dissemination of OAEIR, as represented by 18.6% each. LIS professionals who were facing accuracy ethical problems during the organisation of OAEIR constituted just 4.7%. LIS professionals who encountered accuracy ethical problems in two OAEIR management processes constituted 23.3% of respondents, and in all three, 34.9%.

Under the intellectual property ethical framework, most LIS professionals encountered ethical challenges during the dissemination of OAEIR (27.8%), followed by the organisation process with 22.2%. A total of 16.7% of LIS professionals face property ethical concerns during the creation of OAEIR. LIS professionals that faced property ethical challenges in two and all OAEIR management processes constituted 16.7% each. Many LIS professionals faced dissemination challenges during the provision of access to OAEIR, as represented by 40.9%. This was followed by LIS professionals that faced access ethical challenges in two OAEIR management processes, as constituted by 25.0% and then in all OAEIR management processes, 20.5%. A small number of LIS professionals faced access ethical problems during the creation and organisation of OAEIR, as represented by 6.8% apiece. The above responses suggest that LIS professionals were facing many PAPA ethical problems during the dissemination of OAEIR. This was followed by ethical problems in two or all three OAEIR management processes.

5.3.1.3.1 OAEIR privacy ethical issues

Protection of user privacy is considered one of the fundamentals of the electronic information revolution era. Thus, LIS professionals are generally expected to uphold and protect user privacy regarding information accessed and disseminated to them. Therefore, whether libraries had mechanisms to protect use privacy in the dissemination of information in the digital world was one of the answers the study sought to unveil. Table 5.18 below presents the responses.

Table 5.18: Protection of user privacy (N=68)

Protection of User Privacy		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	34	50.0	50.0	50.0
	No	8	11.8	11.8	61.8
	Not sure	26	38.2	38.2	100.0
	Total	68	100.0	100.0	

Half of the LIS professionals responded that their library had mechanisms to protect user privacy in disseminating information, as represented by a 50%. Very few responded that their

library had no means to protect user privacy in disseminating information, as represented by an 11.8%. Just above a third of the respondents (38.2%) was not sure if their library had any mechanisms to protect user privacy in disseminating information. The results suggest that half of the libraries was protecting user privacy, and another half (11.8 + 38.2%) was not protecting user privacy in disseminating information.

5.3.1.3.2 OAEIR access ethical issues

The sub-units below will analyse data from the questionnaire based OAEIR access ethical issues.

5.3.1.3.2.1. OAEIR access provision

Developing mechanisms that enable user access to information is an essential element that libraries should implement to improve or even make access to electronic information possible. How various institutions provided access to electronic information is summarised in Table 5.19.

Table 5.19: Access to electronic information (N=68)

Access to Electronic Information		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Library Website	35	51.5	51.5	60.3
	OPAC and Library Website	27	39.7	39.7	100.0
	OPAC	6	8.8	8.8	8.8
	Total	68	100.0	100.0	

Table 5.19 shows that access to electronic information is commonly provided through the library website, as represented by 51.5%. However, several respondents indicated that access was provided through both the OPAC and library website (39.7%). Only 8.8% of respondents indicated that access to OAEIR was being provided through the OPAC. The above result suggests that access mechanisms to OAEIR were available in all institutions.

Apart from providing access to the electronic databases above, libraries were asked if their IRs were available for OA over the internet. The responses are presented in Table 5.20 below:

Table 5.20: Institutional Repository availability on open access (N=68)

Institutional Repository availability on open access		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	56	82.4	82.4	82.4
	No	12	17.6	17.6	100.0
	Total	68	100.0	100.0	

The majority of IRs was available for OA over the internet, as represented by 82.4% of the respondents. Only 17.6% of the IRs was not available for OA over the internet. The results suggest that university libraries made their IR content accessible to their communities and beyond through OA.

Access to information, both print and electronic resources, by all library clients, is a fundamental right that should be upheld. As libraries register approved readers, access to electronic resources should be provided simultaneously with print resources. Table 5.21 responds to whether libraries provided their approved readers with access to electronic information resources.

Table 5.21: Approved Readers access to electronic information (N=68)

Approved Readers access to OAEIR		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	40	58.8	58.8	58.8
	No	28	41.2	41.2	100.0
	Total	68	100.0	100.0	

Just above half of the libraries provided their approved readers with access to electronic information resources, as represented by 58.8%. Slightly below half (41.2%) of the libraries was not providing their approved readers with access to electronic information resources. The

result suggests that approved readers' access to electronic information databases depended on individual libraries.

5.3.1.3.2.2. Information Literacy Skills training to library clients

Information Literacy Skills (ILS) is an essential tool that enables library clients to possess enough skills to independently, effectively and efficiently access OAEIR. In this contemporary environment, academic libraries need to offer such training to their clients so that they can manoeuvre in the information society. The responses of those institutions offering Information Literacy Skills training to library clients and its format are presented in Tables 5.22 and 5.23 below.

Table 5.22: Information Literacy Skills training (N=68)

Information Literacy Skills Training		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	65	95.6	95.6	95.6
	No	3	4.4	4.4	100.0
	Total	68	100.0	100.0	

As highlighted in Table 5.21 above, almost all of the respondents indicated that they were offering Information Literacy Skills training in their institutions, as represented by 95.6%. Only 4.4% of respondents stated that they were not offering Information Literacy Skills training in their institutions. The results suggest that LIS professionals' offering of Information Literacy Skills training in institutions was very high.

Respondents who had indicated that they were offering ILS in their institutions were asked to specify the format they were offering it. Table 5.23 below presents the results.

Table 5.23: Information Literacy Skills format (N=68)

Information Literacy Skills Format		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Examinable	41	60.3	68.3	68.3
	Voluntary	14	20.6	23.3	91.7
	Examinable and Voluntary	5	7.4	8.3	100.0
	Total	60	88.2	100.0	
Missing	System	8	11.8		
Total		68	100.0		

Offering ILS as an examinable course was the most popular format used in institutions, as indicated by 68.3% of respondents. About one-fifth of the institutions provided ILS as a voluntary training session, as indicated by 23.3% of respondents. A further 8.3% of institutions offered it in both examinable and voluntary formats. The results suggest that the examinable format was the most popular method of providing ILS in institutions.

5.3.1.3.2.3. OAEIR and publisher relations

Accessibility of OAEIR access and use licenses are essential for LIS professionals and subsequently to library users. Question 27 on the questionnaire sought to reveal whether these licences were accessible to the two groups above. Table 5.24 presents the results.

Table 5.24: Accessibility of OAEIR access and use licenses (N=68)

Accessibility of OAEIR Licenses		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	27	39.7	42.9	42.9
	Not sure	25	36.8	39.7	100.0
	No	11	16.2	17.5	60.3
	Total	63	92.6	100.0	
Missing	System	5	7.4		
Total		68	100.0		

The majority of respondents indicated that these were not accessible, and some were not sure of these licenses and whether they were accessible, as represented by 57.2% (17.5% + 39.7%). Slightly below half of the respondents (42.9%) revealed that the licences were accessible to LIS professionals and library users. A small 7.4 per cent of respondents did not indicate. The result suggests that half of the electronic content users was not aware of the licences that govern this content, thereby making it difficult for them to know and adopt ethical issues associated with OAEIR.

Access to electronic information is controlled through the licence agreements mentioned above that would have been made between libraries and publishers. To this end, libraries and publishers need to have a mutual understanding of the agreements that control the delivery and access to OAEIR content. Table 5.25 presents the responses on whether such mutual understanding is in existence.

Table 5.25: Mutual understanding over license agreements (N=68)

Mutual Understanding on OAEIE Licenses		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	35	51.5	53.0	53.0
	Not sure	25	36.8	37.9	100.0
	No	6	8.8	9.1	62.1
	Total	66	97.1	100.0	
Missing	System	2	2.9		
Total		68	100.0		

More than half of the respondents indicated that their libraries had a mutual understanding with publishers over the agreements that control the delivery and access to OAEIR content, as represented by 53.0%. Respondents who were not sure whether mutual agreements existed constituted 37.9%, while those that specified that these mutual agreements were not available made up 9.1%. The results suggest that mutual understanding between the libraries and publishers over OAEIR licence agreements was fairly balanced.

Publishers bundle content by creating a licencing structure that mixes different titles. This bundling of content means libraries will be left with no choice but to subscribe to titles they need and titles they do not need. Respondents were asked whether such an arrangement made their OAEIR collection meet their clients' needs in the relevance of content and access arrangements. Table 5.26 below presents the responses:

Table 5.26: Relevance of OAEIR bundled content (N=68)

Relevance of OAEIR Bundled Content		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	35	51.5	53.8	53.8
	Not sure	23	33.8	35.4	100.0
	No	7	10.3	10.8	64.6
	Total	65	95.6	100.0	
Missing	System	3	4.4		
Total		68	100.0		

Respondents who indicated that their OAEIR collection met their needs, both in the relevance of content and access arrangements, constituted 53.8%. 10.8% of respondents indicated that their OAEIR collection was not meeting their clients' needs. A third of respondents (35.4%) was unsure whether their libraries OAEIR collection met their clients' needs. The results suggest that bundled OAEIR collections were slightly meeting libraries clients' needs instead of unbundled content, where libraries would have an opportunity to choose titles of their choice.

It was important for the study to review the availability of the library-vendor platform for raising ethical issues respective to the issues mentioned so far under OAEIR and publisher relations. Questions 22 and 23 on the interview schedule sought to review this. All of the respondents indicated that there was no such platform, or if it existed, they did not know about it. The results suggest that some ethical concerns by libraries presented challenges to reaching publishers or the vendors of OAEIR.

5.3.1.3.3 OAEIR intellectual property ethical issues

Ownership of content is essential in determining intellectual property and associated ethical issues. IR content depositors (authors) need to sign 'release consent' of their materials upon submission. This would enable libraries to tackle the ethical problems associated with privacy, access to that information, intellectual property issues, and how they will create, organise, and

disseminate such information. Table 5.27 presents findings from respondents on whether their libraries were making it mandatory for authors to sign such release consent.

Table 5.27: Institutional Repository content author consent (N=68)

Institutional Repository Content Author Consent		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	29	42.6	44.6	44.6
	No	19	27.9	29.2	73.8
	Not sure	17	25.0	26.2	100.0
	Total	65	95.6	100.0	
Missing	System	3	4.4		
Total		68	100.0		

Slightly below half of the respondents indicated that their libraries had a mandatory IR release consent policy, as represented by 44.6%. Respondents who responded that their libraries had no mandatory IR release consent policy constituted 29.2%, while those that were not sure were 26.2%. The results suggest that libraries primarily did not have a mechanism in place for IR content release consent.

5.3.1.3.4 OAEIR accuracy ethical issues

Accuracy of content is of paramount ethical importance, especially with the coming in of OAEIR. Thus, the library needs to check for accuracy in the content uploaded to the IR before it reaches library clients. The summary statistics of the responses are presented in Table 5.28.

Table 5.28: Accuracy of Institutional Repository content (N=68)

Accuracy of Institutional Repository Content		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	37	54.4	55.2	55.2
	Not sure	16	23.5	23.9	100.0
	No	14	20.6	20.9	76.1
	Total	67	98.5	100.0	
Missing	System	1	1.5		
Total		68	100.0		

More than half of the libraries (55.2%) checked for the accuracy of the IR content before the information was uploaded. Libraries that did not check for the accuracy of content constituted 20.9%. A total of 23.9% of respondents did not know whether their libraries were executing the task or not.

In the case of online databases, half of the libraries 34 or 50.0%, evaluated the accuracy and completeness of the content from publishers before the information reached library clients. Libraries that did not evaluate the accuracy of content were 19 or 28.1%. A total of 15 or 21.9% of respondents did not know whether their libraries were executing the task or not. Figure 5.12 gives the summary of the responses. The results suggest that evaluation of content accuracy was irregular and casual.

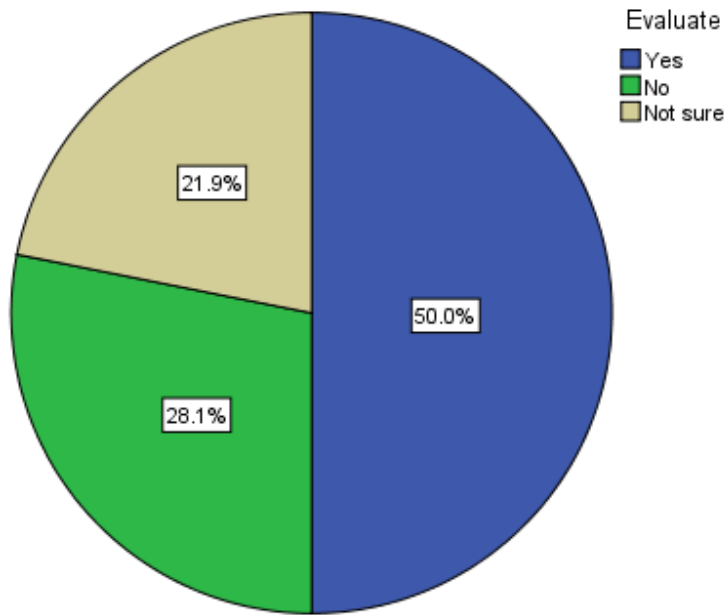


Figure 5.12: Evaluation of online database content accuracy (N=68)

Respondents who had indicated that they were evaluating accuracy and completeness of content in online databases were asked to indicate the frequency of the exercise. The frequency of the evaluation is shown in Figure 5.13.

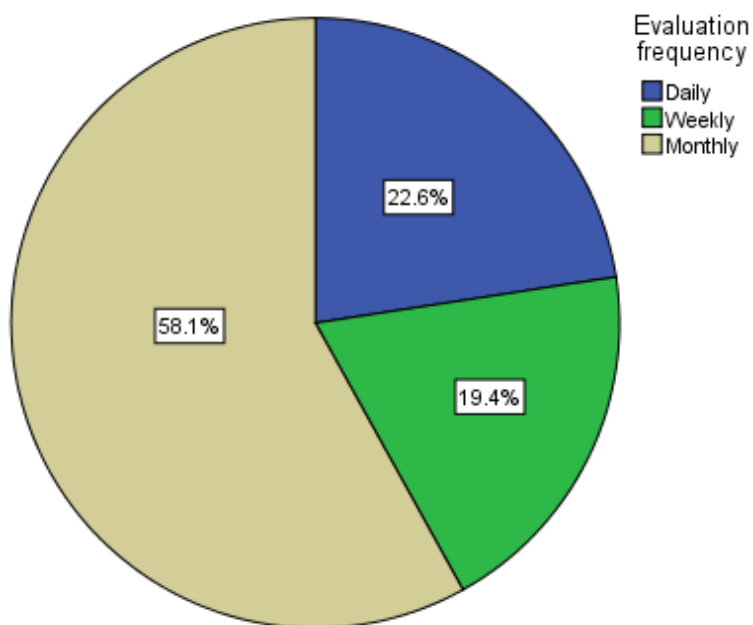


Figure 5.13: Frequency of evaluation (N=68)

Most respondents, 39 or 58.1%, indicated that evaluation of content accuracy and completeness was done monthly, although a significant number of evaluations are also done daily (15 or 22.6%), and weekly (13 or 19.4%).

5.3.2 Information ethics dilemmas associated with the management of OAEIR

Another objective of the study was to determine information ethics dilemmas encountered by LIS professionals in the execution of OA electronic information management processes. The research questionnaire and interview schedule sought to reveal this by asking respondents various questions about information ethics dilemmas being experienced by respondents in their institutions. The sub-units below will present such results obtained from the questionnaire and interview schedule.

5.3.2.1 Dilemmas associated with duty-based and personal values

The application of ethics is closely associated with personal values and norms. However, one needs to uphold one's organisational laid down procedures and expectations when executing assigned tasks. Respondents were asked whether they encountered ethical dilemmas associated with choosing between duty expectations versus their personal beliefs. Table 5.29 presents the results.

Table 5.29: Duty versus personal beliefs (N=68)

Duty versus Personal Beliefs		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	43	63.2	69.4	100.0
	Yes	19	27.9	30.6	30.6
	Total	62	91.2	100.0	
Missing	System	6	8.8		
Total		68	100.0		

A third of the respondents (30.6%) indicated that they encountered ethical dilemmas in choosing between duty expectations and their personal beliefs when managing OAEIR. However, 69.4% of respondents did not encounter ethical dilemmas in choosing between duty

expectations and their personal beliefs, and such conflict did not exist. The result suggests that LIS professionals carried out their duties in line with their organisational laid down procedures and expectations.

5.3.2.2 Ethical problems in electronic information management

The electronic information revolution presents new ethical problems for LIS professionals regarding the creation, organisation and dissemination of OAEIR. The results are summarised in Table 5.30 and Figure 5.14 below:

Table 5.30: New ethical problems in the electronic information revolution (N=68)

OAEIR New Ethical Problems		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	42	61.8	65.6	65.6
	Not sure	12	17.6	18.8	100.0
	No	10	14.7	15.6	81.3
	Total	64	94.1	100.0	
Missing	System	4	5.9		
Total		68	100.0		

Two-thirds of respondents (65.6%) indicated that they were facing new ethical problems in the management of OAEIR, while just 15.6% highlighted that they were not facing any. A further 18.8% were not sure if these new ethical problems existed or not.

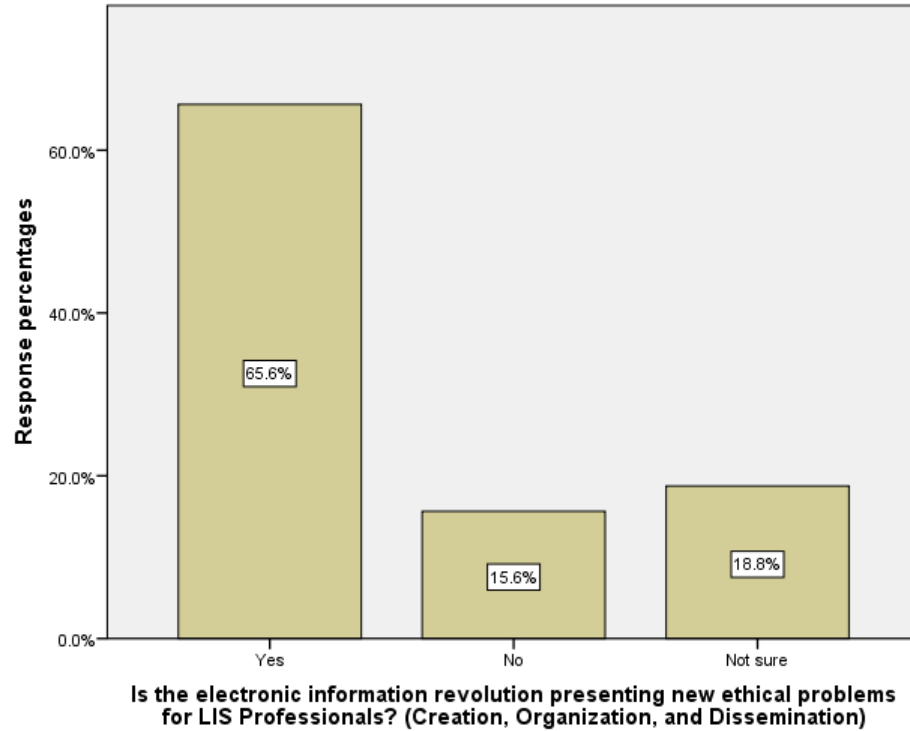


Figure 5.14: New ethical problems in the electronic information revolution

The above results suggest that most respondents were facing ethical dilemmas in the handling of electronic information resources.

Respondents who had indicated that they were facing new ethical problems in the management of OAEIR were asked to highlight these problems. Table 5.31 and Figure 5.15 present the results.

Table 5.31: Ethical problems faced (N=68)

Ethical Problems in OAEIR Management		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Creation, organisation and dissemination	15	22.1	34.9	100.0
	Dissemination	13	19.1	30.2	46.5
	Creation and organisation	8	11.8	18.6	65.1
	Organisation	4	5.9	9.3	16.3
	Creation	3	4.4	7.0	7.0
	Total	43	63.2	100.0	
Missing	System	25	36.8		
Total		68	100.0		

Most respondents indicated that they were facing ethical problems in virtually all the management processes of OAEIR, as represented by 34.9%. A further 30.3% of respondents stated that they were facing ethical problems in disseminating OAEIR. About 18.6% of the respondents indicated that they were facing ethical problems in the creation and organisation of OAEIR, while 9.3% faced in the organisation, and 7.0% in the creation processes only. However, 36.8% of respondents did not indicate whether they faced these ethical problems.

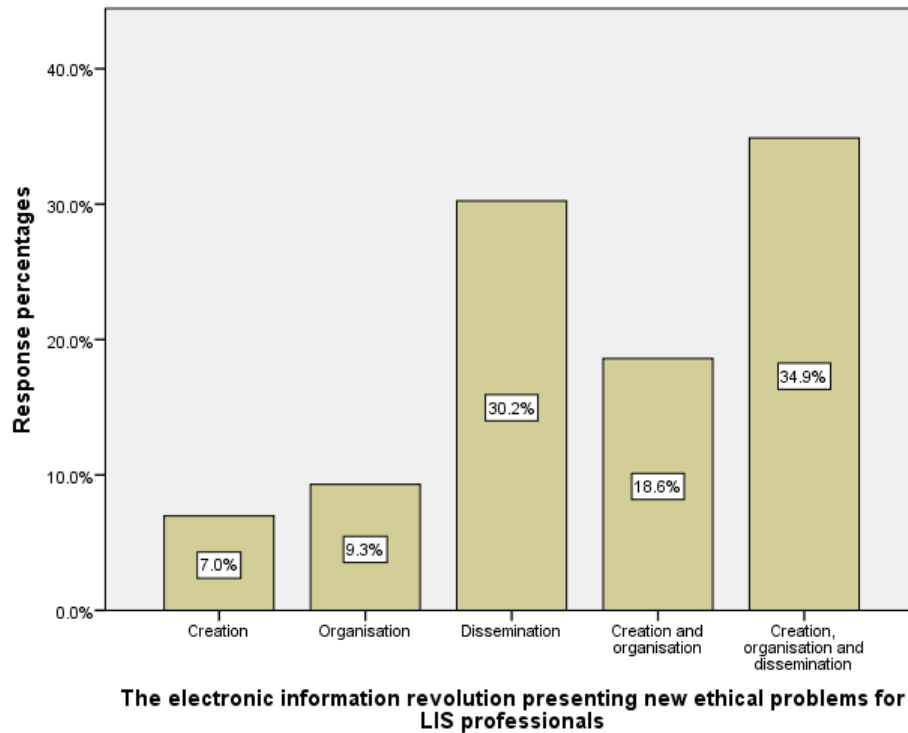


Figure 5.15: Ethical problems faced

The above results suggest that LIS professionals were facing the most ethical problems during the dissemination aspect of OAEIR, followed by in all three management processes.

The interview schedule questions 18 and 28 sought clarifications regarding ethical grey areas created by technological factors, as well as ethical problems presented to LIS professionals by the electronic information revolution. Firstly, question 18 on the interview schedule sought to review ethical grey areas created by technological factors regarding the provision of electronic information in libraries. The responses ranged widely, and some of them bordered on inaccurate information being made available to clients. Again, regarding the accuracy of the information, LIS professionals' capacity to manage or detect plagiarism for IR content was an ethical grey area. A significant number of responses also highlighted privacy issues surrounding the use of electronic information. Problematic issues about access to electronic information, in terms of organisation and dissemination, were also highlighted. In terms of intellectual property, ownership of information, plagiarism, and copyright were major ethical grey areas surrounding electronic information. On the other hand, a few respondents saw not

much difference between the electronic and print eras in terms of ethics. Secondly, on question 28, in terms of new ethical problems presented to LIS professionals by the electronic information revolution in the creation, organisation, and dissemination of OAEIR, respondents highlighted a lack of control over the information and its access. Again, issues to do with intellectual property, the accuracy of information due to predatory content, and privacy due to clients' ability to access the information from anywhere, were major new ethical problems being faced by LIS professionals. The results suggest that PAPA ethical dilemmas presented LIS professionals with problems in this technology era.

5.3.2.3 PAPA ethical dilemmas in OAEIR

The management of OAEIR presented different PAPA ethical dilemmas for LIS professionals. The major ethical dilemmas in the handling of OAEIR are presented in Figure 5.16 below:

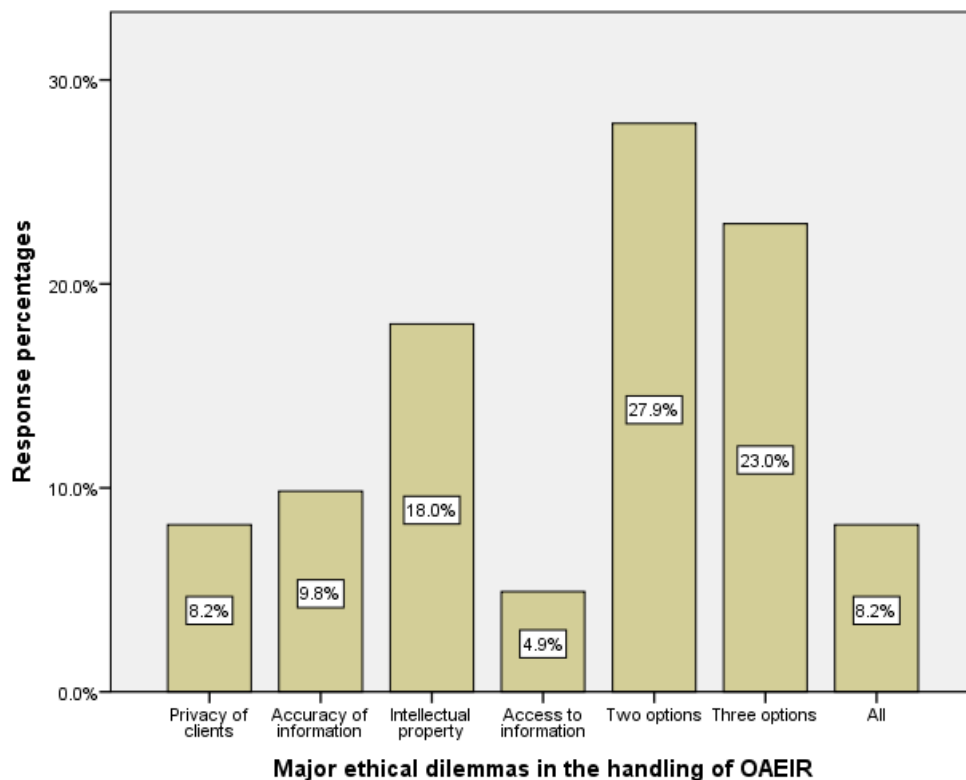


Figure 5.16: PAPA ethical dilemmas in the handling of OAEIR (N=68)

Most respondents faced ethical dilemmas in two or three of the PAPA ethical framework as represented by 27.9% and 23.0%, respectively. However, as individual ethics, most respondents faced intellectual property ethical dilemmas in the handling of OAEIR, as demonstrated by 18.0%. Respondents who faced privacy ethical dilemmas constituted 8.2%, while those that faced accuracy ethical dilemmas constituted 9.8%, and access ethical dilemmas 4.9%. A total of 8.2% of respondents faced ethical dilemmas in all of the PAPA ethical framework during the management of OAEIR processes. The results suggest that the majority of respondents were having difficulties in all of the PAPA ethical framework as far as the management of OAEIR was concerned.

The OAEIR management processes that presented LIS professionals with the PAPA ethical dilemmas above are shown in Table 5.32 below:

Table 5.32: OAEIR management and PAPA ethical dilemmas (N=68)

OAEIR and PAPA Ethical Dilemmas	Creation	Organisation	Dissemination	Creation and Organisation	Creation, organisation and dissemination
Privacy of clients	16.7%	13.3%	43.3%	13.3%	13.3%
Accuracy of information	23.3%	9.3%	23.3%	25.6%	18.6%
Intellectual property	15.9%	22.7%	22.7%	22.7%	15.9%
Access to information	9.3%	9.3%	41.9%	16.3%	23.3%

Under privacy ethical framework, most LIS professionals faced ethical dilemmas during the dissemination of OAEIR, as represented by 43.3% of respondents. A further 16.7% of respondents faced privacy dilemmas during the creation of OAEIR. Respondents who indicated that under clients' privacy, they were facing organisation-related dilemmas or both creation and organisation or all of the following: creation, organisation and dissemination

constituted 13.3% apiece. The results suggest that in terms of clients' privacy, dissemination of OAEIR presented major ethical dilemmas for LIS professionals in this information society.

Under accuracy ethical framework, creation and dissemination of OAEIR presented most ethical dilemmas for LIS professionals as represented by 23.3%, respectively. A small number of LIS professionals (9.3%) seemed to be bothered by the organisation of OAEIR as far as the accuracy of information is concerned. Respondents who indicated that under the accuracy of the information, they were facing both creation and organisation or all of the following: creation, organisation and dissemination, constituted 25.6% and 18.6%, respectively. The results suggest that regarding the accuracy of the information, creation and dissemination of OAEIR presented significant ethical dilemmas for LIS professionals.

LIS professionals were experiencing intellectual property ethical dilemmas during the organisation and dissemination of OAEIR, as presented by 22.7% of respondents, respectively. A minor number of LIS professionals (15.9%) seemed to be bothered less by the organisation of OAEIR. Respondents who indicated that they were facing both creation and organisation or all of three (creation, organisation and dissemination) constituted 22.7% and 15.9%, respectively, under intellectual property. The results suggest that in terms of electronic information and intellectual property, the organisation and dissemination of OAEIR presented significant ethical dilemmas for LIS professionals.

LIS professionals were most concerned about the dissemination of OAEIR under access to information ethical framework, as represented by a 41.9% ethical dilemma they faced during this management process. A small fraction of 9.3% of LIS professionals apiece faced ethical dilemmas associated with the creation and organisation of OAEIR under access to information. Respondents who faced ethical dilemmas during creation and organisation or all of the following: creation, organisation and dissemination, constituted 16.3% and 23.3%, respectively. The results suggest that LIS professionals were concerned with dissemination issues under access to information ethical framework.

Collectively, the above results in Table 5.29 suggest that dissemination of information caused major PAPA ethical dilemmas for LIS professionals in their handling of OAEIR, with a collective total of 32.8% ($(43.3\%+23.3\%+22.7\%+41.9\%)/4$). This was followed by the creation of OAEIR, with a collective total of 16.3%, and then the organisation of OAEIR with 13.65%. Combined totals for LIS professionals who faced both creation and organisation ethical dilemmas (19.48%) and/or all three: creation, organisation and dissemination (17.78%) constituted the other collective ethical dilemmas.

Further clarification on PAPA ethical dilemmas experienced by LIS professionals in the management of OAEIR (online databases and IR content) was sought through the interview schedule question number 19, 20, 21, 24, 25 and 26. Questions 19, 20 and 21 on the interview schedule sought to find out PAPA ethical dilemmas experienced by LIS professionals in the creation, organisation, and dissemination of OAEIR. The results found that privacy ethical dilemmas were difficult to deal with since the information was on the OA model. On access framework, the ethical dilemmas were on unsuitable content that could end up being accessed by inappropriate groups. Other access dilemmas were on the limitation on concurrent users and limited content available. On property, copyright ethical dilemmas were highlighted, where content use and misuse issues were the most common ethical dilemmas, such as plagiarising.

On accuracy, non-peer-reviewed information was the primary issue, where predatory content would end up in the public domain. Predatory content was giving LIS professionals ethical dilemmas associated with assessing the accuracy of content in libraries. On the IR, measuring the standard of information was a major ethical dilemma for LIS professionals, such as dissertations' academic quality. Thus, LIS professionals risked uploading inaccurate information on the IR. There was also a need for metadata standards skills as metadata affected the quality of the information. On the other hand, a small number of respondents was not sure of any dilemmas in the management of OAEIR. This was because the staff was not aware of information ethics standards and there was generally a lack of information on ethics available to LIS professionals. Relatedly, providing information versus implementing laid-down policies was causing dilemmas in libraries.

Question 24 on the interview schedule sought to find out how libraries were protecting the privacy of their clients in the cyber world. Most responses indicated that they were protecting clients' privacy by providing personal or individual authentication details. Some libraries had non-sharing of personal information provisions within their policy framework, while others were looking at crafting such policies in the near future. On the other hand, a significant number of responses indicated no clear-cut strategy currently in place, with the use of passwords the only approach. However, the use of passwords was designed more to protect library resources rather than the clients themselves. Question 25 on the interview schedule sought to find information about intellectual property protection in OAEIR provision in libraries. Most respondents highlighted that they were being guided by their Intellectual Property (IP) policy on handling IP related issues. Some institutions were also spreading the information on IP issues through Information Literacy Skills training sessions to conscientise their users on intellectual property issues. However, one-way institutions handled IP issues on their IR was by only uploading abstracts on copyrighted content. A third of the respondents indicated that they were not currently executing anything on IP. Question 26 on the interview schedule sought to determine metadata accuracy in the OAEIR provision. Most institutions had indexing guidelines available, making the accuracy of metadata possible. However, the accuracy of holdings for online databases was at publishers' mercy, as it was difficult to check all the content. Nevertheless, some institutions were making authorities and lists of content to enable tracking changes in holdings and making regular quality checks. Again, pre-cleaning metadata to suit the in-house style was being implemented in some institutions, together with bi-annual updating or uploading of metadata. A third of respondents indicated that they were not currently executing anything regarding the accuracy of the content on OAEIR.

5.3.3 Contextual information ethics standards associated with the management of OAEIR

The third objective of the study was to recommend contextual information ethics standards that LIS professionals could implement in the OA electronic information management processes. The research questionnaire and interview schedule sought to reveal this by asking respondents various questions pertaining to their personal experiences, culture and information

ethics in their institutions. The sub-units below will present such results obtained from the questionnaire and interview.

5.3.3.1 Principles influencing OAEIR ethics application

The application of ethical standards in the day-to-day management of OAEIR is influenced by varying reasons, from personal beliefs at the individual level to duty-based principles at the organisational level. In this regard, respondents were asked to state principles that influence their choice of applying ethical standards when managing OAEIR. The results are summarised in Table 5.33 below:

Table 5.33: Applications of ethics (N=68)

Applications of Ethics		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Organisation values	34	50.0	50.0	57.4
	Both	29	42.6	42.6	100.0
	Personal beliefs	5	7.4	7.4	7.4
	Total	68	100.0	100.0	

Half of the respondents indicated that organisational values served as the basis upon which they based their ethical decision, as represented by 34 or 50.0%. A further 29 (42.6%) of respondents stated that both organisational values and personal beliefs served as the basis for their ethical decision. A small number of respondents (5 or 7.4%), used personal belief as the basis for their ethical decision. The results suggest that organisational values were being considered and/or implemented by LIS professionals when making ethical decisions regarding OAEIR.

The researcher sought further clarification on the above application of ethical standards in the day-to-day management of OAEIR through the interview schedule (question number 29). Respondents highlighted that factors influencing their ethical decisions in OAEIR management were duty-based primarily, as they were duty-bound to implement laid out procedures. A

significant number highlighted that although they were implementing laid down procedures on applying ethics, there was also flexibility to use experience. A third of the respondents stated that they were, however, allowed to use past experiences since there was no ethical policy framework. The result suggests that LIS professionals were using duty-based principles in much of their ethical decision-making and in some instances, aided by experience.

5.3.3.2 Ethical dimensions in electronic information management

Whether cultural beliefs impacted how LIS professionals adopted ethical standards in their day-to-day work was debatable. Table 5.34 presents the responses.

Table 5.34: Cultural beliefs on ethics (N=68)

Cultural Beliefs on Ethics		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	48	70.6	70.6	70.6
	No	20	29.4	29.4	100.0
	Total	68	100.0	100.0	

About 70.6% of the respondents indicated that cultural beliefs impacted how LIS professionals were adopting ethical standards. Slightly less than a quarter (29.4%) of respondents indicated that LIS professionals' cultural beliefs had no impact on how they were adopting ethical standards. The results suggest that one's culture played a central role in their adoption of ethical principles.

The researcher asked respondents who had indicated that cultural beliefs impacted how they adopted ethical standards to highlight the levels of impact culture influenced their application of these ethical standards in PAPA ethical considerations. Table 5.35 presents the results.

Table 5.35: Culture and PAPA (N=68)

Culture and PAPA	No impact	Little impact	Average impact	High impact	Very high impact
Privacy of clients	4.4%	0.0%	26.7%	40.0%	28.9%
Accuracy of information	9.1%	6.8%	20.5%	38.6%	25.0%
Property (intellectual) of information	4.4%	2.2%	26.7%	42.2%	24.4%
Access to information by clients	6.8%	4.5%	18.2%	34.1%	36.4%

Under the privacy ethical framework, culture had a high impact in making ethical decisions, as represented by 40.0% of respondents. On accuracy, ethical framework culture also had a high impact in making ethical decisions, as represented by 38.6% of respondents. Again, on the intellectual property of information, culture had a high impact in making ethical decisions, as represented by 42.2% of respondents. On access to information, respondents indicated that culture had a very high impact in making ethical decisions, as represented by 36.4% of respondents. The results suggest that LIS professionals' culture had a high impact on their application of ethical decisions in the management of OAEIR.

The researcher further asked respondents to highlight the OAEIR management processes that their cultural practices influenced their application of PAPA ethical standards. Table 5.36 presents the results.

Table 5.36: The OAEIR management and PAPA (N=68)

OAEIR management and PAPA	Creation	Organisation	Dissemination	Two options	Three options
Privacy	17.5%	7.5%	45.0%	20.0%	10.0%
Accuracy	22.5%	7.5%	17.5%	22.5%	30.0%
Property	7.9%	31.6%	21.1%	23.7%	15.8%
Access	9.8%	9.8%	39.0%	22.0%	19.5%

Under the creation of OAEIR, culture had more influence on the accuracy of the information, as represented by 22.5%, followed by privacy, with 17.5%. Culture had little influence on access to information (9.8%) together with property (7.9%). On the organisation of OAEIR, culture had more influence on property issues, with 31.6% of responses. There was very little influence of culture on access (9.8%), privacy (7.5%) and accuracy (7.5%). During dissemination of OAEIR, culture had a high influence on privacy ethical issues, with 45.0%. This was followed by access with 39.0%, then property (21.1%), and accuracy (17.5%). On two or all three OAEIR management processes above, culture had more influence on accuracy 42.5% (22.5% + 30.0%), followed by access (41.5%), property (39.5%), and privacy (30.0%). The results suggest that when it comes to cultural considerations on the management of OAEIR, LIS professionals were more worried about applying PAPA ethical standards during the dissemination of electronic information resources.

To obtain further clarification, question 30 on the interview schedule sought to unveil whether African or Zimbabwean culture influenced LIS professionals' adoption and implementation of the PAPA ethical standards in the cyber world. Some of the respondents indicated that they were following duty requirements when implementing all the PAPA ethical standards and, therefore, culture did not impact the processes. A significant number highlighted that culture did not influence privacy, access and accuracy, as they were universal and embedded in ethics. However, on the property, respondents noted that culture influenced its adoption and implementation by LIS professionals. This was because the intellectual property was culturally

embedded, and according to culture, care and respect were necessary when using other people's property.

5.3.3.3 The universal applicability of LIS ethical codes

Respondents were asked whether the available international and regional international codes of ethics standards for LIS professionals applied to the local ethical situations in the library. The responses are shown in Table 5.37 below:

Table 5.37: Applicability of international ethical codes (N=68)

Applicability of International Ethical Codes		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	48	70.6	70.6	70.6
	Not sure	15	22.1	22.1	100.0
	No	5	7.4	7.4	77.9
	Total	68	100.0	100.0	

From the above results, 70.6% of the respondents noted that the international codes of ethics standards for LIS professionals applied to the local ethical situations in the libraries. On the contrary, 7.4% of the respondents noted that these codes did not apply to the local ethical situations, and 22.1% was not sure if they did apply. The results suggest that LIS professionals' available international codes of ethics standards were applicable to LIS professionals in Zimbabwe.

As a follow-up to the above questions, respondents were further asked whether developing a localised code of ethics framework was necessary. The respondents' views in connection with developing an ethics framework are presented in Figure 5.17 below:

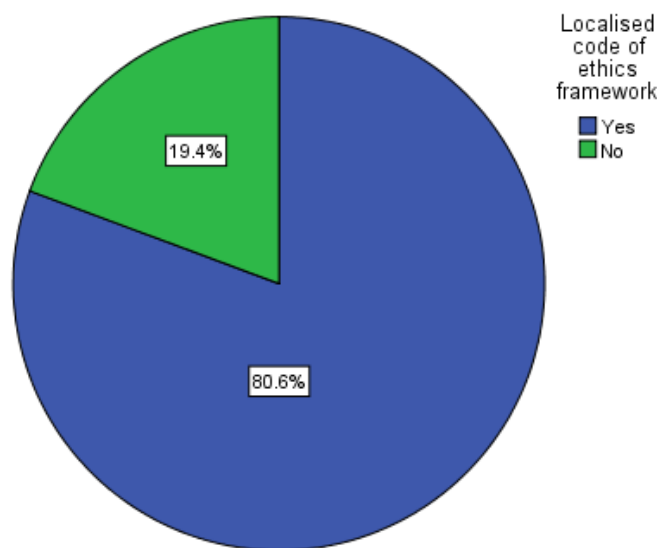


Figure 5.17: Localised code of ethics framework (N=68)

55 (80.6%) of the respondents from the questionnaire instrument supported the development of a localised code of ethics framework to help the Zimbabwean citizens, whilst 13 (19.4%) did not. The results suggest that a huge majority of LIS professionals believed that a localised code of ethics framework would better serve them. The same question was asked on the interview schedule (question 31) to get more clarity. The majority of the respondents supported the idea of a localised code of ethics framework, which was customised to the local environment but borrowed from other codes. Additionally, these codes would be contextualised from the global ones, such as IFLA and AfLIA codes, so that issues of *ubuntu*, socio-economic, and political circumstances are infused. A small number of respondents believed that there was no need to reinvent the wheel, as the international codes of ethics were working in the local environment.

5.4 Interview report

As stated earlier on, the interview schedule was administered as a second data collecting tool to augment the questionnaire instrument. In other words, it sought to clarify some of the questionnaire instrument's responses. The purpose was to utilise the qualitative data to strengthen the quantitative findings. Of the respondents interviewed, five were Deputy Librarians, five were Sub Librarians, and thirteen were Senior/Assistant Librarians. The results

of the interview schedule were integrated into the results themes of the questionnaire instrument as end paragraphs. This was because questions on the interview schedule corresponded with questions on the questionnaire instruments, making it easy to analyse the questions one after the other. The researcher did this to consolidate the study and put flesh on the bones of the quantitative results by comprehensively explaining the results above it.

5.5 Document analysis report

The document analysis was administered as a third data collecting tool to also augment the questionnaire instrument. The document analysis results were also integrated into the results themes from the questionnaire instrument. The themes covered on the document analysis checklist were:

- OAEIR collection development policies;
- OAEIR policy coverage;
- LIS professionals' ethical obligations within policies;
- Library policy coverage on privacy ethical obligations;
- Library policy coverage on accuracy ethical obligations;
- Library policy coverage on intellectual property ethical obligations; and,
- Library policy coverage on access ethical obligations.

5.6 Summary of the chapter

This chapter presented, in detail, the results of the study. The interview schedule and document analysis checklist clarified some of the questionnaire instrument's responses, to strengthen the findings. The results of the three instruments were integrated to consolidate and put flesh on the bones of the study. The overall response rate for the study ranged from satisfactory to. Quantitative and qualitative data analysis procedures were employed through descriptive statistics analysis and the SPSS and thematic content analysis, respectively. The results showed that mostly senior LIS professionals (professional librarians) were involved in managing OAEIR processes in university libraries, assisted by Senior Library Assistants (para-professionals). Among the three management processes, dissemination of OAEIR was a common role that LIS professionals were executing. Slightly more than half of the LIS professionals in university libraries were aware of the LIS code of ethics. Still, among those,

many of them did not possess knowledge of any specific ones. Again, institutional affiliation to the LIS code of ethics by university libraries stood at just above a quarter, with many not stating which codes their institutions were affiliated to. However, LIS professionals' consideration and application of PAPA ethical standards were essential in the management of OAEIR, with accuracy of the information being of paramount importance, followed by property, access, and privacy. This was against the background that ZimLA and ZULC were currently not doing enough to conscientise LIS professionals on the profession's ethics through advocacy, awareness, development, and enforcement of ethical codes in Zimbabwe. LIS professionals' application of ethics in electronic information was viewed as the same as print information. Ethics requirements and encounters were high in libraries, especially in privacy, access, property, and ethical situations. Whilst slightly more than half of the library policies had ethical conscience, they were not specific on PAPA issues as a whole. However, most of the libraries hold LIS professionals accountable for not applying ethical considerations in the management of OAEIR, and information ethics skills enhancement opportunities were available. Almost half of LIS professionals PAPA encountered situations that required ethical judgment in their handling of OAEIR, whilst the other slight majority did not encounter any ethical situations in their handling of OAEIR. LIS professionals used organisational values and duty-based principles as the basis upon which to base their ethical decision-making, and in some instances, aided by experience where no ethical policy framework was in existence. As such, no ethical dilemmas emanating from choosing between duty expectations and their personal beliefs were being encountered. However, most LIS professionals were facing new ethical dilemmas in the management of OAEIR in this electronic information revolution. LIS professionals' culture greatly impacted LIS professionals' adoption and application of ethical decisions in the management of OAEIR. On adopting ethical principles, culture had a high impact in making privacy, accuracy and intellectual property ethical decisions, while, on the access ethical framework, culture had a very high impact. However, duty requirements were the primary determiner when LIS professionals implemented all the PAPA ethical standards. Lastly, the available global codes of ethics standards for LIS professionals, such as AflIA, ALA and IFLA, applied to LIS professionals in Zimbabwe. However, most LIS professionals supported the need to develop a localised code of ethics framework customised to the local environment but borrowing from other codes at regional and international levels.

CHAPTER SIX: INTERPRETATION AND DISCUSSION OF RESULTS

6.0 Introduction

The previous chapter presented research results of quantitative and qualitative data collected from the respondents through survey questionnaires, interviews and a document analysis checklist. The structured questionnaire research instrument was administered to operational level LIS professionals in selected Zimbabwe Universities. The semi-structured interview schedule research instrument was administered to managerial level LIS professionals in selected Zimbabwean universities. Lastly, the researcher used the document analysis research instrument to analyse the selected Zimbabwe universities' library policies. The study was underpinned by the deontological and PAPA ethical frameworks.

This chapter interprets and discusses the research results of the study to examine the adoption of information ethics standards in the management of OAEIR by Zimbabwean university libraries. The researcher addressed the following study questions during the interpretation and discussion:

- What is the LIS professionals' level of adoption of information ethics standards in the management of OAEIR?
- What are the information ethics dilemmas encountered by LIS professionals in the execution of open access electronic information management processes?
- What contextual information ethics standards could LIS professionals implement in the management processes of open access electronic information?

As mentioned in Chapter Four (Methodology) and Chapter Five (Presentation of Results), this study employed a mixed-methods research approach, which two methods remained relatively independent until now, the data interpretation stage. Thus, this chapter discusses integrated research results guided by research objectives and, subsequently, generates themes that emanated from the above research questions of the study.

6.1 Discussion of findings

The sub-sections below will discuss the findings of the study guided by research objectives and subsequently generates themes that emanated from the research questions of the study.

6.1.1 Adoption of information ethics in OAEIR management

One of the study's objectives was to determine the adoption of information ethics standards in managing OAEIR by LIS professionals. The sub-units below will interpret and discuss the results obtained. The first sub-unit will interpret and discuss data based on the awareness of an ethical standards theme. This theme emanates from the first component of the first research question. The second sub-unit will analyse data based on the application of ethical standards in the library theme. In contrast, the third sub-unit will analyse data based on the adoption of the PAPA ethical standards theme. The second and third themes emanate from the second component of the first research question, relating to 'adoption'.

6.1.1.1 Awareness of LIS ethical standards

Most senior LIS professionals, designated as Faculty Librarians, System Librarians, Research or Information Services Librarians, Client Services Librarians, and Content Management Librarians, managed OAEIR processes in university libraries, assisted by Senior Library Assistants. However, among the three management processes, dissemination of OAEIR was a common role that LIS professionals were executing. The study's findings support the view that in this contemporary library environment increased importance in the management of electronic resources *by LIS professionals to library clients* was placed on effective information dissemination (Young, 2009). This explains why dissemination of OAEIR was a common role in libraries and was managed by senior and junior staff. Additionally, this probably also had to do with the fact that the majority of LIS professionals were Senior Library Assistants (Figure 5.3), who were mostly involved in the dissemination of information in university libraries as indicated by the distribution of LIS Professionals by role in the library (Table 5.4). Thus, Senior Library Assistants were mostly involved in disseminating OAEIR duties within the Client Services and Content Management sections, which constituted to 87% of all library staff.

Slightly more than half of the LIS professionals in university libraries was aware of the LIS code of ethics, while just another half was in the dark as far as the LIS code of ethics was concerned. However, further analysis of findings revealed that even among those aware of the LIS code of ethics, many of the respondents did not possess knowledge of any specific ethics, raising questions about whether they were genuinely knowledgeable. This was because the staff was not aware of information ethics standards. There was generally a lack of information on ethics available to LIS professionals, affecting the provision of information versus implementing laid-down ethical policies in libraries. The findings support the view that not much was known about information ethics in Africa and that the area was still an open task that was failing to provide concrete guidance for LIS professionals in their day-to-day duties (Capurro, 2006; Fallis, 2007). Igbeka and Okoroma (2013) indicated that though ethical codes had been in place in the LIS field, many LIS professionals were not aware of them, let alone practised them in their professional duties, calling for the need for publicity. Again, the responses highlighted that mostly junior LIS professionals did not have the codes available for use as they were not easily accessible, hence not used for day-to-day decision-making. The findings confirm Onoyeyan et al.'s (2014) view that most practising LIS professionals did not have a copy of their professional code of ethics document. Thus, they were not much aware of its contents and this compromised their ethics adoption rate. The findings also supported Mwafuilwa's (2017) view that not all LIS professionals in university libraries were aware of ethical issues arising from the use of modern technologies and subsequent management of OAEIR. This presented "a catch-22 situation" in university libraries regarding implementing ethical considerations in various library information provision processes.

Institutional affiliation to university libraries' LIS code of ethics stood at just above a quarter, based on the valid percentage category, with most of these not stating which codes their institutions were affiliated with. As Phillips, Oyewole and Akinbo (2018) noted, LIS professionals needed to be guided by a professional code of ethics, especially in light of many ethical dilemmas in this information society. However, as highlighted by the results, most respondents directly or indirectly indicated that their institutions were not affiliated with any LIS code of ethics or were unaware of such codes. The results confirmed Igbeka and Okoroma's (2013) assertion that though ethical codes had been in place in the LIS field, many

LIS professionals were unaware of them, let alone practised them in their professional duties. The findings noted that the codes of ethics slightly influenced practice in university libraries' management of OAEIR. In such rare cases, the codes were more concerned with observing clients' privacy issues in creating, organising, and disseminating OAEIR information. This shows that generally, LIS professionals executed their professional duties without following ethical guidelines (Igbeka & Okoroma, 2013). The study reaffirmed Onoyeyan et al.'s (2014) study finding that not much was being done to assist LIS professionals in understanding professional ethics. This was because most LIS professionals were not fully aware of the ethical consequences of their day-to-day actions to make the best ethical decisions when confronted with ethical dilemmas (Phillips, Oyewole & Akinbo, 2018). Thus, there was a need to educate LIS professionals on the ethics of the profession, especially in light of the information society.

The importance that LIS professionals attach to Privacy, Accuracy, Property, and Access ethical standards is critical in managing OAEIR. As Adetimirin (2017) concluded, LIS professionals' knowledge of the above four issues in the PAPA framework was now invaluable in this information society. The current study's findings reflected the above assertion by suggesting that LIS professionals' consideration and application of PAPA ethical standards were essential in managing OAEIR and the professionals were aware of PAPA ethical framework. The study's findings confirmed that the accuracy of information was of paramount importance, followed by property and access. However, clients' privacy was listed as the least important consideration of information ethics. This was against the background that the expansion of electronic information resources in libraries had posed a significant threat to the privacy and confidentiality of library clients and information, an integral part of the mission and values of LIS professionals in libraries (Mwafuililwa, 2017).

National associations and other professional bodies play a significant role in the awareness and adoption of a profession's ethical standards. Many have developed various codes of ethics that focus on principles and values that guide members' behaviours concerning what is right or wrong (Shachaf, 2005). However, the study's findings revealed that ZimLA and ZULC were not doing enough to conscientise LIS professionals on the profession's ethics through

advocacy, awareness, development and enforcing the adoption of ethical codes in Zimbabwe. As library services were essentially human-oriented and depended on ethical principles more than any other profession, Ngu-War (2019) supported the need for LIS professional bodies to be active in ethics. Thus, professional ethics codes should often be advocated, developed, marketed and enforced by professional organisations to help guide members in performing their duties according to sound and consistent ethical principles.

6.1.1.2 Application of ethics in libraries

Applying ethics in electronic information has been considered a new fundamental in recent literature. However, as Onoyeyan et al. (2014), Adebayo and Mabawonku (2017) and Phillips, Oyewole and Akinbo (2018) noted, the adoption of information ethics by LIS professionals had not been revealed through empirical studies, more so focusing on the African continent and the world at large. This created a gap in determining the status quo regarding the subject matter. Additionally, though LIS professionals' 'ethics in practice' had created a lot of interest from various scholars, the availability of literature that focuses on the awareness, perception and adoption of ethical issues by LIS professionals was still scarce. Thus, how LIS professionals considered their ethical obligation regarding the information presented in the 'new' electronic format, as opposed to print, was one of the *raison d'être* of this study. The study's findings revealed that libraries had the same ethical obligation regarding the information presented in print and electronic format, as the information was the same despite its varying mode of delivery. However, there was a need for more ethical obligation efforts in the electronic information format emanating from electronic content trust issues by users of the information. The above findings of the study contradicted many scholars who were of the view that ICTs had opened up a plethora of information ethics concerns for LIS professionals in this information society. This had been coupled with LIS professionals' limited ICTs skills required to efficiently and ethically handle electronic information (Chase, Dygert, & Johnston, 2000; Hoq, 2012; Moran, Stueart, & Morne, 2013). Thus, OAEIR brought information ethics to the forefront of ethical considerations in an environment where little is known about LIS professionals' ethical awareness and adoption of ethical principles. In light of this situation, where LIS professionals are now facing many ethical dilemmas, a call for more awareness and practice of ethics in libraries has been made (Igbeka & Okoroma, 2013; Onoyeyan et al., 2014;

Adebayo & Mabawonku, 2017; Mwafuililwa, 2017; Phillips, Oyewole, & Akinbo, 2018). However, further analysis of findings revealed that due to the low awareness of information ethics and ethical codes by LIS professionals, there was a general conclusion that the related application of ethical codes in university libraries was still in its infancy. Thus, for one to assume that LIS professionals' 'ethics in practice' in distinguishing different ethical obligations regarding the information presented in print and electronic format was adequate, would not be accurate.

The practical application of ethics in library work requires that the library management enforce this within the library workflow operations. The study findings revealed that ethics requirement within libraries was very high, with most LIS professionals required to observe ethical considerations in their everyday duties, thus suggesting that ethical concerns were receiving attention in libraries. The findings were consistent with Sueur, Hommes and Bester's (2013) view that LIS professionals' need for ethical awareness and observation had grown in this information society, to include the need to observe ethical judgement within the confines of laid down ethical policies. However, as revealed by further findings on the same matter, there was a lack of clear policy direction regarding LIS professionals' ethical obligations in electronic content. This was against the background that print resources had fewer ethical concerns than electronic resources, which had more ethical issues. This scenario affected how ethical issues were being implemented in everyday electronic library workflow operations. The above findings were consistent with Chandel and Saikia (2012), Igbeka and Okoroma (2013) and Khan (2016), who stated that the existence and awareness of ethical codes alone without measures to enforce these ethics was as good as having none. Thus, LIS professionals were encouraged to accordingly develop separate collection development policies for print and electronic information resources. Each type of material had unique collection development processes with unique ethical issues, thus needing unique decision-making. This required LIS professionals to adopt acquisition guidelines that were both in conformity with their profession's ethical standards and their society's contextual ethical expectations. Thus, every library ought to own a detailed collection development policy that guides electronic information resources acquisitions decisions that would also serve to defend a library's acquisition decisions in a conflict situation where a library client challenges an item in the

collection. Thus, libraries needed to have a collection development policy or standard operating procedures for online databases and IR content.

Adoption of duty-based principles by LIS professionals is enforced by policies and standard operating procedures that support uniformity and consistency in adopting professional principles, in this case, ethical principles. Thus, OAEIR ethical considerations in library policies should be explicitly spelt out. The study's findings revealed that slightly more than half of the library policies had ethical considerations in them, though they were not specific on the overall PAPA issues. The findings were consistent with Phillips, Oyewole and Akinbo's (2018) view that, although over the years, LIS professionals' awareness of the ethical issues in LIS service delivery had improved, adoption of the PAPA ethical framework in this contemporary library environment had not been fully established. Additionally, awareness of ethical principles presented in these policies was, to a greater extent, restricted to senior LIS professionals at the expense of their junior colleagues. Though most policies were due for review in a year or two, most of the policies and SOPs already covered the creation, organisation, and dissemination workflow of OAEIR. However, these policies and SOPs did not spell-out LIS professionals' ethical obligations. The study's findings supported Chandel and Saikia's (2012) and Khan's (2016) assertions that LIS professionals needed to update or develop separate collection development policies for electronic and print collections to address the unique ethical issues related to the collection development of its different formats of resources. Cardwell-Stone (2012) and Echterling (2019) also reinforced the above findings by highlighting that the 'print revolution' ideologies still drove library collection development policies. However, the new mode of scholarly communication required LIS professionals to revisit all practices and workflows to incorporate integral variances with conventionally published content and the use of new technologies and online content in libraries. This would be through updating existing LIS professionals' policy guidelines to ensure that they address ethical concerns emanating from the technologies and related platforms. Additionally, they would need to align usage agreements that control the delivery of OAEIR by identifying problematic issues and informing changes in library policies and related standard operating procedures (Cardwell-Stone, 2012). On the other hand Mullen (2011), Dyas-Correia (2014) and Echterling (2019) noted that whereas LIS professionals had been advocating and

implementing OA to research in many institutions as a way to promote the library values of openness, there had been little integration of the same in library collection development policies. Thus, library collection development policies were still driven by the print revolution ideologies and were general or even silent regarding OA acquisitions and related ethical issues. Resultantly, OA resources were not yet integrated into the norms, functions and roles of the LIS professionals and profession, including in mainstream workflow processes such as cataloguing and indexing services, thereby presenting practical day to day ethical dilemmas for LIS professionals. However, for the OA movement to get substantial recognition in the LIS field, other libraries had found ways of including OA issues into the mainstream library environment through their IR policies and subsequently related standard operating procedure documents.

LIS professionals needed to have the skills that would enable them to make the most of the electronic information resources, as good information ethics skills were essential in this contemporary library environment. IFLA encouraged LIS professionals to strive for excellence in the profession by maintaining and enhancing their knowledge and professional skills and those of their colleagues to provide the highest standards of service quality and promote the profession's positive reputation. In this regard, the study's findings revealed that opportunities for enhancing information ethics skills were available in libraries, mostly through webinars at an individual level and hands-on training sessions. The nature of the training mostly involved imparting skills on privacy and ethical issues in information management and dissemination. However, the above findings of the study contradicted Chandel Saikia's (2012), Igbeka and Okoroma's (2013), Onoyeyan et al.'s (2014), and Echterling's (2019) view that not much was being done to assist LIS professionals in understanding professional ethics as well as ethical consequences of their actions. This resulted in many LIS professionals ordinarily executing their professional duties as though there were no ethical guidelines. Additionally, though OA was a vital creation and objective for libraries, it has raised many ethical dilemmas associated with the lack of additional skills for LIS professionals to cope with the collection and organisation of this emerging format. LIS professionals' skills and involvement in acquiring electronic information resources had somewhat been inadequate, as they mostly subcontracted most of their acquisition activities to book vendors who would intermediate them with an array

of publishers and producers of scholarly information. This was against the background that the collection development of electronic information resources was essentially more complex and comparatively more challenging than the collection development of printed information resources.

LIS professionals were bound to encounter duty situations that would ordinarily require them to observe ethical judgement. The study findings found that almost half of the LIS professionals were encountering situations that required ethical judgment in their handling of OAEIR, whilst a slight majority was not encountering any ethical situations in their handling of OAEIR. This suggested that most LIS professionals were either unaware of the required ethical practice or were not implementing it in the management of OAEIR. The findings were consistent with Igbeka and Okoroma's (2013) view that though ethical codes had long been in place in the LIS field, in most instances, a reasonable number of LIS professionals was not aware of them, let alone practised them in their professional duties. The above findings are also consistent with earlier findings that half of the LIS professionals in university libraries was either aware or in the dark as far as the LIS code of ethics was concerned. Again, earlier related findings revealed that even among those aware of the LIS code of ethics, a very high number of the respondents did not possess knowledge of any specific ones, raising questions about whether they were genuinely aware. The findings are consistent with Igbeka and Okoroma's (2013) observation that, in the midst of numerous ethical problems posed by the information society, many LIS professionals continued to carry out their professional duties as though there were no ethical guidelines. Adebayo and Mabawonku (2017) reinforced this view by highlighting that LIS professionals' awareness of information ethics alone was insufficient. It did not constitute its adoption, as LIS professionals' level of adoption of information ethics was generally lower than their awareness. Additionally, Phillips, Oyewole and Akinbo (2018) noted that LIS professionals might fail to recognise that they are encountering an ethical dilemma in executing their day-to-day duties. This scenario pointed to a lack of awareness of the ethical issues in information service delivery in this information society.

Ethics accountability within libraries formed the foundation of its implementation; as such, libraries needed to hold their LIS professionals accountable for not implementing ethical

standards in their day-to-day management of OAEIR. The study's findings revealed that most libraries held LIS professionals accountable for not applying ethical considerations in the management of OAEIR. According to the study results, libraries took varying actions for holding LIS professionals accountable for not applying ethical considerations in their day-to-day management of OAEIR, ranging from reprimand, re-training, quality assurance application, rules, SOPs, and policy enforcement. Library supervisors, such as Client Services Librarians, Content Management Librarians, Information Services Librarians, and Systems Librarians, monitored their staff's ethical implementation as part of quality control duties or through the strategic plan documents policies and standard operating procedures. However, the abovementioned documents were not yet specific on information ethics or PAPA in general. Additionally, many findings pointed towards the non-existence of enforcement measures in information ethics standards, and the policies and procedure manuals were silent on that aspect. The study's findings seem consistent with Igbeka and Okoroma's (2013) conclusion that the existence and awareness of ethical codes alone without measures to enforce these ethics at the organisational level was as good as having none. Thus, there was a need to spell out LIS professionals' roles in the ethical framework within the library policies and standard operating procedures.

The implications of fully adopting information ethics standards in the management (creation, organisation and dissemination) of OAEIR in libraries had a bearing on staffing levels and workflow procedures. The study's findings noted that there was a need for additional professional librarians (as opposed to para-professional staff), especially for monitoring and evaluation purposes, quality assurance and ethical compliance, and catering for changes in the workflow procedures. However, though there was a need for re-training, the study findings revealed that the staff skills level gap did not need change much. This was because the current LIS professionals were recruited in the digital era and, thus, could handle most contemporary ethical concerns in libraries. This mindset change and retooling would have a bearing on job titles in libraries, as creating new ones and duties would be appropriate to address ethical standards issues in this information age. The findings were consistent with Mwafuilwa's (2017) view that in the face of ICTs, the duties and responsibilities of LIS professionals should

be re-branded to reflect their contemporary roles as content custodians, in addition to being experienced information navigators in this super information-intensive information society.

6.1.1.3 PAPA in OAEIR management

Privacy, accuracy, property and access (PAPA) are information ethics standards and ethical considerations associated with managing OAEIR in this information age. The study findings revealed that LIS professionals encountered ethical situations in everyday work, particularly privacy, access, property, and accuracy. The findings were consistent with various scholars such as Anderson's (2006), Cardwell-Stone's (2012), Onoyeyan et al.'s (2014) and Mwafuililwa's (2017) view that the provision of electronic information and the subsequent OA model to information had opened PAPA ethical issues for LIS professionals. However, according to the findings, the encounters varied with a particular OAEIR management process LIS professionals executed. Most LIS professionals encountered information dissemination ethical problems in the ethical privacy framework. The findings were in line with Mason's (1986), ALA's (2008), IFLA's (2012), Cardwell-Stone's (2012), Matingwina's (2015) and Mwafuililwa's (2017) view that ethical privacy issues were one of the chief ethical concerns for LIS professionals during the dissemination of information in this information society. This was due to the enhanced capacity of ICTs in surveillance, communication, storage and retrieval, and the expansion of library electronic information resources. Mwafuililwa (2017) further reinforced the findings by noting that the growth of library electronic information resources had posed a significant threat to the privacy and confidentiality of library clients and information. Thus, LIS professionals' protection and upholding user privacy were considered to be some of the fundamentals of the libraries' electronic information revolution era. Hence, the current study also sought to reveal how the matter was being treated in libraries. The study findings revealed that half of the libraries had mechanisms to protect user privacy in disseminating information. The other half of the libraries either had no mechanisms to protect user privacy in disseminating information or were unsure if the mechanisms were available. The findings were consistent with Ngu-War's (2019) view that the relationship between the library and the user was confidential. Appropriate measures needed to be taken by LIS professionals to ensure that user data were not shared beyond the original transaction. Thus,

LIS professionals needed to respect library users' privacy and the protection of personal data necessarily shared between individuals and institutions.

Under the ethical accuracy framework, most LIS professionals faced challenges in all three OAEIR management processes: creation, organisation, and dissemination. These findings were consistent with Onoyeyan et al.'s (2014) view that the advent of electronic information resources had resulted in a high level of information content inaccuracy. This was due to the inherited Internet's lack of permanence, instability and volatility of the information content, which had created reliability concerns for LIS professionals. Additionally, as Chase, Dygert and Johnston (2000), Sueur, Hommes and Bester (2013) and Adebayo, Akole and Salau (2016) noted, this posed ethical challenges to LIS professionals as they attempted to create, organise and disseminate electronic information resources. This was because it was more challenging to describe a web-based resource than a print resource due to online resources' features continuously being updated, mostly at unpredictable intervals, affecting the accuracy of metadata and holding information. The above was central to the standing rule that information accuracy was a component of information integrity that sought to guarantee the users of information that the information had not been modified from its original source and had remained consistent and accurate without being accidentally or intentionally changed from the source for it to be considered fit for human consumption. Thus, accurate information must be supplied to the user regardless of the LIS professionals' stance on the content or finality of its use at the right time, in the right quantity and in the right format. Matingwina (2015) reinforced the findings by concluding that the information society, characterised by the explosion and use of electronic information and open publishing platforms, had compromised the accuracy and quality of information reaching the library client. This posed several ethical challenges in libraries' management cycle of electronic information resources. On the other hand, as the accuracy of OAEIR content was of paramount ethical importance, libraries needed to check for accuracy in this content before it was uploaded and available to library clients. However, the study findings revealed that the evaluation of content accuracy was irregular and casual in university libraries. The findings were consistent with Matingwina's (2015), Mwafuilwa's (2017) and Ajuwon and Ajuwon's (2018) view that the accuracy of information resources had been an ethical cause for concern for LIS professionals in this OA environment. This was due

to the divorce of the library institution from the creation and organisation of OAEIR, which had placed LIS professionals at the periphery of proceedings, thereby leaving a massive gap in the evaluation of appropriate content. Thus, the accuracy of OAEIR information from publishers and vendors is now becoming difficult for LIS professionals to detect, especially before the information eventually reaches the library clients. Again, the lack of in-depth knowledge about the discipline being searched presented some ethical challenges for LIS professionals in university libraries, as most of the deployed Subject Librarians did not have qualifications in those subject areas other than a LIS qualification. In some cases, this resulted in inaccurate information as LIS professionals failed to separate between correct and incorrect subject-based information, against library clients' expectations of accurate and reliable information.

Under the intellectual property ethical framework, most LIS professionals encountered ethical challenges during the dissemination of OAEIR, followed by the organisation process. Many LIS professionals faced dissemination challenges during the provision of access to OAEIR. The above findings revealed that LIS professionals faced many PAPA ethical problems while disseminating OAEIR. This was followed by ethical problems in two or all three OAEIR management processes. Matingwina (2015) reinforced the findings by concluding that constant and swift developments in ICTs had brought out questions and dilemmas concerning the capacity of existing copyright laws to concurrently protect the rights of scholars, while at the same time ensuring that access to information was not hindered. This left a gap causing ethical challenges for LIS professionals in university libraries. Again, the intellectual property itself was once the domain of lawyers and patent holders and had sneaked into the LIS profession through the information society. This presented at their doorstep ethical issues which were not easy to ignore and which would ordinarily require more cooperation and interaction among LIS professionals and content vendors to arrive at a common goal of mutual interests, according to Ferreira (2008), Chandel and Saikia (2012), Sueur, Hommes and Bester (2013), Charbonneau and Priehs (2014), Onoyeyan et al. (2014) and Matingwina (2015). Resultantly, LIS professionals as electronic collection content developers, through the IR and other open or proprietary electronic resources, were now at the forefront of determining library intellectual property ethical issues. This required them to embark on copyright education for themselves

and their library clients. Thus, any LIS professional who was unaware of, and subsequently adopted, intellectual property ethical considerations in this information society concerning electronic information resources management processes, was being risky and this had negative consequences to their work. Additionally, content ownership is essential in determining intellectual property and associated ethical issues. IR content depositors (authors) must sign 'release consent' of their materials upon submission. This would enable libraries to tackle the ethical problems associated with privacy, access to that information, intellectual property issues, and how they would create, organise, and disseminate such information. However, the study findings revealed that libraries largely did not have a mechanism in place for IR content release consent, though in some institutions, the IR policy referred to mandatory submission. The study findings were consistent with Ferreira's (2008), Chandel and Saikia's (2012) and Senapati and Singh's (2012) conclusions that when creating electronic information resources, both open and proprietary, LIS professionals needed to be aware of legal issues such as licensing agreements and contractual obligations among other related matters, as it was their moral duties to protect these issues. More cooperation and interaction were also required among LIS professionals and content owners, resulting in the former incorporating intellectual property concerns in the IR workflow processes, including such issues as consent and release procedures.

Developing mechanisms that enabled user access to information was an essential element that libraries should implement to improve or even make access to electronic information possible. All library clients' access to information, both print and electronic resources, was a fundamental right that should be upheld. The study's findings revealed that most libraries provided access to electronic information through the library website; thus, access mechanisms to OAEIR were available in most institutions. Additionally, the findings revealed that most of the libraries' IRs content was available over the Internet, free to their communities and beyond, through OA. Thus, OAEIR content in libraries was easily and freely accessible to users of information who needed to use it. Slightly more than half of the libraries also provided their approved users with access to electronic information resources, with slightly below half not doing so. Thus, the study findings revealed that approved users' access to electronic databases depended on individual libraries. The study findings were consistent with Sueur, Hommes and

Bester's (2013), Britz's (2013) and Onoyeyan et al.'s (2014) view that academic libraries in the 21st century were no longer mere storehouses of information. This was because they had an obligation to proactively, effectively and efficiently provide library clients with access to their collections by unlocking the opportunity for online participation by various individuals through open-source software, open content and user-unfriendly website. Supporting these findings, Mishra and Mishra (2014) and Matingwina (2015) noted that providing information access quickly and timely to library clients was an act of LIS professionals' personal and professional commitment, which was also a fundamental human right in an information society. Concerning the IR, access to the information contained in these repositories was enhanced by LIS professionals' deliberate application of appropriate information standards, such as file formats and metadata, which were important for information sharing, information quality, and information accessibility on any other platform. Ngu-War (2019) reinforced the above findings by stating that the core mission of LIS professionals was to offer access to their collection and services free of cost to the user. Therefore, restrictions on information access needed to be removed. Due to this purpose, LIS professionals needed to ensure that library websites complied with international standards for accessibility and access, including using the most effective ways to promote and market their collection so that users and prospective users became aware of their existence and availability. This also included the library keeping any membership fees and administrative charges as low as possible so that other people in society were not excluded.

In this contemporary environment, academic libraries needed to train their clients to manoeuvre in the information society, demanding that LIS professionals understand current trends in information management (Adebayo, Akole & Salau, 2016). The study findings revealed that libraries offered information literacy skills training in their institutions. The examinable format was the most popular method of providing it, and LIS professionals' participation was high. However, a quarter of the libraries offered ILS as a voluntary training session. The findings were consistent with ALA's, (2008), IFLA's (2012) and Sinh and Nhung's (2012) view that LIS professionals should always help and support users with their information searching, including offering information literacy skills training to library clients. The findings were also supported by Anderson (2006), who viewed information literacy skills

as a profound and fundamental part of library clients' academic practice that should take centre stage in information access and dissemination. Thus, LIS professionals' teaching of information literacy skills in universities was within the context of ethical professional behaviour in as much as electronic information access and dissemination were concerned (Forster, 2013). Ngu-War (2019) reinforced the above findings by stating that LIS professionals needed to promote information literacy skills among library users by supporting them in searching for information through their ability to identify, locate, evaluate, organise, use and communicate information for academic purposes. LIS professionals also needed to support library users with the ethical use of information, thereby helping to eliminate plagiarism and other forms of misuse of information.

The application of ethics in libraries was also influenced by OAEIR user licences, and relations with publishers. With electronic information being controlled through the licence agreements made between publishers and libraries, there was a need for a mutual understanding of these OAEIR content agreements that control delivery and access. The study findings revealed that mutual understanding between the libraries and publishers over OAEIR licence agreements was reasonably balanced. However, bundled OAEIR collections were slightly meeting clients' needs instead of unbundled content, where libraries will choose titles of their choice. Publishers bundled content by creating a licencing structure that mixed titles, raising the relevance of content and access arrangements issues. This bundling of content meant libraries would be left with no choice but to subscribe to titles they need and titles they do not need. The findings of the study were consistent with Cardwell-Stone's (2012, p. 6) view that OAEIR platforms and technologies used to provide digital content to library users were often operated and maintained by commercial vendors. In most cases, libraries ended up sacrificing library clients' privacy and access to information for or out of convenience. Additionally, the library's OAEIR service providers were more concerned with revenue generation and placing access limits on content users than library clients' privacy, meaning that processes that enabled them to exploit content users' behaviour data for commercial gains were more attractive to them. To find out if these information access issues were being addressed, the library-vendor relations in terms of the availability of a platform for raising such ethical matters were reviewed. The study's findings revealed that some ethical concerns by libraries were finding it challenging to reach publishers

or the vendors of OAEIR. The study findings were consistent with Chandel and Saikia's (2012) view that more cooperation and interaction were required among LIS professionals, publishers, content vendors and library clients. This interaction would be required to discuss and arrive at a common goal of mutual interests regarding the creation, organisation, maintenance, management and use of OAEIR. The current scenario left it to LIS professionals to ensure that a level playing field was established before committing the library and library clients to unfavourable licence arrangements (Cardwell-Stone, 2012). On the other hand, accessibility of OAEIR access and use licences were necessary for LIS professionals and library users. The study findings revealed that half of the electronic content users was unaware of the licences governing this content, making it difficult for them to know and adopt ethical issues associated with OAEIR. As studies that focused on the awareness and adoption of ethical issues emanating from OAEIR licences issues in academic libraries remained scarce, perhaps the findings were consistent with the fact that LIS professionals themselves had limited knowledge of copyright and related laws, where most of the licence structure derived their strength from (Charbonneau & Priehs, 2014).

6.1.2 Information ethics dilemmas in OAEIR management

Another objective of the study was to determine information ethics dilemmas encountered by LIS professionals in the execution of OA electronic information management processes. The sub-sections below will interpret and discuss data obtained from the research results.

6.1.2.1 Dilemmas associated with duty-based and personal values

The application of ethics is closely associated with personal values and norms. Problematic ethical situations, dilemmas and dissonance regarding ethical issues and LIS professionals, in as far as conflicts between their values and the organisation for which they work, have always been a challenge, according to Carbo and Almagno (2001), Stueart and Moran (2007) and Tan (2017). However, one needs to uphold one's organisational laid-down procedures and expectations when executing assigned tasks and handling ethical situations and their subsequent dilemmas. The study's findings revealed that most LIS professionals were not encountering ethical dilemmas emanating from choosing between duty expectations and their personal beliefs. Thus, LIS professionals carried out their duties in line with their

organisational procedures and expectations. The findings were consistent with the ALA (2008) and IFLA (2012) view that LIS professionals should not advance their private interests or personal beliefs over organisational values. As such, LIS professionals should distinguish between personal convictions and professional duties so as not to allow these personal beliefs to interfere with the fair representation of the aims of their institutions or the provision of access to their information resources. Stueart and Moran (2007) and Tan (2017) highlighted that one of the remedies was to implement solid ethical procedures and expectations within the library that supported the corporate network culture. These ethical procedures and expectations should simultaneously empower the LIS professionals as well as LIS managers to navigate ethical conflict situations in line with their organisations.

6.1.2.2 Ethical dilemmas in electronic information management

Contemporary library trends in information generation, management and information-seeking behaviour of library clients have created many ethical challenges for the LIS professionals in this information society. The study's findings revealed that most LIS professionals were facing new ethical dilemmas in the management of OAEIR in this electronic information revolution. The findings were consistent with Carbo and Almagno's (2001), Miltenoff and Hauptman's (2005), Hoq's (2012) and Chandel and Saikia's (2012) assertion that in this contemporary information society, ethical questions related to the provision of OAEIR had increasingly become an ever-present phenomenon in LIS professionals' working lifecycle. Resultantly, as the roles of LIS professionals were becoming more complex than ever due to the development of the Internet, LIS professionals were encountering, and had to deal with, many contemporary information ethics decisions and ethical dilemmas emanating from the lifecycle of OAEIR information (Matingwina, 2015; Adebayo, Akole & Salau, 2016). The findings were further reinforced by Mwafuililwa (2017) and Munigal (2018), who noted that LIS professionals faced severe ethical dilemmas in the electronic information resources management cycle due to the increasing complexity of communicating and sharing information in this modern society. AL-Nuaimi et al. (2017) bolstered the findings by highlighting that the integration of these ICTs into LIS professionals' day-to-day practices had simultaneously transformed regular ethical issues and had further generated new ethical problems. The study further revealed that most LIS professionals were facing ethical problems in generally all of the management processes

of OAEIR, that is, creation, organisation and dissemination. However, the dissemination of OAEIR posed more significant ethical problems for LIS professionals. The findings were consistent with Chandel and Saikia's (2012) and Sueur, Hommes and Bester's (2013) view that the new ICTs largely relied on the trust of the information users for compliance. However, this was presenting LIS professionals with practical ethical dilemmas to think about, in terms of information dissemination and access. This further complicated ethical dilemmas for LIS professionals, as library clients' information-seeking behaviour and attitude had fluctuated over the past few years. As a result, LIS professionals' encountering ethical dilemma situations in the information society was being generated by both the information side and the users of this information, namely, the library clients (Mutula, 2013; Mwafuililwa, 2017).

Accuracy of information is an important ethical consideration, especially in the information society. The study findings revealed that technological factors and the electronic information revolution had created many problematic ethical grey areas for LIS professionals due to a lack of control over the information and its access. In terms of electronic information provision in libraries, the study revealed that, as a result of predatory content, inaccurate information was being made available to clients, thereby creating an ethical problem area for LIS professionals. The findings were consistent with Beall's (2013, 2014), Matingwina's (2015), Shen and Bjork's (2015), Mouton and Valentine's (2017), Ajuwon and Ajuwon's (2018) view that keeping up with accurate electronic library holdings was proving difficult for LIS professionals. This was because libraries were not holding the resources themselves but on remote servers owned by publishers, posing ethical dilemmas. Additionally, by exploiting the OA publishing model and money-making mode, predatory publishers reduced the peer-review process and thereby hindered scholarly communication. Resultantly, through the OA channels without proper peer review, questionable publications had hit the core of credibility of legitimate scientific publication accomplishments. This had left LIS professionals challenged due to their lack of in-depth knowledge on different subject areas library clients request daily.

In this contemporary information world, ethical grey areas emanating from the use of information and intellectual property issues were prevalent for LIS professionals as they attempted to balance providing library users with access to information and simultaneously

respecting authors' copyrights. The study's findings revealed that regarding intellectual property, major ethical grey areas surrounding electronic information were ownership of information, plagiarism, and copyright infringement. The findings also revealed the LIS professionals' incapacity to manage or detect plagiarism for IR content, in breach of intellectual property rights, was also an ethical grey area. However, the problem was slowly subsiding, with most African higher education institutions embracing antiplagiarism platforms. The above findings were consistent with Charbonneau and Priehs's (2014) and Onoyeyan et al.'s (2014) view that intellectual property rights issues were one of the biggest ethical dilemmas confronting LIS professionals in the 21st century. This was due to the information explosion coming from both the proprietary electronic information resources and the publishing involvement of LIS professionals through open-access IRs. Brenncke (2007), Senapati and Singh (2012), Reinsfelder (2014) and Matingwina (2015) reinforced the findings by highlighting that LIS professionals were sandwiched between the competing values of providing the highest level of library service to all users and the desire to respect intellectual property rights and the interests of rights holders. It was now complicated for LIS professionals to protect publishers' intellectual property and interests, especially in this age of digital and online publications. The intangibility of information, especially in the digital environment, was also a source of many ethical dilemmas, as copyright laws protected the form of expression and not the idea itself. Again, the concept of copyright's 'fair use' or 'fair dealing' posed further ethical dilemmas because of its elusiveness, complexity, and rigid nature.

Digital content's delivery model not only placed library clients' privacy at risk but also facilitated censorship of information and jeopardised access, thereby causing a potential threat to the rights of an individual to read and receive information (Cardwell-Stone, 2012). The study's findings also revealed that privacy issues surrounding electronic information were one of the major new ethical problems being presented to LIS professionals, as it was difficult to police and control clients' privacy. This was chiefly because of the contemporary created environment, which enabled library users to have the ability to access electronic information from virtually anywhere, any time. The findings were consistent with Cardwell-Stone's (2012), Reinsfelder's (2014), Matingwina's (2015) and Stueart and Moran's (2017) view that the new ICTs which were finding their way into the LIS profession were proving to be unfriendly to

privacy. This was on the background that the current digital content rights management had the potential to undermine personal privacy seriously. The scholars added that privacy issues in libraries often had been compromised by ICTs, calling for LIS professionals to be constantly vigilant in protecting library clients' legal right to privacy. This was because LIS professionals now depended on publishers and third parties to provide electronic content, whose privacy policies most likely did not match libraries' privacy policies and practices. This, therefore, made libraries lose control over library clients' data and control to protect clients' privacy.

6.1.2.3 OAEIR and PAPA ethical dilemmas

The management of OAEIR, both online databases and IR content, also presented different PAPA ethical dilemmas for LIS professionals. The study's findings revealed that LIS professionals had difficulties in all of the PAPA ethical frameworks regarding the management of OAEIR. Collectively, the dissemination of information caused major PAPA ethical dilemmas for LIS professionals in their handling of OAEIR. The above findings were consistent with Young's (2009) and Echterling's (2019) view that though OA was an important creation and objective for libraries, it had raised many ethical dilemmas. These ethical dilemmas were associated with library cataloguing standards, lack of additional funding and skills for LIS professionals to cope with the collection and organisation of this emerging format. Resultantly, the dissemination of OAEIR has presented LIS professionals with the most difficult challenge in the concept of the OA movement. This has created ethical dilemmas for LIS professionals trying to balance relationships with publishers and library clients, collection development and associated ethical standards.

In terms of clients' confidentiality, the study's findings revealed that the dissemination of OAEIR presented major ethical dilemmas for LIS professionals in this information society. Probably this also had to do with the fact that over half of LIS professionals in university libraries were involved in disseminating OAEIR role, as per the demographic data of the study. The above findings were consistent with Chandel and Saikia's (2012) and Cardwell-Stone's (2012) view that electronic information resources presented LIS professionals with many ethical challenges at every management level, from their selection, acquisition, organisation, and dissemination. These challenges needed libraries to employ and uphold the highest level

of integrity in providing information (Phillips, Oyewole and Akinbo, 2018). The study's results also revealed that privacy ethical dilemmas were difficult to deal with because the information was on the OA model. However, libraries employed various measures to protect their clients' privacy in the cyber world. The study also revealed that the provision of personal or individual authentication details was being used in libraries to protect clients' privacy. Some libraries had non-sharing of personal information provisions within their policy framework, while others were looking at crafting such policies in the near future. On the other hand, many responses indicated no clear strategy currently in place, with the use of passwords as the only approach. However, the use of passwords was designed more to protect library resources rather than the clients themselves.

In terms of the accuracy of the information and ethical issues, the study's findings revealed that the creation and dissemination of OAEIR presented major ethical dilemmas for LIS professionals. On accuracy, non-peer-reviewed information was the major issue, where predatory content would end up in the public domain. Predatory content gave LIS professionals an ethical dilemma in assessing the accuracy of library content. On the IR, measuring the standard of information was a major ethical dilemma for LIS professionals, such as the academic quality of dissertations. Thus, LIS professionals risked uploading inaccurate information to the IR. There was also a need for metadata standards skills for LIS professionals as they affected the quality of the information. However, most institutions had indexing guidelines available, making metadata accuracy possible. On the contrary, the study's findings revealed that the accuracy of holdings for online databases was at the publishers' mercy as it was difficult to check all the content. Nevertheless, some institutions made authorities and lists of content to track changes in holdings and make regular quality checks. Again, pre-cleaning metadata to suit the in-house style was being implemented in some institutions, together with bi-annual updating or uploading of metadata.

In terms of electronic information and intellectual property ethical issues, the study's findings revealed that the organisation and dissemination of OAEIR presented significant ethical dilemmas for LIS professionals. On intellectual property, copyright ethical dilemmas were highlighted, where content use and misuse issues, such as plagiarising, were the unique ethical

dilemmas. However, the study also revealed that LIS professionals employed different measures to protect intellectual property in OAEIR provisions in libraries. Most respondents highlighted that they were being guided by their Intellectual Property (IP) policy on handling IP-related issues. Some institutions also spread information on IP issues through Information Literacy Skills training sessions to conscientise their users on intellectual property issues. Another way institutions handled IP issues on their IR was by only uploading abstracts on copyrighted content.

Additionally, the study's findings revealed that ICTs had further complicated the management of copyright issues in libraries, resulting in LIS professionals facing ethical dilemmas in their day-to-day duties. This was a direct result of electronic information resources collections now constituting almost 80% of most academic libraries' total collection. The findings were consistent with Senapati and Singh's (2012) and Matingwina's (2015) view that ethical dilemmas always arose when the information being requested by library clients became difficult or impossible to acquire and provide access to them efficiently without violating copyright restrictions. This was against the swiftness of the exercise, where information could easily be disseminated anywhere in the world, and library clients, as a need, were able to download multiple electronic journal articles and electronic book chapters anywhere and at any time. This practice violated authors' and publishers' copyrights and intellectual property rights law. As a result, LIS professionals were entangled in ethical dilemmas to protect the rights of both authors and library clients. On the one hand, they wanted authors to gain commercial value from their works, but on the other hand, they wanted not to restrict and control the information flow unnecessarily. It was now very difficult for LIS professionals to protect publishers' intellectual property and interest, especially in this age of digital and online publications. This was because library clients could access information virtually anywhere and at any time, posing a potential source of ethical challenges. Thus, LIS professionals in university libraries faced ethical dilemmas, especially against the background that sharing information was one of their *raison d'être*.

In terms of electronic information and access ethical issues, the study's findings revealed that LIS professionals were concerned with the dissemination of information issues under the

access ethical framework. The ethical dilemmas were on unsuitable content that inappropriate groups could access on the access ethical framework. Other access dilemmas were the limitation on concurrent users and the restriction on content available.

6.1.3 Contextual information ethics standards in OAEIR management

The third objective of the study was to contextualise information ethics standards that LIS professionals could implement in the OA electronic information management processes. The sub-sections below will interpret and discuss data obtained from the research results.

6.1.3.1 Principles influencing OAEIR ethics application

The application of ethical standards in the day-to-day management of OAEIR was influenced by varying factors, ranging from personal beliefs at the individual level to duty-based principles at the organisational level. LIS professionals who interpreted the privacy of users, accuracy of the information, intellectual freedom and access to information as a universal human right and their duty to protect them operated within a deontological ethical framework (Burgess & Knox, 2019). The study's findings revealed that LIS professionals used organisational values and duty-based principles as the basis upon which to base their ethical decision-making, and in some instances, aided by experience where no ethical policy framework was in existence. Thus, LIS professionals' duty-based application of ethical standards in the day-to-day management of OAEIR was influenced by the duty requirement to implement laid-out procedures. However, the duty-based application of ethical standards based on organisational values was closely followed by personal beliefs in making ethical decisions. This was due to LIS professionals being allowed to be flexible to use experience in applying ethics and implementing laid-out procedures. The findings were consistent with Osmo and Landau's (2006) and Tanner, Medin and Iliev's (2008) view that a long tradition in decision-making pointed to the fact that people usually took a deontological perspective when making decisions. This is because a deontological perspective is connected closely to rights, focusing on the rights of the library users, their freedom to choose, to know the truth, and the right to privacy (Anderson, 2006; Gensler, 2011). This was reinforced by Adebayo, Akole and Salau (2016), who highlighted that ethical consideration of information provision in libraries focused more on the deontological aspects.

6.1.3.2 Ethical dimensions in electronic information management

The impact of culture on ethical standards was examined, as cultural diversity was an ethical dimension frequently used to explain various people's ethical behaviours across societies and countries (Rhee et al., 2010). The study contextualised PAPA towards the African cultural dimension perspective and concerning the management processes of OAEIR in academic libraries. The findings revealed that LIS professionals' culture played a central role in adopting ethical principles in the management of OAEIR. Additionally, culture greatly impacted LIS professionals' application of ethical decisions in the management of OAEIR. The findings were consistent with Capurro's (2010), Rhee et al.'s (2010) and Britz's (2013) view that morals refer to the customs and traditions of individuals and societies and that ethics and practice are the critical reflections of these morals. LIS professionals working in different countries would differ in morality, impacting their actions in ethics adoption and dilemmas. Additionally, deontology subscribed to the idea that normative ethics came from the ideology of norms and standards of a society's culturally accepted behaviour, which might differ between various societies. Thus, the ethical principles of individuals and groups in society were based on unified social resolutions and, thus, on the norms and values of that particular society (Gensler, 2013). In addition, Sueur, Hommes and Bester (2013) and Phillips, Oyewole and Akinbo (2018) stated that LIS professionals' behaviour was often significantly shaped by their customs and habits as they encountered ethical situations and their consequent adoption rate of ethical standards.

The study's findings further revealed that culture had a high impact on making privacy-related ethical decisions in adopting ethical principles. On accuracy and the intellectual property-related ethical framework, culture also had a high impact on making ethical decisions. Lastly, on access the ethical framework, culture had a very high impact on LIS professionals' decision-making process on ethical decisions. Brey (2007) noted that the discussion of privacy, intellectual property rights and access to information, which are central in information ethics, had shown that a good case could be made for the descriptive culture-relativity of these values. The study's findings further revealed that when it comes to cultural considerations in the management of OAEIR, LIS professionals were most worried about applying PAPA ethical standards during the dissemination process of electronic information resources. During the

dissemination of OAIER, culture had a high influence on privacy-related ethical issues first, followed by access, property, and accuracy. On two or all three OAEIR management processes above, culture had more influence on accuracy, followed by access, property, and then privacy. WSIS Action Line C10 recognised the importance of ethical dimensions as a key factor in the information society. The findings were consistent with Gyegye's (2010), Capurro's (2013) and Dolamo's (2013) view that in adopting ethical principles in libraries, culture had a high impact on making ethical decisions due to the values and norms of African *ubuntu*.

To obtain further clarification, the study sought to unveil whether African or Zimbabwean culture influenced LIS professionals' adoption and implementation of the PAPA ethical standards in the cyber world. The study's findings revealed that duty requirements were the primary determiner when implementing all the PAPA ethical standards and, therefore, culture did not impact the processes. Additionally, culture did not influence privacy, access and accuracy, as these were universal and embedded in ethics. However, on property, culture influenced its adoption and implementation by LIS professionals. This was because the intellectual property was culturally embedded, and care and respect were necessary when using other people's property. Whilst the duty requirements serving as the primary ethical determiner were consistent with earlier findings and literature, the above findings contradicted many scholars' views, such as Brey (2007), Shachaf (2005), Gyekye (2010), Rhee et al. (2010), Capurro (2013) and Dolamo (2013), on the privacy, accuracy and access ethical and cultural dimensions. This was because African cultural ethics took the form of humanistic morality, not individualistic, whose central focus was the concern for the welfare and interest of each member of society, emphasising the importance of the values of mutual helpfulness, collective responsibility and reciprocal obligations. Thus, individualistic ethics that focused on the welfare and interests of the individual was hardly regarded in African moral thought, as the well-being of man depended on his fellow man and was aligned to a humanitarian ethics philosophy termed 'the ethics of duty, not of rights'. Additionally, ethics in the African context reflected a society's cultural values. Therefore, there could not be standardised ethical dimensions across individuals and societies due to the diversity of cultures and societies. Thus, whilst personal privacy could be an important ethical principle in Western countries, it could be of little value in the African context, which emphasised *ubuntu* and different cultural

perspectives. As a sign that intellectual property rights were culturally relative, many non-Western countries had traditionally not included recognition of intellectual property rights in their value system and were currently struggling with this concept. Additionally, access to information and the concept of freedom of information as an ethical issue was culturally relative.

6.1.3.3 The universal applicability of LIS ethical codes

The available codes of ethics standards for LIS professionals were developed at regional and international levels by LIS organisations such as AfLIA, ALA, and IFLA. The study findings revealed that these available global codes of ethics standards for LIS professionals applied to LIS professionals in Zimbabwe. The findings were consistent with Rachels and Rachels' (2010) and Awoniyi's (2015) view that some ethical values were being shared by all cultures, as there were some moral rules that all societies should embrace for them to function properly. Although values differed from person to person and from one society to another, these values seemed to be stable across individuals and societies. Additionally, though cultures might differ in what they regarded as legitimate exceptions to the rules, this disagreement existed against a broad background of agreement. Thus, overestimating the number of differences between cultures was inaccurate, as not every moral rule would vary from society to society.

However, the vast majority of scholars disproved these above findings. Nevertheless, there was always a diversity of views in studies like this, where behaviour patterns mattered. Thus, as a follow-up to the above conclusions, the study's findings also revealed that most LIS professionals supported the need to develop a localised code of ethics framework customised to the local environment but borrowed from other codes at the regional and international levels. Additionally, this localised code would be contextualised from the global ones, such as IFLA and AfLIA codes, so that issues of ubuntu, socio-economic, and political circumstances were infused, thus better serving the local LIS professionals. The findings were consistent with Mutula's (2013), Obasola's (2014) and Matingwina's (2015) observation that the current information ethics system prescribed ways that privileged Western cultural traditions. However, of late, the persistence of the traditional ethical component, where cultural identities were constantly enhanced, had presented practical dilemmas for African LIS professionals in

this contemporary information society. This was also against the background that one of the dimensions of ethics was context and culture-specificity, and the adoption of information ethics by LIS professionals had a cultural dimension. Thus, individuals with different cultural diversity and backgrounds had different ethical dimensions, which presented difficulties in agreeing on ethical determinations across borders. IFLA (2012) supported the development of codes of ethics and professional conduct for LIS professionals at a local level, as theirs served as a guideline for individual LIS professionals and consideration by various LIS Associations when creating or revising their codes. Equally, Igbeka and Okoroma (2013) noted that low awareness and adoption of the ethical values by LIS professionals essentially pointed to the fact that the degree of feasibility and practicability of ethical codes would be very questionable. Thus, Kibugi (2014) argued that whilst information ethics was a good discipline and practical way forward solution to deal with issues of this information society affecting all countries, it had to be contextualised to suit the local needs of societies. The findings were further supported by Gyekye (2010), Rhee et al. (2010), Obasola (2014), Matingwina (2015) and Adebayo and Mabawonku (2017), who were of the view that various ethical dimensions involving PAPA and cultural traits were in existence in this information society in the process of handling electronic information resources. This was because ethics was a relative concept that had dimensionality over culture, situation, and personal interests, and differed in every society, and that different cultures had different moral codes. Thus, the ethics of any given society was embedded in the ideas and beliefs individual members of the society shared about what was right or wrong, good or bad. These characteristics of ethics shared a lot of resemblances with the characteristics of culture, if not being interchangeable. Brey (2007), Rachels and Rachels (2010) and Gensler (2013) summed this up by saying that information ethics, as it had developed in the West, had a strong emphasis on rights, and little attention was paid to uncovering cultural differences that might exist in systems of morality. Thus, values that were central in Western information ethics were not the values that were of central concern in many non-western systems of morality, making information ethics a product of descriptive moral relativism. Additionally, cultural relativism, which was based on the connotation that the good and bad in a society were relative to culture, challenged the belief in objectivity and universality of moral truth, and holds that there was no such thing as universal truth in ethics but various cultural codes. Resultantly, Igbeka and Okoroma (2013), Mutula (2013) and Kibugi

(2014) highlighted that ethical concerns and issues needed to be spelt out in more concrete behavioural terms, to be peculiar and founded on the diversity of emerging information societies in Africa. Thus, they needed to be founded on African values, cultures and people, while remaining sensitive to the international information ethics needs. Matingwina (2015) noted that the lack of localised ethical principles and the complexity of ethical codes were some of the top ethical challenges LIS professionals faced in upholding ethical values in this information society. Thus, while a shorter international version code with core values could be developed, it was important to devise detailed country-specific codes applicable to various contextualised social and cultural variations (Munigal, 2018). In addition, Ngu-War (2019) stated that professional ethics codes and principles were not meant to replace law or morality, but to serve as guidelines for professional conduct. These guidelines defined the limits of acceptable conduct and guided what kind of actions were regarded as right or wrong in the occupation. Thus, LIS professionals could contextualise these guidelines to apply to their local context, as the current codes of ethics frameworks provide broad statements (ALA, 2008; IFLA, 2012). These broad statements served as a guiding framework for ethical decision-making and did not dictate conduct to cover particular situations.

6.2 Summary of the chapter

The chapter interpreted and discussed, in detail, the findings of the study. The study's findings suggested that senior LIS professionals (professional librarians) were involved in managing OAEIR processes in university libraries, assisted by Senior Library Assistants (para-professionals). Among the three management processes, dissemination of OAEIR was a common role that LIS professionals were executing. Slightly more than half of the LIS professionals in university libraries were aware of the LIS code of ethics. Still, among those, many of them did not possess knowledge of any specific ones. Again, institutional affiliation to the LIS code of ethics by university libraries stood at just above a quarter, with many not stating which codes their institutions were affiliated with. However, LIS professionals' consideration and application of PAPA ethical standards were essential in the management of OAEIR, with the accuracy of the information being of paramount importance, followed by property, access, and privacy. LIS professionals' application of ethics in electronic information was viewed as the same as print information. Ethics requirements and encounters were high in

libraries, especially in privacy, access, property, and ethical situations. Whilst slightly more than half of the library policies had ethical conscience, they were not specific on PAPA issues as a whole. However, most of the libraries held LIS professionals accountable for not applying ethical considerations in the management of OAEIR. Almost half of LIS professionals encountered situations that required ethical judgment in their handling of OAEIR, whilst the other slight majority did not encounter any ethical situations in their handling of OAEIR. In the privacy-related ethical framework, most LIS professionals encountered information dissemination ethical problems. In addition, most LIS professionals faced challenges in the OAEIR creation, organisation, and dissemination management processes under the accuracy ethical framework. Under the intellectual property ethical framework, most LIS professionals encountered ethical challenges during the dissemination of OAEIR, followed by the organisation process. Regarding electronic information and access ethical issues, LIS professionals were concerned with dissemination issues. LIS professionals used organisational values and duty-based principles as the basis upon which to do their ethical decision-making. In some instances, they were aided by experiences where no ethical policy framework existed. However, most LIS professionals faced new ethical dilemmas in managing OAEIR in this electronic information revolution. Though dissemination of OAEIR posed greater ethical problems for LIS professionals, they faced ethical problems in all of the management processes of OAEIR, that is, creation, organisation and dissemination. Technological factors and the electronic information revolution have created many problematic ethical grey areas for LIS professionals due to a lack of control over the information and its access. Regarding electronic information provision in libraries, predatory content and inaccurate information created a major ethical problem for LIS professionals. On intellectual property, ownership of information, plagiarism, and copyright infringement were the major ethical problems. Privacy issues surrounding electronic information were a major ethical problem presented to LIS professionals. This privacy concern was chiefly because of the contemporary information environment, which enabled library users to have the ability to access electronic information from virtually anywhere, any time, and was difficult to police and control clients' privacy. LIS professionals' culture greatly impacted their adoption and application of ethical decisions in the management of OAEIR. On adopting ethical principles, culture had a high impact in making privacy, accuracy and intellectual property ethical decisions, while on the access

ethical framework, culture had a very high impact. However,, duty requirements were the primary determiner when LIS professionals implemented all the PAPA ethical standards. Lastly, the available global codes of ethics standards for LIS professionals, such as AfLIA, ALA and IFLA codes, were applicable to LIS professionals in Zimbabwe. However, most LIS professionals supported the need to develop a localised code of ethics framework customised to the local environment but borrowed from other codes at regional and international levels.

CHAPTER SEVEN: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.0 Introduction

The previous chapter interpreted and discussed the study findings. This chapter summarises the findings of the study's research questions as discussed and interpreted in the previous chapter. These findings will be summarised in the context of the deontology ethical theory, the PAPA ethical framework, and the literature review, all presented in the previous chapters. Additionally, this chapter will draw conclusions, make recommendations, and suggest areas for further research. These study findings' contributions to theory, practice and policy are discussed. The study sought to generate information and understanding on the adoption of information ethics standards in the management of OAEIR by LIS professionals, together with the information ethics dilemmas encountered and contextual information ethics standards applicable to OA electronic information management processes. The study was based on the pragmatism worldview underpinned by the deontological ethical theory and the PAPA ethical framework. A mixed-methods approach was used as the research approach of the study in a sequential explanatory research design. Questionnaires, interview transcripts, and document analysis were used to collect quantitative and qualitative data from LIS professionals in Zimbabwean university libraries. The framework of the chapter and discussion is organised by order of the study's research questions.

7.1 Summary of chapters

Chapter One provided the study's context by discussing the study's main variable. This chapter described the introduction to the study, the research problem, the study's purpose, significance, scope and delimitations, and limitations. Definitions of key terms used in the study were also provided. The principal theory upon which the study was constructed was identified and discussed. A brief outline of various research methodologies employed by the study was given. The primary literature on the research problem was discussed, including within the African context. Additionally, the literature addressed the study's many facets, including unpacking information ethics in the contemporary environment and why it is important to study it, ethical

dilemmas and dimensions, and related prior studies informing the research. The chapter ended with a brief discussion of the structure of the study.

Chapter Two discussed ethical theories and the three compelling basic approaches to normative ethics: virtue, consequential ethics, and deontological ethics. After examining the attributes, constructs, or variables of the above three normative ethics theories, the study adopted the deontological ethical framework. The duty-based or deontological ethics theory solves several problems which are associated with consequentialist ethical theories. The legacy of the deontological theory is respecting and treating others as ends, instead of treating others as means as advocated by the consequential theory. This legacy is supported by LIS professions' ethical principles, which respect the fundamental rights of everyone equally, principles that virtue and consequentialist ethical theory have no answer to. Thus, deontology is a dominant theory that resonates well with LIS professionals' ethical awareness, particularly within the information management context and concerning library principles and policy. The PAPA ethical framework reflects the significant components in the management process of electronic information resources by LIS professionals, and focusing on these values can help LIS professionals construct the social contract.

Chapter Three reviewed existing literature on the awareness and adoption of information ethics standards by LIS professionals as they create, organise and disseminate OAEIR. Additionally, the researcher reviewed existing literature on the associated ethical dilemmas and contextual ethical standards they could use to manage OAEIR. The discussion from the literature first focused on those electronic information resources which are now being made available to library clients by LIS professionals, that is, online databases of books and journals and information resources being provided by libraries through the IR content of staff publications and student dissertations. It then focused on the above resources concerning the OA movement and its impact on libraries and LIS professionals' work. Code of ethics frameworks used by LIS professionals in the execution of their duties and associated ethical issues peculiar to the information society libraries were also discussed from the global LIS profession codes, other benchmark international codes, and continental codes of ethics perspectives. The above analysis overlapped into the discussion on information ethics, regional efforts towards the

information ethics field, and contemporary ethical standards associated with managing OAEIR. Later, the researcher reviewed literature that focused on the privacy, access, property, and accuracy ethical issues associated with the management of OAEIR by LIS professionals from the adoption and associated dilemmas perspective. A look at the literature on the contextual information ethics standards from the cultural dimension perspective was also explored by unpacking the privacy, access, property and accuracy concepts in the African cultural context. This was meant to place the literature review within the perspective of the research questions' themes, including infusing key variables of the underlying research theory (deontology) into the literature review and broader issues on the research problem.

Chapter Four presented the methodology adopted by the study, as it sought to generate information and understand the adoption of information ethics standards in the management of OAEIR by LIS professionals. It also presented the methodology adopted to understand the information ethics dilemmas encountered and contextual information ethics standards applicable to OA electronic information management processes. The study used the pragmatism worldview as the research paradigm and the mixed-methods approach to obtain a rich data source. The study used a sequential explanatory research design in which quantitative and qualitative data were collected sequentially. The population drawn from university libraries and sampling procedures were also described, including instruments used in the collecting data, that is, questionnaires (for the quantitative approach), interview transcripts and document analysis (for the qualitative approach). The validity and reliability of the research instruments were achieved through pre-testing the instruments. Quantitative and qualitative data analysis procedures were employed through descriptive statistics analysis, using the Statistical Package for Social Science (SPSS), and thematic content analysis. Ethical considerations were enforced as per the research ethics guidelines of the University of KwaZulu-Natal.

Chapter Five presented, in detail, the results of the study. The interview schedule and document analysis checklist clarified some of the questionnaire instrument's responses to strengthen the findings. The results of the three instruments were integrated to consolidate and put flesh on the bones of the study. The overall response rate was high and satisfactory for the study.

Quantitative and qualitative data analysis procedures were employed through descriptive statistical analysis, the SPSS, and thematic content analysis. The primary objective of the chapter was to provide an overview of the raw data collected using the specified methods of data presentation stated above, and explain the data to make it meaningful. Among the three management processes, dissemination of OAEIR was a common role that LIS professionals were executing. Slightly more than half of the LIS professionals in university libraries were aware of the LIS code of ethics, though not any specific ones. Again, institutional affiliation to the LIS code of ethics by university libraries stood at just above a quarter, with many not stating which codes their institutions were affiliated with. Ethics requirements and encounters were high in libraries, especially in privacy, access, property, and ethical situations. Whilst slightly more than half of the library policies were ethically conscience, they were not specific on PAPA issues as a whole. Almost half of LIS professionals encountered situations that required ethical judgment in their handling of OAEIR, whilst the other slight majority did not encounter any ethical situations in their handling of OAEIR. LIS professionals used organisational values and duty-based principles as the basis upon which to do their ethical decision-making. In some instances, LIS professionals were aided by experiences where no ethical policy framework existed. However, most LIS professionals faced new ethical dilemmas in managing OAEIR in this electronic information revolution. LIS professionals' culture greatly impacted their adoption and application of ethical decisions in the management of OAEIR. However, duty requirements were the primary determiner when LIS professionals implemented all the PAPA ethical standards. Though the available global codes of ethics standards for LIS professionals applied to LIS professionals in Zimbabwe, there was a need to develop a localised code of ethics framework.

Chapter Six interpreted and discussed, in detail, the research findings and provided an interpretation of the results and how they related to the existing literature. The study's findings suggested that senior LIS professionals (professional librarians) were involved in managing OAEIR processes in university libraries, assisted by Senior Library Assistants (para-professionals). Among the three management processes, dissemination of OAEIR was a common role that LIS professionals were executing. Slightly more than half of the LIS professionals in university libraries were aware of the LIS code of ethics. Still, among those,

many of them did not possess knowledge of any specific ones. Again, institutional affiliation to the LIS code of ethics by university libraries stood at just above a quarter, with many not stating which codes their institutions were affiliated with. However, LIS professionals' consideration and application of PAPA ethical standards were essential in the management of OAEIR, with the accuracy of the information being of paramount importance, followed by property, access, and privacy. This was against the background that ZimLA and ZULC were currently not doing enough to conscientise LIS professionals on the profession's ethics through advocacy, awareness, development, and enforcement of ethical codes in Zimbabwe. LIS professionals' application of ethics in electronic information was viewed as the same as print information. Ethics requirements and encounters were high in libraries, especially in privacy, access, property, and ethical situations. Whilst slightly more than half of the library policies had ethical conscience, they were not specific on PAPA issues as a whole. However, most libraries held LIS professionals accountable for not applying ethical considerations in the management of OAEIR, and information ethics skills enhancement opportunities were available. Almost half of LIS professionals encountered situations that required ethical judgment in their handling of OAEIR, whilst the other slight majority did not encounter any ethical situations in their handling of OAEIR. LIS professionals used organisational values and duty-based principles as the basis upon which to base their ethical decision-making. In some instances, they were aided by experiences where no ethical policy framework existed. As such, no ethical dilemmas arose from choosing between duty expectations and personal beliefs. However, most LIS professionals faced new ethical dilemmas in managing OAEIR in this electronic information revolution. LIS professionals' culture significantly impacted LIS professionals' adoption and application of ethical decisions in the management of OAEIR. On adopting ethical principles, culture had a high impact in making privacy, accuracy and intellectual property ethical decisions, while on access ethical framework, culture had a very high impact. However, duty requirements were the primary determiner when LIS professionals implemented all the PAPA ethical standards. Lastly, the available global codes of ethics standards for LIS professionals, such as AfLIA, ALA and IFLA, were suitable for LIS professionals in Zimbabwe. However, most LIS professionals supported the need to develop a localised code of ethics framework customised to the local environment, but borrowed from other codes at regional and international levels.

7.2 Summary of findings

The summary and organisation of this section are based on the study's research questions. Generally, the findings revealed the level of adoption of information ethics standards in the management of OAEIR by LIS professionals was still in its infancy. LIS professionals faced many ethical dilemmas resulting from the management (creation, organisation and dissemination) of electronic information resources, calling for the adoption of contextualised ethical standards in some areas of the LIS professionals' work.

The first research question sought to determine the adoption of information ethics in OAEIR management by LIS professionals in Zimbabwean university libraries. The adoption of LIS ethical standards was reviewed from both the awareness and application sides. Slightly more than half of the LIS professionals in university libraries were aware of the LIS code of ethics, while just another half were in the dark as far as the LIS code of ethics was concerned. However, even among those aware of the LIS code of ethics, many of the respondents did not possess knowledge of any specific ones, raising questions about whether they were genuinely knowledgeable. There was generally a lack of information on ethics available to LIS professionals, thereby affecting the provision of information versus implementing laid-down ethical policies in libraries. Again, the responses highlighted that mostly junior LIS professionals did not have the codes available for use, as they were not easily accessible, hence not used for day-to-day decision-making. Institutional affiliation to university libraries' LIS code of ethics stood at just above a quarter based on the valid percentage category, with most of these not stating specific codes to which their institutions were affiliated. However, as highlighted by the results, most respondents had directly or indirectly indicated that their institutions were not affiliated with any LIS code of ethics or were unaware of such codes. Probably this was attributed to the fact that ZimLA and ZULC were not doing enough to conscientise LIS professionals on the profession's ethics through advocacy, awareness, development and enforcing the adoption of ethical codes in Zimbabwe. The findings noted that the codes of ethics slightly influenced practice in university libraries' management of OAEIR. In such rare cases, they were more concerned with observing clients' privacy issues in creating, organising, and disseminating OAEIR information. LIS professionals were aware of and applied PAPA ethical framework and made related ethical considerations in managing OAEIR.

The accuracy of information was of paramount importance, followed by property and access. However, the study listed clients' privacy as the least important consideration of information ethics.

In the application of ethics in electronic information, libraries had the same ethical obligation regarding the information presented in print and electronic format as the information was the same despite its varying mode of delivery. However, there was a need for more ethical obligation efforts in the electronic information format emanating from electronic content trust issues by users of the information. Ethics requirement within libraries was very high, with most LIS professionals required to observe ethical considerations in their everyday duties, thus suggesting that ethical concerns were receiving attention in libraries. However, there was a lack of clear policy direction regarding LIS professionals' ethical obligations in electronic content, thereby affecting how ethical issues were being implemented in everyday electronic library workflow operations. Slightly more than half of the library policies had ethical conscience, though they were not specific on PAPA issues as a whole. Though most of the policies and SOPs already covered the creation, organisation, and dissemination workflow of OAEIR, they did not spell-out the LIS professionals' ethical obligations. Additionally, awareness of ethical principles presented in these policies was, to a greater extent, restricted to senior LIS professionals at the expense of their junior colleagues.

Opportunities for enhancing information ethics skills were available in libraries, primarily through webinars at an individual level and hands-on training sessions. The training mostly involved imparting skills on privacy and ethical issues in information management and dissemination. Almost half of the LIS professionals was encountering situations that required ethical judgment in their handling of OAEIR, whilst a slight majority was not encountering any ethical situations in their handling of OAEIR. This suggested that most LIS professionals were either unaware of the required ethical practice or were not implementing it in the management of OAEIR. Again, the earlier related findings revealed that even among those aware of the LIS code of ethics, a very high number of the respondents did not possess knowledge of any specific ones, raising questions about whether they were genuinely aware. Most libraries held LIS professionals accountable for not applying ethical considerations in the

management of OAEIR. Library supervisors, such as Client Services Librarians, Content Management Librarians, Information Services Librarians, and Systems Librarians, monitored their staff's ethical implementation as part of quality control duties or through the strategic plan documents policies and standard operating procedures. However, the documents mentioned above were not yet specific on information ethics or PAPA in general, so the policies and procedure manuals were silent on that aspect. The implications of fully adopting information ethics standards in managing OAEIR in libraries would need additional professional librarians to be recruited in university libraries (as opposed to para-professional staff). This change would be in areas such as monitoring and evaluation, quality assurance and ethical compliance, and catering for changes in the workflow procedures. Additionally, though there was a need for re-training, the current staff's skills level change was not going to be wholesome, as they were recruited in the digital era and, thus, could handle most contemporary ethical concerns in libraries. This mindset change and retooling would have a bearing on library job titles. Creating new ones and duties would be befitting to address the ethical standards issues in this information age.

LIS professionals encountered ethical situations in their everyday work, particularly regarding privacy, access, property, and accuracy ethical situations. However, the encounters varied with a particular OAEIR management process LIS professionals executed. Most LIS professionals encountered information dissemination ethical problems in the ethical privacy framework. Half of the libraries had mechanisms to protect user privacy in disseminating information. The other half of the libraries either had no mechanisms to protect user privacy in disseminating information or were unsure if the mechanisms were available. Under the ethical accuracy framework, most LIS professionals faced challenges in all three OAEIR management processes: creation, organisation, and dissemination. However, the evaluation of content accuracy was irregular and casual in university libraries. Under the intellectual property ethical framework, most LIS professionals encountered ethical challenges during the dissemination of OAEIR, followed by the organisation process. Many LIS professionals faced dissemination challenges during the provision of access to OAEIR. The above findings revealed that LIS professionals faced many PAPA ethical problems while disseminating OAEIR. This was followed by ethical problems in two or all three OAEIR management processes.

Most libraries provided access to electronic information through the library website; thus, access mechanisms to OAEIR were available in most institutions. Additionally, most of the libraries' IRs content was available over the internet, free to their communities and beyond through OA. However, approved users' access to electronic databases depended on individual libraries. Libraries offered information literacy skills training in their institutions, and the examinable format was the most popular method.

Mutual understanding between the libraries and publishers over OAEIR licence agreements was reasonably balanced. However, bundled OAEIR collections were slightly meeting clients' needs instead of unbundled content, where libraries would choose titles of their choice. Publishers bundled content by creating a licencing structure that mixed titles, raising the relevance of content and access arrangements issues. Some ethical concerns by libraries resulted in challenges in reaching publishers or the vendors of OAEIR. Half of the electronic content users was unaware of the licences that governed this content, making it difficult for them to know and adopt ethical issues associated with OAEIR.

The second research question sought to determine information ethics dilemmas experienced by LIS professionals in the management of OAEIR. Most LIS professionals were not encountering ethical dilemmas from choosing between duty expectations and their personal beliefs. Thus, LIS professionals carried out their duties in line with their organisational procedures and expectations. However, in this electronic information revolution, most LIS professionals were facing new ethical dilemmas in the management of OAEIR, in all of the management processes of OAEIR, that is, creation, organisation and dissemination. However, the dissemination of OAEIR posed more significant ethical problems for LIS professionals. Technological factors and the electronic information revolution have created many problematic ethical grey areas for LIS professionals due to a lack of control over the information and its access. In terms of electronic information provision in libraries, inaccurate information was being made available to clients due to predatory content, thereby creating an ethical problem for LIS professionals. Regarding intellectual property, major ethical grey areas surrounding electronic information were ownership of information, plagiarism, and copyright infringement. LIS professionals' incapacity to manage or detect plagiarism for IR content, in

breach of intellectual property rights, was also an ethical grey area. However, the problem was slowly subsiding, with most African higher education institutions embracing antiplagiarism platforms. Privacy issues surrounding electronic information were one of the major new ethical problems being presented to LIS professionals, as it was difficult to police and control clients' privacy.

LIS professionals were having difficulties in all of the PAPA ethical frameworks regarding the management of OAEIR. Collectively, the dissemination of information caused major PAPA ethical dilemmas for LIS professionals in their handling of OAEIR. In terms of clients' confidentiality, dissemination of OAEIR presented major ethical dilemmas for LIS professionals in this information society. This probably had to do with the fact that over half of LIS professionals in university libraries was involved in disseminating the OAEIR role, as per the demographic data of the study. However, the provision of personal or individual authentication details was being used in libraries to protect clients' privacy. Some libraries had non-sharing of personal information provisions within their policy framework, while others were looking at crafting such policies in the near future. On the other hand, a significant number of responses indicated no clear-cut strategy currently in place, with the use of passwords as the only approach. However, the use of passwords was designed more to protect library resources rather than the clients themselves. Regarding the accuracy of the information and ethical issues, the creation and dissemination of OAEIR presented major ethical dilemmas for LIS professionals. On accuracy, non-peer-reviewed information was the major issue, where predatory content would end up in the public domain. Predatory content gave LIS professionals an ethical dilemma in assessing the accuracy of library content. On the IR, measuring the information standard was a major ethical dilemma for LIS professionals, such as dissertations' academic quality. Thus, LIS professionals risked uploading inaccurate information to the IR. However, most institutions had indexing guidelines available, making metadata accuracy possible. On the contrary, the accuracy of holdings for online databases was at the publishers' mercy, as it was difficult to check all the content. Nevertheless, some institutions made authorities and lists of content to track changes in holdings and made regular quality checks. Again, pre-cleaning metadata to suit the in-house style was being implemented in some institutions, together with bi-annual updating or uploading of metadata. Additionally, ICTs

have further complicated the management of copyright issues in libraries, resulting in LIS professionals facing ethical dilemmas in their day-to-day duties, as electronic information resources collections were now constituting over 80% of most academic libraries' total collections. In terms of electronic information and intellectual property ethical issues, the organisation and dissemination of OAEIR presented significant ethical dilemmas for LIS professionals. On intellectual property, copyright ethical dilemmas were highlighted, where content use and misuse issues, such as plagiarising, were the unique ethical dilemmas. However, LIS professionals employed different measures to protect intellectual property during OAEIR provision in libraries, guided by their IP policy on handling IP-related issues. Some institutions also spread information on IP issues through Information Literacy Skills training sessions to conscientise their users on intellectual property issues. Another way institutions handled IP issues on their IR was by only uploading abstracts on copyrighted content. Regarding electronic information and access ethical issues, LIS professionals were concerned with dissemination issues. The ethical dilemmas were on unsuitable content that inappropriate groups could access on the access framework. Other access dilemmas were the limitation on concurrent users and the restriction on content available.

The third research question sought to determine contextual information ethics standards that LIS professionals could implement in the management of OAEIR. This was examined from the cultural and ethical dimension perspectives. LIS professionals used organisational values and duty-based principles as the basis upon which to base their ethical decision-making. In some instances, they were aided by experiences where no ethical policy framework existed. Thus, LIS professionals' duty-based application of ethical standards in the day-to-day management of OAEIR was influenced by the duty requirement to implement laid-out procedures. However, the duty-based application of ethical standards based on organisational values was closely followed by personal beliefs in making ethical decisions. This was due to LIS professionals being allowed to be flexible to use past experience in applying ethics and implementing laid-out procedures. LIS professionals' culture played a central role in adopting ethical principles in the management of OAEIR. Additionally, culture greatly impacted LIS professionals' application of ethical decisions in the management of OAEIR. In adopting ethical principles, culture greatly impacted the making of privacy-related ethical decisions. On

accuracy and intellectual property ethical framework, culture also had a high impact on making ethical decisions. Lastly, on the access-related ethical framework, culture had a very high impact on LIS professionals' decision-making process on ethical decisions. When it comes to cultural considerations in the management of OAEIR, LIS professionals were most worried about applying PAPA ethical standards during the dissemination process of electronic information resources. During the dissemination of OAEIR, culture had a high influence on privacy-related ethical issues first, followed by access, property, and accuracy. On two or all three OAEIR management processes above, culture had more influence on accuracy, followed by access, property, and then privacy. Duty requirements were the primary determiner when implementing all the PAPA ethical standards; therefore, LIS professionals' local culture did not impact the processes. Additionally, culture did not influence privacy, access and accuracy as they were universal and embedded in ethics. However, on property-related ethical issues, culture influenced its adoption and implementation by LIS professionals. This was because the intellectual property was culturally embedded, and care and respect were necessary when using other people's property. Available global codes of ethics standards for LIS professionals, such as AfLIA, ALA, and IFLA codes, were applicable to LIS professionals in Zimbabwe. Nevertheless, most LIS professionals supported the need to develop a localised code of ethics framework customised to the local environment but borrowed from other codes at the regional and international levels. Additionally, this localised code would be contextualised from the global ones, such as IFLA and AfLIA codes, so that issues of *ubuntu*, socio-economic, and political circumstances are infused, thus better serving the local LIS professionals.

7.3 Conclusions

These conclusions are drawn from the key findings of each research question. The first research question investigated the adoption of information ethics in OAEIR management by LIS professionals in Zimbabwean university libraries. The conclusion drawn from the findings is that generally, the subject of information ethics is still new to LIS professionals, as many of them are not aware of information ethics, let alone practised it in their professional duties, calling for the need for publicity. This conclusion was supported by literature, which noted that not much was known about information ethics in Africa and that the area was still an open task that was failing to provide concrete guidance for LIS professionals in their day-to-day duties.

This scenario was affecting the provision of information as far as implementing laid-down ethical policies in libraries, causing many dilemmas, as outlined in the second research question. University libraries' affiliation to the LIS code of ethics was viewed in terms of these institutions being members of either AfLIA or IFLA, but with no clear guideline on how they would draw from these codes, as specified by the codes themselves. To exacerbate the matter, local professional associations such as ZimLA and ZULC were not doing enough to conscientise LIS professionals on the profession's ethics through advocacy, awareness, development and enforcing the adoption of ethical codes in Zimbabwe. Resultantly, university libraries lacked clear policy direction regarding LIS professionals' ethical obligations in electronic content, affecting how ethical issues were being implemented in everyday electronic library workflow operations. Where some library policies had a semblance of ethical consciousness, they were not specific on PAPA issues in an elaborate format. Again, awareness of ethical principles was more evident in senior LIS professionals, at the expense of their junior colleagues. Nevertheless, the importance LIS professionals attached to the privacy, accuracy, property, and access ethical issues in university libraries was high. This presented 'a catch-22 situation' in university libraries regarding implementing ethical considerations in various library information provision processes.

The second research question investigated the information ethics dilemmas experienced by LIS professionals in the management of OAEIR. The conclusion drawn from the findings is that contemporary library trends in information generation, management and information-seeking behaviour of library clients had created many ethical dilemmas for the LIS professionals in this information society. LIS professionals' current duties were becoming more complex than ever due to the emergence of and life cycle of OAEIR information. They had to deal with many contemporary information ethics decisions and ethical dilemmas. Though problematic ethical situations emanating from LIS professionals' conflicts between their values and the organisation had previously been a challenge, as a safety net, LIS professionals were now carrying out their duties in line with their organisational laid-down procedures and expectations. Thus, LIS professionals were distinguishing between their convictions and professional obligations by not allowing these personal beliefs to interfere with the fair provision of access to their information resources. The electronic information revolution has

created many ethical grey areas for LIS professionals due to a lack of control over the information and its access. As OAEIR resources were not being held by libraries but on remote serves owned by publishers, LIS professionals faced ethical challenges. These emanated from predatory content, the credibility of legitimate scientific publications, inaccurate information and electronic library holdings, which were being made available to clients. Electronic information and intellectual property issues presented ethical grey areas for LIS professionals as they balanced library users' access to information and authors' copyrights. To this end, intellectual property rights issues were one of the biggest ethical dilemmas confronting LIS professionals in the 21st century due to their elusiveness, complexity, and rigid nature. Major intellectual property ethical grey areas faced were ownership of information, plagiarism, and copyright infringement. The current information access and retrieval environment, which enabled library users to access electronic information from virtually anywhere, anytime, had placed library clients' privacy at risk. This situation had presented LIS professionals with one of the major new ethical problems to date, as the current digital content rights management had the potential to undermine personal privacy seriously and was difficult to police and control clients' privacy. The conclusion drawn from the above findings is that LIS professionals were facing PAPA ethical grey areas in all of the management processes of OAEIR, that is, creation, organisation and dissemination.

Dissemination of OAEIR posed more significant ethical problems for LIS professionals due to the library clients' information-seeking behaviour, attitude and compliance, which fluctuated over the years. Resultantly, the dissemination of OAEIR had presented LIS professionals with the most difficult challenge in the concept of the OA movement. This had created ethical dilemmas for LIS professionals trying to balance relationships with publishers and library clients, collection development and associated ethical standards. Inappropriate content access, restriction on content available on bundled access arrangement, and limitation on concurrent users presented LIS professionals with electronic information dissemination dilemmas. Though libraries were employing various measures during the dissemination of information to protect their clients' privacy in the cyber world, such as password and authentication mechanisms, LIS professionals still faced ethical dilemmas. These emanated from user privacy issues due to the OA model of most libraries nowadays. Again, the use of passwords was

designed more to protect library resources rather than the clients themselves. Regarding the accuracy of the information and ethical issues, the creation and dissemination of OAEIR presented major ethical dilemmas for LIS professionals, chiefly emanating from non-peer-reviewed information and predatory content. Information accuracy issues on the IR were somewhat controlled as most institutions had indexing guidelines available, making metadata accuracy possible. On the contrary, the accuracy of holdings for online databases was at the publishers' mercy as it was difficult to check all the content. In terms of electronic information and intellectual property ethical issues, the organisation and dissemination of OAEIR presented significant ethical dilemmas for LIS professionals. Ethical dilemmas presented included copyright-related issues such as content misuse and plagiarism. Though most libraries were employing different measures to protect intellectual property in OAEIR provisions, such as the IP policy guidance and IP ethical sessions in Information Literacy Skills training, the swiftness of electronic information access and retrieval was derailing the progress.

The third research question investigated the contextual information ethics standards that LIS professionals could implement in the management of OAEIR. The conclusion drawn from the findings is that LIS professionals' application of ethical standards in the day-to-day management of OAEIR was influenced by duty-based principles at the library level, aided by experiences where no ethical policy framework existed. However, with a gap in clear policy direction and those 'duty-based principles at the library level' regarding LIS professionals' ethical obligations in electronic content, the application of ethics appeared to emanate more from the use of experience, thus would vary according to individual taste. Again, LIS professionals' culture greatly impacted the adoption and application of ethical principles and decisions in the management of OAEIR, ushering in an African cultural dimension in the ethical management of OAEIR in university libraries. Culture greatly impacted privacy, accuracy, and intellectual property ethical decisions during the dissemination process of electronic information resources. However, culture had a very high impact on making access ethical decisions during the dissemination process of electronic information resources. This was due to the values and norms of African *ubuntu* and the descriptive cultural-relativity nature of the PAPA values. Whilst the duty requirements were LIS professionals' primary determiner when implementing all the PAPA ethical standards, the absence of locally contextualised codes

of ethics framework had posed more dilemmas for LIS professionals in implementing ethical standards. To this end, though the available global codes of ethics standards for LIS professionals applied to LIS professionals in Zimbabwe in a broader sense, there was a call for a contextualised localised code of ethics framework.

7.4 Recommendations

The purpose of this study was to determine the level of adoption of information ethics standards in the management of OAEIR by LIS professionals, together with the information ethics dilemmas encountered and contextual information ethics standards applicable to OA electronic information management processes. The study has identified various issues in relation to the phenomenon and has presented recommendations based on each research question and the findings.

The first research question examined the adoption of information ethics standards in LIS professionals' management of OAEIR. A recommendation from this research question and the findings is that ZimLA and ZULC need to conscientise LIS professionals on the profession's ethics through advocacy, awareness, and development in Zimbabwe. Zimbabwean LIS schools need to unpack, fully integrate, and provide more depth in offering information ethics to LIS professionals in their colleges and universities, especially in light of the newer ethical dimensions inflicted by the information society and, subsequently, the development of OAEIR. This can be done as a two-pronged approach, that is, through LIS fresher students and special post-graduate programmes on information ethics and other contemporary library issues emerging now, provided for in-service LIS professionals. On another level, university libraries need to adopt the available codes in real time and enforce their application within their control system. University libraries need to align their policies with ethical issues emanating from the use of ICTs in information access and retrieval libraries as well as the OA movement. Additionally, LIS professionals themselves need to take a proactive role in understanding and applying the ethics issues of their profession, particularly emanating from electronic content, to better the provision of library services in universities. LIS professionals should also embark on information ethics copyright education for themselves and their library clients to better provide information services. Lastly, libraries' information ethics and ethical systems should

be subjected to elaborate research and interpretation, calling for such at local and regional levels.

The second research question revealed information ethics dilemmas associated with LIS professionals' management of OAEIR. A recommendation from this research question and the findings is that Zimbabwean university libraries need to align OAEIR provision with appropriate information ethics standards emanating from clearly laid down policies and SOPs. This retooling will have a bearing on job titles, descriptions and workflow procedures in libraries. Creating new ones or adding new related duties would be appropriate to address ethical standards issues in this information age. Additionally, LIS professionals in the Zimbabwean university libraries must incorporate information ethics standards issues in OAEIR licence negotiation processes with information vendors, publishers, and other supply models.

The third research question identified contextual information ethics standards applicable to OA electronic information management processes. The recommendation from this research question and the findings is that a localised Zimbabwean LIS professionals' code of ethics framework needs to be developed but customised and contextualised to the local environment by borrowing from other codes at the regional and international levels. ZimLA and ZULC need to spearhead the development of such local codes of ethics in Zimbabwe. This will address the different cultural diversity and cultural backgrounds that cause different ethical dimensions, which present difficulties in agreeing on ethical determinations across borders.

7.5 Contributions of the study

The findings and recommendations from the study will significantly influence and contribute toward theory, policy and practice concerning the adoption of appropriate information ethics standards in the management of OAEIR in Zimbabwean university libraries. Additionally, the study's findings and recommendations will significantly influence how to manage ethical dilemmas emanating from the management of OAEIR. This study was informed by the deontology ethics theoretical framework to understand the behavioural intentions of LIS professionals towards the adoption of information ethics standards in Zimbabwean university

libraries. It also sought to contribute a cultural dimension to the theory, thereby enhancing appreciation of the underlying theory. The concept of information ethics was fairly new in literature, and insufficient research had been carried out that focused on ethics and the LIS profession in Africa, thus leaving a gap that needed to be filled. The study will significantly contribute toward offering information ethics as a discipline in LIS studies across the country and beyond, especially as viewed through the eyes of the contemporary library field. Additionally, the awareness, perception, and adoption of information ethics standards by LIS professionals in the creation, organisation and dissemination of OAEIR had not been revealed through empirical studies focusing on the African continent. This created a gap for this study to determine the status quo regarding the subject matter, which will contribute to theory, policy, practice and society. Again, if the findings and recommendations of this study were to be followed and implemented by Zimbabwean university libraries and other local affiliated associations, in practice, the study would have contributed tremendously to practice in the awareness, perception, and adoption of information ethics standards.

7.6 Suggested areas of further research

The current study examined the adoption of information ethics standards in the management of OAEIR by Zimbabwean university libraries. The availability of literature that focuses on the perception and adoption of ethical issues by LIS professionals is still very scarce, calling for more probing into the discipline. The study revealed several research gaps which need further probing. Firstly, the study employed deontological principles in applying ethical standards in libraries. However, LIS professionals' use of experience to aid the duty-based application of ethical standards in the day-to-day management of OAEIR has brought in consequentialism theory and its ethical dimensionality. Therefore, there is a need for a consequentialism-based study on information ethics, or better still, the application of all normative ethics principles. The dimensionality of culture on information ethics also needs further scrutiny, as African culture possesses unique traits that need contextualised assessment.

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LIST OF APPENDICES

Appendix 1: Request for permission



University of KwaZulu-Natal
School of Social Sciences
College of Humanities
Pte Bag X01
Scottsville, 3209
Pietermaritzburg

6th July 2018

The Registrar
Name of University

Dear Sir / Madam

RE: REQUEST FOR PERMISSION TO UNDERTAKE RESEARCH

My name is Haward Hogo, a PhD (Information Studies) student in the School of Social Sciences, College of Humanities at the University of KwaZulu-Natal, Pietermaritzburg Campus, South Africa.

As part of my doctoral studies I am undertaking research on “information ethics standards in the management of open access electronic information resources (OAEIR) by Zimbabwe university libraries”. My supervisor is Professor Ruth Hoskins. Some of the methods that will be used in gathering data for the research include questionnaires for librarians, interviews with library management, and policy/standard operation procedures analysis. The outcomes of this study will be beneficial to librarians in the Zimbabwe University libraries by assisting them to outline appropriate ethical standards associated with creating, organising and disseminating of OAEIR, thereby aligning electronic information provision to their user communities with appropriate information ethics standards. This may ensure that the issues of privacy, accuracy, intellectual property rights, and access of information are fully integrated in the creation, organisation, dissemination, and use of OAEIR in the Zimbabwe university libraries. The findings of the study may also trigger Zimbabwean library and information science (LIS) schools to provide more depth in the offering of information ethics to LIS professionals in their colleges and universities.

The purpose of this letter is to request permission to distribute these questionnaires, conduct interviews, analyse your electronic information resources related policies/standard operation procedures, and to request any other information that could assist this research. I intend to collect data from July to September 2019. The data collected will be treated with confidentiality and anonymity. I shall be very grateful for your assistance and I appreciate your cooperation in advance.

Yours sincerely,

Haward Hogo (217076954)

Email address: howard.hogo@gmail.com or 217076954@stu.ukzn.ac.za

Appendix 2: Letter of introduction



10th March 2020

Dear Respondent,

Invitation to participate in an interview

My name is Howard Hogo, a PhD (Information Studies) student at the University of KwaZulu-Natal, Pietermaritzburg Campus, South Africa. I kindly invite you to participate in the research project entitled **“The examination of information ethics standards in the management of open access electronic information resources (OAEIR) by Zimbabwe university libraries”**. I am conducting this study as part of the requirements of the Doctoral degree programme.

The aim of this study is to establish the level of adoption of information ethics standards in the management of open access electronic information resources by library and information science (LIS) professionals with a view to assist LIS professionals in the Zimbabwe university libraries to outline appropriate ethical standards in the acquisition, organisation and dissemination of electronic information resources. Results of the study will be disseminated through conferences, workshops and publications.

All information provided will be treated with utmost confidentiality, shall be used solely for the purpose of this study, and shall be disclosed only with your permission. Please note that your name will not be included in the report and your confidentiality will be maintained throughout the study. There will be no monetary gain from participating in this research project. The information that you will provide will be used for academic purposes only and not otherwise.

Your participation in answering the questions is completely voluntary. You have the right to withdraw at any time during the study. I appreciate the time and effort it would take to participate in this study. The interview will take 20 to 30 minutes of your time.

Yours sincerely,

Howard Hogo

Institution: University of KwaZulu-Natal

Cell phone number: +263 (0) 772 269 107

Email address: howard.hogo@gmail.com or
217076954@stu.ukzn.ac.za

Supervisor: Prof. Ruth Hoskins

Institution: University of KwaZulu-Natal

Telephone number: + 27 (0) 33 260 5093

Email address: hoskinsr@ukzn.ac.za

HSSREC Research Office: Ms P. Ximba

Institution: University of KwaZulu-Natal

Telephone number: +27 (0) 31 260 3587

Email address: ximbap@ukzn.ac.za

Appendix 3: AU permission to conduct research



(A United Methodist-Related Institution)

INVESTING IN AFRICA'S FUTURE

AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE (AUREC)

P.O. BOX 1320, MUTARE, ZIMBABWE • OFF NYANGA ROAD, OLD MUTARE • TEL: (+263-20) 60075/60026/61611 • E-MAIL: aurec@africau.edu • WEBSITE: www.africau.edu

Ref: AU865/19

10 April, 2019

Howard Hogo
C/O Great Zimbabwe University
Masvingo
ZIMBABWE

**RE: AN EXAMINATION OF INFORMATION ETHICS STANDARDS IN THE
MANAGEMENT OF OPEN ACCESS ELECTRONIC INFORMATION RESOURCES
BY ZIMBABWE UNIVERSITY LIBRARIES**

Thank you for the above titled proposal that you submitted to the Africa University Research Ethics Committee for review. Please be advised that AUREC has reviewed and approved your application to conduct the above research.

The approval is based on the following.

- a) Research proposal
- b) Questionnaires
- c) Informed consent form

• **APPROVAL NUMBER** AUREC865/19

This number should be used on all correspondences, consent forms, and appropriate documents.

• **AUREC MEETING DATE** NA
• **APPROVAL DATE** April 10, 2019
• **EXPIRATION DATE** April 10, 2020
• **TYPE OF MEETING** Expedited

After the expiration date this research may only continue upon renewal. For purposes of renewal, a progress report on a standard AUREC form should be submitted a month before expiration date.

- **SERIOUS ADVERSE EVENTS** All serious problems having to do with subject safety must be reported to AUREC within 3 working days on standard AUREC form.
- **MODIFICATIONS** Prior AUREC approval is required before implementing any changes in the proposal (including changes in the consent documents)
- **TERMINATION OF STUDY** Upon termination of the study a report has to be submitted to AUREC.

Yours Faithfully



AFRICA UNIVERSITY
RESEARCH ETHICS COMMITTEE (AUREC)
10 APR 2019
APPROVED
P.O. BOX 1320, MUTARE, ZIMBABWE

**MARY CHINZOU – A/AUREC RESEARCH ETHICS OFFICER
FOR CHAIRPERSON, AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE**

Appendix 4: BUSE permission to conduct research



BINDURA UNIVERSITY OF SCIENCE EDUCATION

P. Bag 1020
Bindura, Zimbabwe

Tel: +263-0271-7615
7531/2/6, 7622/4
Cell: 0772 154 882/7
registrar@buse.ac.zw
buseregistrar@gmail.com

REGISTRY DEPARTMENT

19 July 2018

Mr Howard Hogo
University of KwaZulu Natal
School of Social Sciences
Pte Bag X01
Scottsville, 3209
Pietermaritzburg
SOUTH AFRICA

Dear Mr Hogoe

**RE: APPLICATION FOR PERMISSION TO CARRY OUT EDUCATIONAL RESEARCH AT
THE BINDURA UNIVERSITY OF SCIENCE EDUCATION**

Bindura University of Science Education has granted you the permission on the following conditions:-

- a) The research shall be limited to your topic "Information Ethics Standards in the Management of Pen Access Electronic Information Resources (OAEIR) by Zimbabwe University Libraries: A Case Study of Bindura University of Science Education".
- b) Whilst carrying out this research, you shall not disturb the core business of the University.
- c) That the research shall be for academic purposes only.
- d) That you shall be guided by the University's official secrecy ethics.
- e) That you shall avail a copy of your research findings to the University.

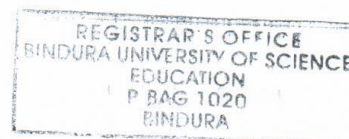
I wish you success in your research work.

Thank you

Yours Sincerely

M.P. Neusu (Mr)
University Registrar

Cc: Librarian, BUSE



Appendix 5: CUT permission to conduct research



CHINHOYI UNIVERSITY OF TECHNOLOGY

✉: P. Bag 7724, Chinhoyi ☎: 263-67-22203-5 📠: 263-67- 27214 E-mail : vicechancellor@cut.ac.zw

Vice-Chancellor's Office: Prof. D. J. Simbi - PhD, BSc, MIM, CEng, FZ'weIE, FICorr, FZAS, Hons FZ'weIE

HUMAN RESOURCES DEPARTMENT

18 September 2018

University of KwaZulu-Natal
School of Social Sciences
College of Humanities
Pte Bag X01
Scottsville, 3209
Pietermaritzburg

Dear Mr. Howard Hogo


RE: REQUEST TO CARRY OUT A RESEARCH PROJECT AT CHINHOYI UNIVERSITY OF TECHNOLOGY

We acknowledge receipt of your application letter dated on 2 July 2018 seeking permission to undertake a research study at Chinhoyi University of Technology that reads: "information ethics standards in the management of open access electronic information resource (OAEIR) by Zimbabwe universities libraries".

You are kindly advised that permission to undertake your study is hereby granted. However, you are reminded to observe the University Official Secrecy Oath.

The University would also expect results of your research upon completion.

Thank you.


J.A. Kaseke (Mr)
DEPUTY REGISTRAR, HUMAN RESOURCES

Appendix 6: HIT permission to conduct research



Harare Institute of Technology
P.O. Box Be 277
Ganges Road, Belvedere
Harare, Zimbabwe
Tel : 263-4-741422/37
Fax : 263-4-741406
Email : hr@hit.ac.zw

Registrar's Office

04 July 2018

Mr Haward Hogo
C/o University of KwaZulu-Natal
Pietermaritzburg
SOUTH AFRICA

Dear Mr Hogo

RE: PERMISSION TO CARRY OUT RESEARCH

Your letter dated 02 July 2018 in connection with the above matter refers.

Please be advised that you have been granted the permission to carry out your research at the Institute. Kindly submit a copy of your research document to this office upon completing your research.

Thank you.

Yours faithfully

M.E Samupindi (Mrs)
REGISTRAR

cc: File copy

Appendix 7: LSU permission to conduct research



Lupane State University
Building Communities through Knowledge

Lupane State University Campus
1st Floor Faculty of Agricultural Sciences Building
Off Bulawayo-Victoria Falls Road
LUPANE
Postal Address: P O BOX 170
LUPANE
Tel: +263-0389-261, 269, 488, 571
Email: registrar@lsu.ac.zw, jmakunde@lsu.ac.zw

REGISTRAR'S OFFICE

22 August 2018

University of KwaZulu-Natal
School of Social Sciences College of Humanities
Pte Bag X01
Scottsville, 3209
PIWTERMARITSBURG

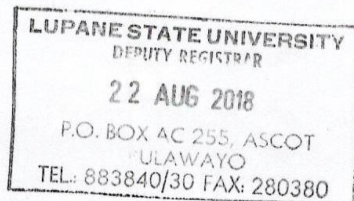
Dear Haward Hogo

REQUEST FOR PERMISSION TO CARRYOUT RESEARCH AT LUPANE STATE UNIVERSITY

The above subject refers.

This letter serves to grant you permission to carry out a study at Lupane State University based on "information ethics standard in the management of open access electronic information resources (OAEIR) by Zimbabwe university libraries)".

Thank you.



Dr C S Makoni
ACTING REGISTRAR
cc Running File

Appendix 8: MSU permission to conduct research



UNIVERSITY OF
KWAZULU-NATAL
INYUVESI
YAKWAZULU-NATALI

University of KwaZulu-Natal
School of Social Sciences
College of Humanities
Pte Bag X01
Scottsville, 3209
Pietermaritzburg

2nd July 2018

The Registrar
Midlands State University
Private Bag 9055
Gweru



Dear Sir / Madam

RE: REQUEST FOR PERMISSION TO UNDERTAKE RESEARCH

My name is Haward Hogo, a PhD (Information Studies) student in the School of Social Sciences, College of Humanities at the University of KwaZulu-Natal, Pietermaritzburg Campus, South Africa.

As part of my doctoral studies I am undertaking research on "information ethics standards in the management of open access electronic information resources (OAEIR) by Zimbabwe university libraries". My supervisor is Professor Ruth Hoskins (+ 27 (0) 33 260 5093, hoskinsr@ukzn.ac.za). Some of the methods that will be used in gathering data for the research include questionnaires for librarians, interviews with library management, and policy/standard operation procedures analysis. The outcomes of this study will be beneficial to librarians in the Zimbabwe University libraries by assisting them in the adoption of appropriate ethical standards associated with creating, organising and disseminating of OAEIR, thereby aligning electronic information provision to their user communities with appropriate information ethics standards. The findings of the study may also trigger Zimbabwean library and information science schools to provide more depth in the offering of information ethics to LIS professionals in their colleges and universities.

The purpose of this letter is to request permission to distribute these questionnaires, conduct interviews, analyse your electronic information resource related policies/standard operation procedures, and to request any other information that could assist this research. I intend to collect data from February to April 2019. The data collected will be treated with confidentiality and anonymity. I shall be very grateful for your assistance and I appreciate your cooperation in advance.

Yours sincerely,

Haward Hogo (217076954)
Email address: howard.hogo@gmail.com or 217076954@stu.ukzn.ac.za
Phone: +263 772 249 107 / 39 266688

Appendix 9: NUST permission to conduct research



National University of Science and Technology

P. O. Box AC 939, Bulawayo, Zimbabwe
Cnr. Gwanda Road/Cecil Avenue

Telephone: 263-9-282842/288413/39/58
Fax: 263-9-289057

From Registrar F. Mhlanga Dip Edu, BEd, MSc(UZ); MBA (NUST)

FM/sm

23 August 2018

Mr Haward Hogo
School of Social Sciences
College of Humanities
University of KwaZulu-Natal
Pte. Bag X01
Scottsville, 3209
Pietermaritzburg
SOUTH AFRICA

Dear Mr Hogo

RE: APPLICATION FOR PERMISSION TO UNDERTAKE RESEARCH

Reference is made to your letter dated 02 July 2018 on the above request.

We would like to inform you that you have been granted permission to undertake a research on ***"information ethics standards in the management of open access electronic information resources (OAEIR) by Zimbabwe university libraries"*** at our University.

We would like to emphasize that all the information gathered should be for research purposes only and that confidentiality has to be exercised.

The University wishes you all the best in your research.

Yours sincerely

[Redacted]
F Mhlanga
Registrar

cc NUST Librarian



Appendix 10: UZ rejection letter

Mount Pleasant
Harare, Zimbabwe
General Line: +263-4-303211 Ext 11105
Direct Line: +263-4-303284
Fax: +263-4- 308941
E-mail: registrar@admin.uz.ac.zw
website: www.uz.ac.zw

From the Registrar
DR N A MUTONGORENI



UNIVERSITY OF ZIMBABWE

11 July 2018

Mr Haward Hogo
University of Kwazulu-Natal
School of Social Sciences
College of Humanities
Pte Bag X01
Scottsville, 3209
Pietermaritzburg
SOUTH AFRICA
Howard.hogo@gmail.com or 217076954@stu.ukzn.ac.za

Dear Mr Haward Hogo

RE: REQUEST FOR PERMISSION TO UNDERTAKE RESEARCH

Your letter to the Registrar dated 02 July, 2018 on the above matter refers.

I write to advise that after careful consideration, your request was not approved.

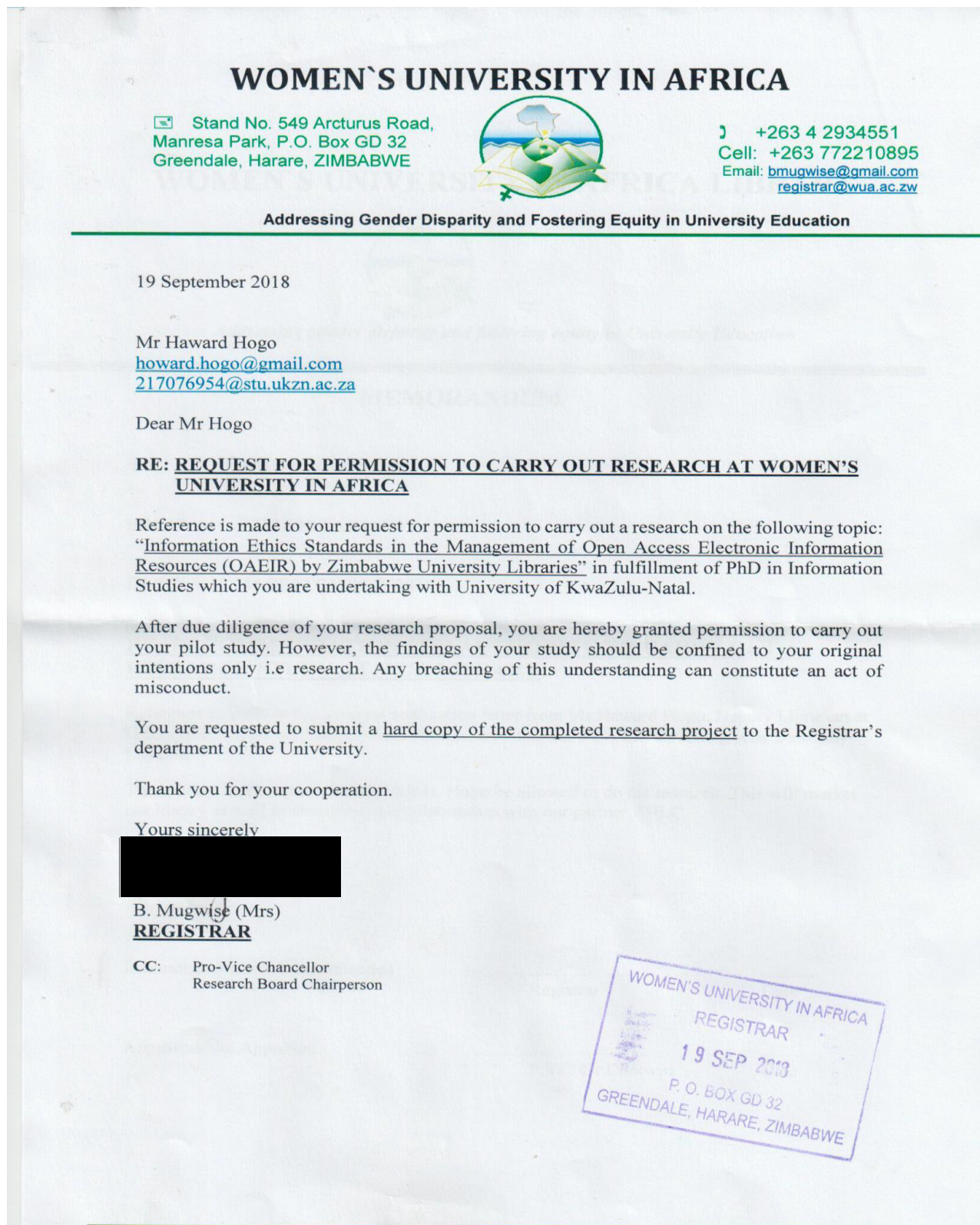
Please be guided accordingly.

DR N A MUTONGORENI

MGN/vz

Cc: Vice-Chancellor
Registrar's Master file
Research file
Running File

Appendix 11: WUA permission to conduct research



Appendix 12: ZOU permission to conduct research



ZIMBABWE OPEN UNIVERSITY

"Empowerment Through Open Learning"



REF: NC14/1/1

17 July 2018

Haward Hogo
University of KwaZulu Natal
School of Social Sciences
College OF Humanities
Pte Bag X01
Scottsville, 33209
Pietermaritzburg

Dear Sir

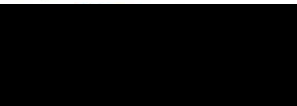
REF: PERMISSION FOR HAWARD HOGO TO CONDUCT RESEARCH STUDY AT
THE ZIMBABWE OPEN UNIVERSITY.

Reference:

"A" Your letter dated 2 July 2018.

We acknowledge with appreciation receipt of reference "A" above.

Permission is hereby granted for you to carry out your research at the Zimbabwe Open University. Upon completion kindly submit a copy of your research to the Registrar's Office.



Professor D. Ndudzo (PhD)
REGISTRAR

DISTRIBUTION

Internal Information

*Corner House, 3rd Floor, Corner Leopold Takavira & Jason Moyo Avenue
P.O.Box MP 1119 Mount Pleasant Harare
TEL: 263-4-793009 FAX: 263-4-703679*

Appendix 13: Informed consent for questionnaire survey

Please complete this form

Title of study: The examination of information ethics standards in the management of open access electronic information resources (OAEIR) by Zimbabwe university libraries.

I....., hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participate in the research project as outlined in the document about the study.

I acknowledge that I have been informed of the purpose of this survey. I am aware that participation in the study is voluntary and I understand that I am at liberty to withdraw from the project at any time, should I so desire.

Respondent

Signature:

Date:

Email:

Researcher

Signature:

Date:

Appendix 14: Informed consent for interviews

Please complete this form

Title of study: The examination of information ethics standards in the management of open access electronic information resources (OAEIR) by Zimbabwe university libraries.

I....., hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participate in the research project as outlined in the document about the study.

I....., *I consent / do not consent* to have this interview recorded.

I acknowledge that I have been informed of the purpose of this interview. I am aware that participation in the study is voluntary and I understand that I am at liberty to withdraw from the project at any time, should I so desire.

Respondent

Signature:

Date:

Email:

Researcher

Signature:

Date:

Appendix 15: Questionnaire for LIS professionals

Title of study: **The examination of information ethics standards in the management of open access electronic information resources (OAEIR) by Zimbabwe university libraries**

This study seeks to establish the level of adoption of information ethics standards in the management of open access electronic information resources (OAEIR) by library and information science (LIS) professionals. Please complete this questionnaire to assist with the objective of the study.

Instructions:

- a) *Indicate the most appropriate answers by placing a tick [✓] in the boxes provided.*
- b) *Unless stated each question should have only one tick [✓] of your chosen answer.*
- c) *Where the space is provided, write your answer in it.*
- d) *Please use a pen to answer this questionnaire.*

A. Section A (Demographic data)

1. Age : 20-35 ☐ 36-50 ☐ 51-60+ ☐

2. Gender: Male ☐ Female ☐

3. Academic qualifications: Diploma ☐ Degree ☐ Masters ☐ PhD ☐

4. What is your post qualification experience? 0-5yrs ☐ 6-10yrs ☐ 11+yrs ☐

5. What is your job level? *i.e.* *Assistant* *Librarian*

6. What is your role in the Library?

7. How long have you been at this institution? 0-5yrs ☐ 6-10yrs ☐ 10+yrs ☐

B. Section B (Awareness / Adoption of Information Ethics)

8. What is your role within the management processes of OAEIR? *Please tick all applicable.*

Creation i.e. acquisition, sourcing ☐ Organisation i.e. indexing ☐
Dissemination i.e. marketing, training, access ☐ Not sure ☐

9. Are you aware of any code of ethics for library and information science (LIS) professionals?

Yes ☐ No ☐ Not sure ☐

If yes to 9 above, please list them:

10. Are you affiliated as a library to any code of ethics standards?

Yes ☐ No ☐ Not sure ☐

If yes to 10 above, please list them:

11. Does your library require you to observe ethical considerations in your everyday duties?

Yes ☐ No ☐ Not sure ☐

12. How frequently do you encounter situations that require ethical judgement in your handling of OAEIR?

Daily ☐ Weekly ☐ Rarely ☐ Never ☐ Not sure ☐

13. Does your library hold you accountable for not implementing ethical considerations in your everyday duties?

Yes ☐ No ☐

If yes to 13 above, in what ways?

14. Privacy, accuracy, property and access are ethical considerations you may face in your everyday work with open access electronic information resources. Do you encounter these ethical situations?

Yes ☐ No ☐ Not sure ☐

If yes to 14 above, in which electronic information resources management processes do you encounter these ethical situations? *Please tick all applicable*

Privacy:	Creation	<input type="checkbox"/>	Organisation	<input type="checkbox"/>	Dissemination	<input type="checkbox"/>
Accuracy:	Creation	<input type="checkbox"/>	Organisation	<input type="checkbox"/>	Dissemination	<input type="checkbox"/>
Property:	Creation	<input type="checkbox"/>	Organisation	<input type="checkbox"/>	Dissemination	<input type="checkbox"/>
Access:	Creation	<input type="checkbox"/>	Organisation	<input type="checkbox"/>	Dissemination	<input type="checkbox"/>

15. What importance do you attach to the following ethical standards in the management of OAEIR? *Rate your opinion on a scale of 1 to 5, where 1 = Unimportant, 2 = Of little importance, 3 = moderate, 4 = important, 5 = very important*

Ethical consideration	1	2	3	4	5
Privacy of clients					
Accuracy of information					
Property (intellectual) of information					
Access to information by clients					

16. Does the library have the same ethical obligation regarding information presented in print and electronic format? Yes ☐ No ☐ Not sure ☐

17. How is access to electronic information provided? *Please tick all applicable*

OPAC ☐ Library Website ☐

18. Is your Institutional Repository (IR) available for open access over the internet?

Yes ☐ No ☐

19. Does IR content depositors sign 'release consent' of their materials upon submission?

Yes ☐ No ☐ Not sure ☐

20. Does the library check for accuracy in the content to be uploaded to the IR?

Yes ☐ No ☐ Not sure ☐

21. Do your library policies have information ethics considerations that cover OAEIR?

Yes ☐ No ☐ Not sure ☐

22. Does your institution offer Information Literacy Skills (ILS) training to library clients?

Yes ☐ No ☐

If yes to 22 above, in what format?

Examinable (*i.e. part of course/ module*) ☐

Voluntary (*i.e. part of User Education*) ☐

23. Does the Library evaluate accuracy and completeness of the content in electronic information databases from publishers before the information reaches library clients?

Yes ☐ No ☐ Not sure ☐

If yes to 23 above, how frequent is this exercise executed?

Daily ☐ Weekly ☐ Monthly ☐

24. Does the Library have mechanisms to protect user privacy in the dissemination of OAIIR?

Yes ☐ No ☐ Not sure ☐

25. Does your Library provide your Approved Readers with access to electronic information resource?

Yes ☐ No ☐

26. Do you have mutual understanding with publishers over the agreements that control the delivery and access to OAEIR content? Yes ☐ No ☐ Not sure ☐

27. Are OAEIR licenses (dictating information access and use) accessible to both you and your clients? Yes ☐ No ☐ Not sure ☐

28. Due to publishers bundling of content by licencing structure, does your OAEIR collection meet your clients' needs both in the relevance of content and access arrangements? Yes ☐ No ☐ Not sure ☐

C. Section C (Information ethics dilemmas associated with management of OAEIR)

29. In the management of electronic information resources do you face any dilemma in choosing between your duty expectations / laid down rules, and personal beliefs? Yes ☐ No ☐

30. Does the library possess the same ethical obligation regarding information presented in print and OAEIR? Yes ☐ No ☐ Not sure ☐

31. Is the electronic information revolution presenting new ethical problems for LIS professionals (in terms of creation, organisation and dissemination)? Yes ☐ No ☐ Not sure ☐

If yes to 31 above, *please tick all applicable*.

Creation ☐ Organisation ☐ Dissemination ☐

32. Which of the following best describe your major ethical dilemmas in the handling of OAEIR? *Please tick all applicable?*

Privacy of clients ☐ Accuracy of information ☐

Intellectual Property ☐

Access to information ☐

On the ticked options in 32 above, in which OAEIR management processes do you face these ethical dilemmas? *Please tick all applicable?*

Privacy:	Creation	<input type="checkbox"/>	Organisation	<input type="checkbox"/>	Dissemination	<input type="checkbox"/>
Accuracy:	Creation	<input type="checkbox"/>	Organisation	<input type="checkbox"/>	Dissemination	<input type="checkbox"/>
Property:	Creation	<input type="checkbox"/>	Organisation	<input type="checkbox"/>	Dissemination	<input type="checkbox"/>
Access:	Creation	<input type="checkbox"/>	Organisation	<input type="checkbox"/>	Dissemination	<input type="checkbox"/>

D. Section D (Contextual information ethics standards associated with the management of OAEIR)

33. What does your application of ethics in your day to day OAEIR duties based on?

Personal Beliefs ☐ Organisation Values ☐ Both ☐

34. Are the available international codes of ethics standards for LIS professionals applicable to your local ethical situations in the library?

Yes ☐ No ☐ Not sure ☐

35. Do you think cultural beliefs have an impact on how ethical standards are adopted by LIS professionals?

Yes ☐ No ☐

If yes to 35 above, what level of impact does culture influence your application of ethical standards in the following ethical considerations? *Rate your opinion on a scale of 1 to 5 where 1 = No impact, 2 = Of little impact, 3 = Average impact, 4 = High impact, 5 = Very high impact*

Ethical consideration	1	2	3	4	5
-----------------------	---	---	---	---	---

Privacy of clients					
Accuracy of information					
Property (intellectual) of information					
Access to information by clients					

On the ticked options above, in what OAEIR management processes does your culture practices influence your application of ethics standards? *Tick all applicable*

Privacy:	<i>Creation</i>	<input type="checkbox"/>	<i>Organisation</i>	<input type="checkbox"/>	<i>Dissemination</i>	<input type="checkbox"/>
Accuracy:	<i>Creation</i>	<input type="checkbox"/>	<i>Organisation</i>	<input type="checkbox"/>	<i>Dissemination</i>	<input type="checkbox"/>
Property:	<i>Creation</i>	<input type="checkbox"/>	<i>Organisation</i>	<input type="checkbox"/>	<i>Dissemination</i>	<input type="checkbox"/>
Access:	<i>Creation</i>	<input type="checkbox"/>	<i>Organisation</i>	<input type="checkbox"/>	<i>Dissemination</i>	<input type="checkbox"/>

36. Does Zimbabwe LIS professionals need to develop their own localised code of ethics framework?

Yes ☐

No ☐

Thank you for your participation

Appendix 16: Interview guide for library managerial level staff

Title of study: **The examination of information ethics standards in the management of open access electronic information resources (OAEIR) by Zimbabwe university libraries**

This study seeks to establish the level of adoption of information ethics standards in the management of open access electronic information resources (OAEIR) by library and information science (LIS) professionals.

Instructions: Please respond to the following questions to the best of your ability and as honestly as possible.

Institution:

What is your job title?

A. Adoption of Information ethics

1. Which categories of staff are involved in the management (creation, organisation and dissemination) _____ of _____ OAEIR?

2. Are you affiliated as a library to any code of ethics standards?

Yes ☐ No ☐ Not sure ☐

If yes, which codes?

3. If yes to 2 above, are these codes of ethics informing or influencing your practice in the management of OAEIR and in what ways?

If no, why not?

4. Does your staff receive any on-the-job training on information ethics? If yes please explain the nature of training.

5. Are you aware of the PAPA (Privacy, Access, Property, and Accuracy) ethical framework?

Yes ☐ No ☐ Not sure ☐

6. Does your library held library staff responsible for not implementing ethical considerations in their everyday duties?

Yes ☐ No ☐

7. How is the library enforcing information ethics standards implementation in the management of OAEIR by staff?

8. What are you doing as a manager to help ensure that the values and the principles of your code of ethics are known and upheld?

9. Do you think LIS professionals require new skills to properly execute information ethical concerns associated with OAEIR?

Yes ☐ No ☐

10. What implications does the adoption of information ethics standards (in the creation, organisation and dissemination of OAEIR) have on staffing or workflow procedures?

11. Does your institution have information ethics considerations in any of the library policies?

Yes ☐ No ☐ Not sure ☐

12. If yes to 11 above, what policies / aspects / in what ways:

13. If no to 11 above, what ethical guidelines do the library follow when building and allowing access to library resources?

14. Are the information ethics codes of conduct accessible to all library staff and in what ways?

15. What is the role of the Zimbabwe Library Association (ZimLA) and Zimbabwe University Libraries Consortium (ZULC) in the awareness and adoption of code of ethics in university libraries?

And is it doing it?

B. Information ethics dilemmas associated with OAEIR management processes

16. As information is being constantly changed by technological factors, what are ethical grey area which has been created for LIS professionals?

17. What PAPA ethical dilemmas are being experienced by staff (if any) in the creation of OAEIR?

OD _____

IR _____

18. What PAPA ethical dilemmas are being experienced by staff (if any) in the organisation of OAEIR?

OD _____

IR _____

19. What PAPA ethical dilemmas are being experienced by staff (if any) in the dissemination of OAEIR

OD _____

IR _____

20. Does the Library have a platform with electronic information producers (vendors) for raising any ethical issues? Yes ☐ No ☐ Not Sure ☐

21. If yes to 20 above, in what ways and how?

22. How has privacy of library clients affected by the coming in of electronic information resources?

And How is the library protecting the privacy of library clients in terms of information accessed?

23. How is the library handling intellectual property issues in the provision of open access electronic information resources?

24. How is the library handling accuracy of holding data of open access electronic information resources due to change of titles or any other issues?

25. **Does the library possess the same ethical obligation regarding information presented in print and OAEIR?**

Why?_____

26. What are new ethical problems being presented to LIS professionals by the electronic information revolution (in terms of creation, organisation and dissemination)?

C. Contextual information ethics standards associated with the management processes of open access electronic information

27. In making ethical decisions in electronic resources management cycle (creation, organisation and dissemination) are you and your staff:

Duty bound to implement laid out procedures?	
Allowed to make personal decisions based on greatest benefit for all irrespective of laid out procedures?	
Allowed to use past experiences irrespective of the two above?	

28. In what ways does culture influence the implementation of the following ethical standards in the cyber world?

Privacy_____

Access_____

Property_____

Access _____

29. Do Zimbabwe LIS professionals need to develop their own localised code of ethics framework and why?

Thank you for your participation

Appendix 17: Document analysis checklist

Title of study: **The examination of information ethics standards in the management of open access electronic information resources (OAEIR) by Zimbabwe university libraries**

Institution:

1. What policies are in place to support collection development of OAEIR?

2. If the policies are in place when were they adopted, and when are they due for update?

3. Do the policies speak to the management workflow of OAEIR (creation, organisation, dissemination)?

Yes ☐ No ☐

3.1. In what ways does this occur?

4. Are LIS professionals' ethical obligations clearly spelled-out in the policies / standard operation procedures (SOPs)

Yes ☐ No ☐

5. Do institutional policies / SOPs spell out ethical obligations to do with privacy to personal records?

Yes ☐ No ☐

6. Do your institutional policies / standard operation procedures (SOPs) spell out ethical obligations to do with accuracy of information?

Yes ☐ No ☐

7. Do your institutional policies / SOPs spell out ethical obligations to do with intellectual property?

Yes ☐ No ☐

8. Do your institutional policies / standard operation procedures (SOPs) spell out ethical obligations to do with access to information? Yes ☐ No ☐

9. How do these PAPA concepts (*in 4-7 above*) inform OAEIR information ethics considerations and in what ways?

10. Are the policies easily accessible by the LIS professionals, and in what ways?

Appendix 18: Ethical clearance



**UNIVERSITY OF
KWAZULU-NATAL**
**INYUVESI
YAKWAZULU-NATALI**

16 January 2019

Mr Haward Hogo (217076954)
School of Social Sciences
Pietermaritzburg Campus

Dear Mr Hogo,

Protocol reference number: HSS/1926/018D
Project title: An examination of information ethics standards in the management of open access electronic information resources (OAEIR) by Zimbabwe university libraries

Approval Notification – Expedited Application

In response to your application received on 18 October 2018, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. **PLEASE NOTE:** Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....
Dr Rosemary Sibanda (Chair)

/ms

Cc Supervisor: Professor Ruth Hoskins
cc Academic Leader Research: Professor Maheshvari Naidu
cc School Administrator: Ms Nancy Mudau

Humanities & Social Sciences Research Ethics Committee
Dr Rosemary Sibanda (Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Telephone: +27 (0) 31 260 3587/8350/4557 Facsimile: +27 (0) 31 260 4609 Email: ximbao@ukzn.ac.za / snymam@ukzn.ac.za / mohuno@ukzn.ac.za
Website: www.ukzn.ac.za

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Appendix 19: Editor's report

Great Zimbabwe University
Department of Curriculum Studies
P O Box 1235
Masvingo
Zimbabwe

1 March 2024

Email: mareva@gzu.ac.zw marevarugare@gmail.com

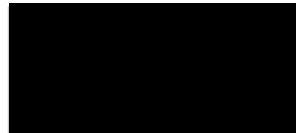
Cell: +263 772 978 970

TO WHOM IT MAY CONCERN

Re: Proof of Editing HOWARD HOGO'S (217075964) DOCTORAL THESIS

This is to certify that I, Prof. Rugare Mareva (National Identity Number 22-101 400 K 22), have edited HOWARD HOGO'S Doctoral Thesis titled: *An examination of information ethics standards in the management of open access electronic information resources (OAEIR) by Zimbabwean universities*, to be submitted to the University of KwaZulu-Natal. Any errors and omissions are inadvertent. I am a holder of a PhD (English) (University of Venda), M.Ed (English) (University of Zimbabwe), B.Ed (English) (University of Zimbabwe), and a Certificate in Education (English Major) (Gweru Teachers' College).

Thank you.



Prof. Rugare Mareva (PhD), Language Editor: GZU Policy Documents; Journal of New Vision in Educational Research (JoNVER); Projects, Dissertations and Theses. Great Zimbabwe University, Department of Curriculum Studies, Masvingo, Zimbabwe