TEACHING INFORMATION ETHICS IN LIBRARY AND INFORMATION
SCIENCES SCHOOLS IN PUBLIC UNIVERSITIES IN KENYA

BY
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INFORMATION STUDIES
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2015
DECLARATION

Declaration by The Candidate

I declare that this thesis is my original work and that it has not been presented for a degree in any other university or any other award.

Jane Cherono Maina ........................................ Date...........................

Declaration by Supervisors.

The undersigned certify that they have read and hereby recommend for acceptance of Moi University a thesis entitled “Teaching Information Ethics in information Science Schools in Public Universities in Kenya.”

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Moi University, Eldoret, Kenya

Dr. Damaris Odero ................................. Date............................

Moi University, Eldoret, Kenya
DEDICATION

Dedicated to my husband Patrick Rotich

and our children

Kelvin, Deborah, Kenneth and Gideon.
ACKNOWLEDGEMENTS

My utmost acknowledgement is to the almighty God for granting me the privilege to undertake the doctoral studies. May He grant us the opportunity to further and implement the ideas brought forward by this study. To you be the glory, Amen.

My sincere gratitude goes to my supervisors Prof. Japheth Otike and Dr. Damaris Odero for their encouragement, insightful guidance and the intellectual excursions into this research. Their wealth of knowledge together with constant support and encouragement worked towards the completion of this work. I would also wish to appreciate all the people who participated in the study during data collection and pre-testing of data collection instruments. Special thanks to the heads of department and lecturers who provided information regarding Library and Information Science (LIS) curriculum and information ethics courses, which was very useful to this study. Thanks to all the class representatives who assisted in distributing questionnaires to their colleagues.

I thank all the staff in the School of Information Sciences at Moi University for the assistance they accorded me during this study. Special thanks to the Department of Library, Records Management and Information Studies for all the support in making this study a reality. I am grateful to my fellow classmates Namaru and Haji for their support and encouragement when things got tough. Thanks a lot for sharing with me the academic rigour of the doctoral studies.
I am greatly indebted to my family for their support, prayers and encouragement as I pursued my academic accomplishments. To my husband Mr. Rotich and our children Kelvin, Deborah, Kenneth and Gideon, who endured my absence, while cheering me to pursue my academic goal. To Kelvin, Deborah, Kenneth and Gideon, may the joy of academics propel you to the highest academic achievements greater than what your mother has achieved. I would like to thank my father and mother who taught me discipline, endurance and perseverance. You taught me patience and the value of education. I would also wish to show my appreciation to my sister and brothers for their moral support and encouragement. I am greatly indebted to my late brother Col. Dr. Malakwen who would have wished to celebrate with me the success of this study but did not live to see it.

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ABSTRACT

Concerns of information ethics have increased in the recent years evidenced by rising plagiarism, increased hacking, privacy violation, and matters relating to the digital divide. Despite commitment by African scholars to entrench information ethics in library and information science (LIS) curriculum, evidence show that the scope and delivery of content is still inadequate. Manifestation of information ethics violations, especially plagiarism is on the rise even among library and information science students. The aim of the study was to investigate the teaching of information ethics in library and information science curriculum in public universities in Kenya with a view to proposing ways of improving its integration. The study objectives were: to establish the purpose for teaching information ethics in library and information science curriculum; to establish the content of information ethics courses in library and information science curricula; to ascertain the extent to which information ethics has been integrated into LIS curriculum; to establish the teaching methods used for information ethics courses; to establish the challenges encountered in teaching of information ethics in information science schools and to propose solutions to improve the teaching of information ethics in library and information science training in public universities in Kenya. The study was informed by the Moral Reasoning theory by Lawrence Kohlberg and Albert Bandura’s “Social Learning theory”. A mixed method approach employing survey research design was used. Purposive and stratified random sampling were used to draw respondents from the targeted population consisting of students, lecturers and heads of department in Moi, Kenyatta, Kisii and The Technical University of Kenya. Data was collected using questionnaires, interviews and documentary survey. The findings show that although LIS departments have integrated information ethics in their curriculum, there is disparity in the mode, scope and depth of its integration across the universities. Lectures and seminars were the dominant teaching methods. There was a myriad of challenges including and not limited to: absence of a well defined content, inadequate information resources, lack of a national network and absence of policy guidelines on information ethics. The study concludes that the courses are very few and the coverage omits specific areas such as e-waste, cyber crimes, digital divide, non malfeasance, crowd computing and netiquette in social media. Lectures and seminars, classroom discussions and case studies were the main pedagogy used to deliver content in information ethics courses. A multidisciplinary approach in teaching information ethics was supported by study. The study recommends a model for the integration of information ethics in LIS curriculum and provides Malan and Bester’s framework for an information ethics course.
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### ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACEIE</td>
<td>African Center of Excellence for Information Ethics</td>
</tr>
<tr>
<td>ACM</td>
<td>Association for Computing Machinery</td>
</tr>
<tr>
<td>ALISE</td>
<td>Association for Library and Information Science</td>
</tr>
<tr>
<td>ANIE</td>
<td>African Network for Information Ethics</td>
</tr>
<tr>
<td>BSc</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>CA</td>
<td>Communications Authority of Kenya</td>
</tr>
<tr>
<td>CAT</td>
<td>Continuous Assessment Test</td>
</tr>
<tr>
<td>CSK</td>
<td>Computer Society of Kenya</td>
</tr>
<tr>
<td>E-waste</td>
<td>Electronic Waste</td>
</tr>
<tr>
<td>HOD</td>
<td>Head of Department</td>
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<tr>
<td>ICA</td>
<td>International Council of Archives</td>
</tr>
<tr>
<td>ICIE</td>
<td>International Center for Information Ethics</td>
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<tr>
<td>ICT</td>
<td>Information and Communications Technology</td>
</tr>
<tr>
<td>IE</td>
<td>Information Ethics</td>
</tr>
<tr>
<td>IEEE</td>
<td>Institute of Electrical and Electronics Engineers</td>
</tr>
<tr>
<td>I&amp; K</td>
<td>Information and Knowledge</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>LAN</td>
<td>Local Area Network</td>
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<tr>
<td>LIS</td>
<td>Library and Information Studies</td>
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<tr>
<td>LRM&amp;IS</td>
<td>Department of Library, Records Management and Information Studies</td>
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<tr>
<td>KLA</td>
<td>Kenya Library Association</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>KENET</td>
<td>Kenya Education Network</td>
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<tr>
<td>MA</td>
<td>Master of Arts</td>
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<tr>
<td>MIS</td>
<td>Management Information System</td>
</tr>
<tr>
<td>NACOSTI</td>
<td>National Commission for Science, Technology and Innovation</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Scientists</td>
</tr>
<tr>
<td>TOT</td>
<td>Trainer of Trainers</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<tr>
<td>WIPO</td>
<td>World Intellectual Property Organization</td>
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CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter presents background information on the study and discusses the foundations of ethics. It also presents the theories of information ethics and describes the context of information ethics education so as to bring an understanding of the nature and level of teaching information ethics in Library and Information Sciences (LIS) curricula in universities in Kenya. Further, it discusses the statement of the problem, aim, specific objectives and research questions of the study. Finally, it presents the assumptions, significance, scope and limitations of the study.

1.2 Background Information

Ethics also referred to as moral philosophy refers to well founded standards of right and wrong that guide humans in terms of rights, obligations, benefits to society, fairness or specific virtues (Velasquez, et al. 2010; Billington, 2003). Ethics also refer to the study and development of individual ethical standard and collective moral awareness, judgment, character and conduct (Velasquez, et al. 2010; Billington, 2003). Ethics is about approval and disapproval, judgments as to the rightness or wrongness, goodness or badness, virtue or vice, desirability or wisdom of actions, dispositions, ends, objects, or states of affairs (Gichure, 1997). In natural settings, ethics is synonymously used to mean morals but philosophically the two are different in that ethics involves the values that a person seeks to express in a certain situation, while morals is the way the person sets achieving these values (Billington, 2003).
Some philosophers argue that ethics is a human nature and "goodness" is thought as something natural to humans. Socrates (470-399 B.C.) posited that people will naturally do what is good, if they know what is right, and that evil or bad actions are the result of ignorance (Billington, 2003). The tool towards that "good" was self-knowledge. Socrates insisted that every person must reach into himself and teach himself (the infamous "Know thyself"). A person must turn his/her attention from the outside world to the inner "world" because this is the only way to know what is really "good" for society. Socrates argued that ethics consists of knowing what we ought to do, and such knowledge can be taught (Velasquez, et. al 2010).

Aristotle (384-322) considered ethics as "living good whereby ethical virtues were viewed as complex rational, emotional and social skills with happiness as the ultimate goal (Billington, 2003; Cokie, 2006). What people need, in order to live well, is a proper appreciation of the way in which such goods as friendship, pleasure, virtue, honor and wealth fit together as a whole (Billington, 2003; Perry, 2002). The theory by Kant (1724-1804) presented ethics as an "a priori" truth and viewed ethics like something that we have embedded in us as "knowledge" prior to any physical or social experience. In deontology theory, a person is obliged to follow the rules, which are incorporated in moral statements, codified in doctrines or dictated by one’s sense of duty (Armstrong 1993; Mason, Mason and Culnan 1995). Kant argued that knowledge, intent or reason is what drives us into behaving good or bad during our lives (Cokie 2005; Perry 2002). Its focus is on the acts taken by the agent and the duties, rights, privileges, or responsibilities that pertain to that act (Mason, Mason and Culnan 1995). An example is the Golden Rule
which encourages us to “Do unto others as you would have them do unto you” (Cokie 2006).

Hobbes (1588-1679) argued that many, if not all, of our actions are prompted by selfish desires. He noted that human nature is unalterably selfish, aimed at personal satisfaction and pleasure, at whosoever else expense (Billington 2003). This view is called "psychological egoism" and maintains that self-oriented interests ultimately motivate all human actions. Closely related to psychological egoism is a view called psychological hedonism which is the view that pleasure is the specific driving force behind all of our actions.

Utilitarianism is the primary teleological theory which was developed by Bentham (1748-1832) and Mill (1806-73). Teleological theories focus on the consequences, results, goals, or purposes of agents’ acts (Mason, Mason and Culnan 1995). This theory focuses on agents’ moral responsibilities, intentions, state of knowledge, virtues and self interest or on the public interest and the good of an action may be judged by its utility or value to society (Cokie 2006; Mason, Mason and Culnan 1995).

1.2.1 Theories of Information Ethics

There has been increased recognition of the uniqueness of information ethics and the utilization of the relevant theories of ethics (Himma 2007). Floridi (1999) argued that the utilization of computers creates new ethical issues which may not be adequately addressed by existing theories of ethics since they were developed before the advent of the information age. Besides, there is considerable discussion by information ethics
professionals and scholars on the application of the theories of obligation to information sciences. Fallis (2007) and Britz and Henderson (2009) identify consequence-based, duty-based, rights-based and virtue-based theories as the underpinning theories for information ethics.

Consequence-based theories are founded in utilitarianism, which is concerned with the idea of utility. Utilitarian theory holds that actions are judged right or wrong according to the amount of happiness or pleasure that come with those decisions (Fallis 2007; Mutula 2011). A person therefore makes decisions depending on the greatest good or happiness for the greatest number of people, and it’s believed that the end justifies the means (Perry, 2003; Mutula, 2011). In utilitarian theory, all parties affected by an action must be identified and the consequences for each party quantified (Cokie 2006). An action is then considered ethical when the good outweighs the bad (Martin et al. 2005). Major weaknesses of utilitarian theory are quantification of outcomes; evaluating situations between who to benefit and to bear harm, and knowing what is best for all the parties that might be affected. (Cokie 2006; Martin et al. 2005). Fallis (2007) citing Mills (1859/1978) and Hettinger (1989) notes that consequence-based theories can easily be applied to issues in information ethics such as censorship and respect for intellectual property rights.

Fallis (2007) referring to Kant’s duty-based theories states that there are ethical duties that human beings must obey regardless of their consequences. He reiterates Ross’s (1930) theory which includes a duty to keep our promises, a duty to distribute goods justly, a duty to improve the lot of others with respect to virtue, intelligence, and
happiness and a duty to avoid injury to others (Fallis 2007:28). For example, a duty to provide access to information (Fallis 2007).

Rights based theories apply to information ethics and has its genesis from deontology. This theory was developed by Kant (1722-104) who believed that there are higher principles that are good in every time, every culture, and every situation (Mutula 2011). Mason, Mason and Culnan (1995) assert that deontological theories center on the act taken by the agent and the duties, rights, privileges, or responsibility that pertain to that act. According to Martin .et al. (2005), in his discussion on social, ethical and legal issues of Information Technology, deontology theory encourages people first, to act according to a rule that you would like to be applied universally, including to your self. Secondly, the theory urges people to treat human always as an end and never as only a means to an end. They argue that to act ethically requires that a person takes responsibility for his/ her actions, and that people need to be sensitized on ethical issues that might arise with their use of IT so that they may not neglect the ethical implications. Moore (2005) discusses how right based theories, for example, utilitarianism applies to information ethics.

Another theory that could be applied to information ethics is egoism (Mutula 2011). Egoists contend that an act is moral when it promotes an individuals’ best long-term interest (Armstrong 1993). Mutula (2011) argues that choice is for the purpose of putting self interest ahead of anything else. The weakness of this theory is that interests often conflict and that sometimes, it will be necessary to act against one’s own interest to preserve the moral order of society (Armstrong 1993).
Babik (2006) contends that information ethics connects descriptive ethics with normative ethics. As a descriptive theory, it focuses on the influence of power structures on the information attitudes and traditions of various times. He further notes that this concerns the development of ethical values related to information transfer and processing in the global information society, and ethical conflicts related to the use of new information technologies and making information available. As a normative theory, ethics determines the standards of professional conduct and behaviour in today’s global information dispensation. However, he argues that Information ethics is a dynamic and evolving field, flowing from various disciplines and perspectives and cultures, critical in these times of intercultural exchange and dialogue of sharing and exchanging information.

1.3 Principles of Information Ethics

Information ethics, according to Capurro (2010) is concerned with issues such as privacy, secrecy, intellectual property, online communities, mobile phones, robots, human enhancement, information overload, and e-waste. Severson (1997) observes that the major principles of information ethics are respect for intellectual property, respect for privacy, fair representation, and non-malfeasance (or “do no harm”). Fallis (2007) sums up that information ethics is concerned with the question of who should have access to what information. Scholars and policy makers involved in the information flow are putting emphasis on information ethics in relation to social and cultural, political and geographical implication on society (Capurro 2010). Carbo and Smith (2008) provide a more extended definition of IE to include concerns with the moral dilemmas and ethical
conflicts that arise in interactions between human beings and information creation, organization dissemination and use; ICTs and information systems.

Samek (2010) posits that information ethics offers opportunities to explore ethical questions about relationships in society among people, information, recorded knowledge and the cultural record. Barroso (2011) asserts that recent social networks and communities have positive effects by contributing to socializing, sharing global knowledge, and helping to develop relationships between citizens and to bring together people all around the world. However, he is concerned that there are also problems related with basic human rights like privacy or intimacy and property, which could be damaged by the action of these new technological tools.

Information ethics according to Samek (2010) citing Capurro and Birger (2003) exposes local, national and international issues related to the production, collection, interpretation, organization, preservation, storage and retrieval, dissemination, transformation and use of information and ideas. Babik (2006) supports the idea by noting that information ethics concerns all human activity related to information regarding our relationship with information, or how we generate, process and distribute information in the form of new technologies and innovations, which contain a great deal of processed information. Ocholla (2009) adds that the field provides a critical framework for considering moral issues concerning information privacy, moral agency, new environmental issues and problems arising from the creation, collection, recording, distribution and processing of information, especially ownership and copyright in view
of the digital divide. Additionally, Froehlich (2005) notes that the field of information ethics is dedicated to the critical reflection on the ethical values and practices related to the production, storage and distribution of information, as well as the ethical implications of the information systems, infrastructures, and policies increasingly embedded in modern culture and society.

According to the information ethics portal (2010), the Tswane declaration of information ethics in Africa considered information ethics to be a field of critical reflections on moral values and practices with regard to the production, storage, distribution and access to knowledge as well as to all kinds of processes, systems and media of information and communication. The Tswane (2007) declaration further resolved that policies and practices regarding the generation, dissemination and utilization of information in Africa should be grounded in ethics based on human values, human rights and social justice. Capurro (2005) notes that information ethics explores and evaluates: the development of moral values in the information field; the creation of new power structures in the information field; information myths; hidden contradictions and intentionalities in information theories and practices, and the development of ethical conflicts in the information field. According to UNESCO (2010), information ethics is considered as providing a critical framework for considering moral issues such as: Information poverty; Digital inclusion/exclusion; Open government and information transparency; Access to knowledge; Children information ethics; Intercultural/ trans-cultural analysis; African moralities; Internet and information ethics in Africa, corporate social responsibility; Leadership in Africa; Risk and compliance; Intercultural information ethics; Moral
traditions; Information privacy; New environmental issues; and problems arising from the life-cycle creation, recording, distribution, processing of information with regard to membership and copyright, information poverty, digital inclusion/exclusion.

1.4 Teaching Information Ethics in Universities in Africa

In the recent past, institutions of higher learning are challenged among others by the rise of new stakeholders, internal factors, together with globalization and the rapid pace at which new knowledge is created and utilized. The globally increased integration of ICTs in society further aggravates the challenges in institutions of higher learning and urgent attention by all the academic stakeholders is required if universities have to maintain their role in society. Mutula (2011) notes that information ethics integration in the curriculum has become more important than before because of the transformative governments that are being implemented the world over using ICTs. He notes that most governments are now enacting ICTs policies to enhance socio-economic and political development, and moral issues relating to the increasing implementation of e-government across the world must be addressed.

Recent increased cases of plagiarism, acts of hacking, academic piracy and violation of privacy in academic institutions the world over necessitate the need for ethical considerations especially in the information era (Bell 2002). Strategies have been put in place by universities to detect plagiarized information. For example, “Turn- it- in” software has been recommended and used by some universities to detect plagiarism especially on thesis and research reports. However, concerns have been raised about the efficiency of this software in that it uses words already in the system and may consider
works with such words to appear as plagiarized yet the case may not necessarily be so. Additionally, plagiarized information may not be detected easily in class assignments and term papers yet these are areas where students practice and may be perfect the habit of academic malpractices.

There have been studies that have supported the integration of information ethics into university curriculum. The ALISE Information Ethics Special Interest Group (2007) suggest that knowledge and understanding of the ethical conflicts and responsibilities facing library and information professionals around the world are necessary to enable relevant teaching, learning and reflection in the field of library information studies and information-related professions. Information ethics education allows information professional to learn to understand the responsibilities and real consequences of their actions, and learn to use their power ethically and responsibly. Carbo (2005) suggests that information ethics education should be expanded to become a fundamental component of information literacy education to all students, beginning on elementary education programmes for young children, and extending through undergraduate curricula. This kind of education should be integrated into existing information literacy campaigns carried out by the university to graduate and undergraduate students and customized to meet the demands of each profession. There is also need for more extensive continuous education for all practitioners, and not just information professionals (Carbo 2005).

Capurro (2010) states that information ethics opens up space for critical reflection of all stakeholders on established moral norms and values. Mutula (2011) supports the
argument noting that this enables information professionals to engage in ethical reasoning by determining what is wrong or right in a dilemma situation. A study carried out by Ocholla (2009) on information ethics education in Africa emphasizes the importance of information ethics in library and information science departments. The significance of information ethics education in information science has also been supported by several authors (Babik 2006; Ocholla 2009; Smith 2002). It has been argued that the mandate for information ethics education in information science arises from the urgency of issues in the global information justice (Smith 2002). Smith (2002) believes that the threats to information access, accuracy and privacy, and matters relating to the digital divide and alternative technologies demand immediate attention and provide the rationale for teaching information ethics. Ndwandwe, Ocholla and Dube (2009) citing Carbo and Amalgno (2001) noted that many of the information professionals who had taken an information ethics course reported that education had been extremely beneficial. Besides, information professionals have the responsibility to provide unfettered access to information thus, promoting intellectual freedom and rights of information (Mutula 2011 citing Britz and Buchanan 2010). Therefore, equipping information workers with information ethics enables information mediators to verify quality, and accuracy of information to clients (Mutula 2011).

According to Capurro (2005) the educational goals for ethics for information specialists are: to recognize and articulate ethical conflicts in the information field; to activate the sense of responsibility with regard to the consequences of individual and collective interactions in the information field; to improve the qualifications of intercultural
dialogue on the basis of recognition of different kinds of information cultures and values; and to provide basic knowledge of ethical theories and concepts and about their relevance in everyday information work. Information ethics explores and evaluates: the development of moral values in the information field; the creation of new power structures in the information field; information myths; hidden contradictions and intentions in information theories and practices, and the development of ethical conflicts in the information field (Capurro 2005).

### 1.5 Information Ethics Teaching in Information Science in Kenya

Some academic institutions in Kenya have engaged in debates on ethics and its impact on societal issues through conferences. An example is the Strathmore University 7th annual conference held from 26th to 29th October, 2010; whose theme was “Ethics and sustainable development (Strathmore University, 2010). The rationale for entrenching information ethics education in library and information science curriculum in Kenya has been supported by several authors (Otike and Maina 2013; Amunga 2013; Limo 2010, Kemoni 2010 and Otike 2010). However, Limo (2010), Kemoni (2010) and Otike (2010) raise concern about the absence of fully dedicated information ethics courses. Otike (2010) observes that most LIS programmes both at undergraduate and postgraduate levels have information ethics aspects, but as components of major subjects such as: management information systems, management of libraries, collection development, publishing and information and communication technology. Similarly, Buchanan (2004) observed in the United States that information ethics issues were briefly mentioned in the
course of other topics that include:— collection management, information policy and information literacy.

Kenya’s Education Cabinet Secretary Kaimenyi (2014) urges Kenyan universities to introduce undergraduate programmes on ethics so as to nurture students to be sincere and honest and be people of high integrity. Amunga (2013) states that information ethics can lead to awareness and deep understanding of unethical academic behaviour with the ultimate goal being behaviour change. Limo (2010) notes that Kenya has a great opportunity to begin on a clean slate since the new media are yet to penetrate all spheres of knowledge. While referring to the African continent, Ndwandwe, Ocholla and Dube (2009) and Ocholla 2009 opine that information ethics is important to LIS training since students are information users and future information managers and providers who need to be sensitized to respect ethical values and morals in regard to intellectual property. This view is shared by Mutula (2011) who observes that the integration of information ethics in curriculum is necessitated by the increased implementation of e-government, which raises several ethical issues such as usability of systems, systems security, systems interoperability, intellectual property rights, freedom of information, universal access and privacy. In agreement, Limo (2010) believes that Kenya has skilled information science and information communication and technology (ICT) staff who need to be empowered to appreciate and exercise information ethics in industry. Amunga (2013) argues that there should be clear institutional policies on academic malpractice and their full implantation.
1.6 Statement of the Problem

There is substantive commitment by African scholars to infuse information ethics in the Library and Information Science curriculum at the university level (Mutula, 2013). There is a rising evidence of plagiarism among students in universities in Kenya. For instance, Daily Nation newspaper (2011) reported a case where a student from the University of Nairobi was stopped by the court from graduating for plagiarism, while Too (2014) observed a widespread practice among students at Moi University. Fallis (2007) proposes that in order to deal effectively with ethical dilemmas, information professionals should have a good working knowledge of information ethics due to their role in the information society of gathering, processing, disseminating and using information. However, it has been observed that in Kenya, there are inefficiencies of the information ethics content currently integrated in the university’s curriculum and that it is viewed as a supportive subject to other major LIS disciplines (Limo, 2010; Amunga 2013). Limo (2010) states information ethics is important to LIS training in Kenya notably to build a culture of responsibility among the youth using information technologies and to inculcate key principles of information ethics which include intellectual property, privacy and decency. This view is emphasized by Kaimenyi (2014), who argues that introducing undergraduate programmes on ethics would expose students to standards of right and wrong practices that prescribe what humans ought to do; and that this will help them deal with personal and moral dilemmas that they face, and are likely to face when they assume offices of public trust.
Mutula (2011) states that integrating information ethics in curricula creates professional identity built upon information value systems, allowing professionals to understand today’s information and knowledge driven society, and the intricacies to access to information. He further states that information professionals in Africa would be better prepared to participate in debates on information ethics thus allowing their fuller engagement in Africa’s economic, social and political development. Otike (2010) and Kemoni (2010) observe that there is no documented library and information science training programme that offers a full fledged or specific module dedicated to information ethics in Kenya. In agreement, Limo (2010) adds that it is rare to find classes dedicated to information ethics. He reiterates that information ethics in Kenya is sandwiched in some traditional programmes and it is likely to be awarded less time and seriousness. According to Otike (2010), a few tertiary educational institutions offer information course as part or in form of legal aspects of information. Several authors have argued for the necessity for integrating information ethics courses in LIS curricula to include: - the need to expose students to acceptable information ethical practices and rules in the information superhighway; make them appreciate its importance; and empower them to appreciate the need to uphold good ethical behaviour in their academic and research works (Mutula 2011; Mabawonku 2010; Ocholla 2009; Ndwandwe, Ocholla and Dube 2009; Fallis 2007, and Vagaan 2003).

Amunga (2013) observes that there is rising evidence of cases of academic malpractices, especially plagiarism, in universities in Kenya and it continues to be an everyday worry for universities, information creators and vendors. According to Limo (2010), information ethics prohibit mischief like hacking and other internet crimes. Amunga
(2013) opines that information ethics will reduce cases of academic malpractices. Their views are shared by Bell (2002) who states that teaching of information ethics is necessitated by plagiarism concerns; increased hacking; privacy violation and lack of training for teachers and students. Moreover, technology has evolved quite rapidly and the legal system has inevitably lagged behind (Martin .et al. 2005), therefore a course in information ethics would sensitize LIS student on ethical challenges and implications in their profession. Besides, Amunga (2013) suggests that there is need to sensitize and raise awareness on the necessity for information ethics at all levels of training in universities in Kenya.

In view of this scenario, it was found necessary to carry out a study to investigate the teaching of information ethics in library and information science departments and the extent of its integration in the curriculum in public universities in Kenya.

### 1.7 Aim of the Study

The aim of this study was to investigate the teaching of information ethics in LIS curriculum in public universities in Kenya with a view to proposing ways and means of improving its integration.

### 1.8 Objectives of the Study

The objectives of the study were to:-

1. Establish the purpose for teaching information ethics in Library and information science curriculum in universities in Kenya.
2. Explore the content of information ethics courses in LIS curricula in universities in Kenya.
3. Determine the extent to which information ethics has been integrated into LIS curriculum by LIS departments in Kenya.
4. Establish the teaching methods used in information ethics courses in LIS schools.
5. Establish the challenges encountered in teaching information ethics in information science schools in public universities in Kenya.
6. Propose solutions to improve the teaching of information ethics in information science training in public universities in Kenya.

1.9 Research Questions

The study was guided by the following research questions:-

1. What is the purpose for teaching information ethics in LIS curriculum in universities Kenya?
2. What information ethics issues are covered in LIS curriculum in universities in Kenya?
3. To what extent has information ethics been integrated into LIS curriculum by LIS departments in Kenya?
4. Which methods of instructions do lecturers use in the teaching of information ethics in LIS schools?
5. What challenges do lecturers experience in teaching information ethics LIS schools in Kenya?
6. What should be done to improve the teaching of information ethics in LIS curriculum in Kenya?

1.10 Assumptions of the Study

This study was based on the following assumptions:

i. That information ethics aspects are not adequately integrated into LIS curriculum by LIS departments/schools in Kenya.

ii. That teaching information ethics to LIS students will make them aware of and encourage them to adopt good practices which they will demonstrate in their academic pursuits and industry through ethical conduct.

iii. That although information ethics violation exists in information science training schools at public universities in Kenya, lecturers and university administrators may not be fully appreciate the impact that this has on learning and on the quality of LIS graduates being released to the market.

1.11 Significance of the Study

The study will contribute to the limited literature available on teaching information ethics. It will specifically address the extent to which information ethics education has been incorporated into LIS curriculum by LIS schools in Kenya. It is hoped that the findings of this study will promote a positive future for information ethics education in Kenya. Previous studies conducted in Kenya did not focus on information ethics and LIS training.
A study by Limo (2010) focuses on information ethics and e-governance. However, pertinent ideas can be learnt from studies that have been conducted on teaching information ethics in other African countries, some of which have been discussed in this study.

It is expected that the findings of this study will have implications on two major information stakeholders:

i. University management and information science curriculum developers: The findings of this study would provide information to the academic community and policy makers on the level and extent of information ethics education in LIS schools in Kenya. It is expected that the study would encourage Kenyan LIS professionals to incorporate additional IE aspects into their LIS programmes. This is due to the fact that information ethics is still a new academic field in Africa and published literature on the same is not much. Studies have shown that information ethics has been integrated in teaching curricula in developed countries (Ocholla 2009).

ii. Information science scholars: This study will provide new ideas to the subject of information ethics education which could be referred to by researchers, scholars, LIS students and professionals in Kenya. The findings of this study would motivate professional bodies in LIS and related fields to develop closer networks with LIS training schools in Kenya. The study also proposes strategies that could be adopted to enhance integration of information ethics in teaching in university education. The researcher hopes that the study will form a basis of further
research on how universities should integrate information ethics in their curricula, which may further lead to generation of new ideas and new insights in the field of library and information science.

1.12 Scope and Limitations of the Study

The aim of this study was to investigate the nature and reasons for information ethics education and the extent to which it is integrated into LIS curriculum by LIS schools in public universities in Kenya. Discussions were made on the reason for including information ethics, how it should be incorporated, the content of information ethics education, methods of instruction for information ethics teaching, and the extent to which information ethics issues are included in existing LIS curricula. It also investigated the challenges encountered in teaching/learning the information ethics course(s), and proposes ways of addressing the challenges. The research questions and the methodology chosen for this study were designed to elicit data from selected respondents on the teaching of information ethics in information science training programmes in Kenyan public universities. Although there are well established private universities that offer training in LIS in Kenya, this study concentrated on public universities only, namely Kenyatta University, Moi University, The Technical University of Kenya and Kisii University.

Information ethics is a young and developing academic field thus has several definitions from various interest groups. This study will be limited to Severson (1997) definition of information ethics namely respect for intellectual property, respect for privacy, fair
representation, and non-malfeasance. Others related terms like ethics of information, cyber ethics and media ethics will not be discussed in this study.

University students in Kenya are advancing on the integration of ICTs in their academic pursuit leading to the need for concern on emerging ethical and moral issues posed by technology. Being a new academic field, published literature on studies relating to information ethics in Kenya is very limited. This study made inferences to studies made in the African continent and relate the findings to Kenya where appropriate. The researcher felt that the factors relating to information ethics education in LIS curricula in other African countries was somehow similar or related to the Kenyan situation.

1.13 Definition of Key Terms

**Ethics:** Well founded standards of right or wrong, good or bad that prescribe what humans ought to do. It also refers to the study and development of one’s ethical standard.

**Hacking** The process of obtaining access to a device or digital system using techniques or mechanisms that were not intended to provide access (Sueur, Hommes and Bester 2013)

**Information ethics** Respect for intellectual property, respect for privacy, fair representation, and non-malfeasance (or “do no harm”), (Severson, 1997).
**Intellectual Property** refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce” (WIPO, 2012).

**Moral development** The formation and maturation of a sense of right and wrong (Sueur, Hommes and Bester 2013).

**Netiquette** Rules about the proper and polite way to communicate with other people when you are using the Internet (Sueur, Hommes and Bester 2013).

**Non-malfeasance** Also referred to as “do no harm,” refers to avoiding wrongdoing or improper or dishonest conduct, especially by a person who holds public office or a position of trust.

**Privacy** The right to keep your information and deeds to yourself, without being subject to surveillance (Sueur, Hommes and Bester 2013).

**Plagiarism:** To use the words or ideas of another person as if they were your own words or ideas without duly acknowledging the source.

**Piracy** It is committed by installing and using commercial software or downloading or copying a program without paying for the program (Sueur, Hommes and Bester 2013).

**Triangulation:** Combination and comparison of multiple data sources, data collection and analysis procedures, research methods, investigators and inferences that occur at the end of the study (Teddlie and Tashakkori , 2009, p.27)
1.14 Summary

This chapter provided the introduction and background information to the research topic by describing the theories of ethics and the principles of information ethics. It contextualized the Kenya situation in the teaching of information ethics in LIS curricula and provides the rationale for teaching information ethics in public universities in Kenya. Discussions were made on the statement of the problem, the purpose of the study and objectives that the research used to achieve the aim of the study. Other discussions also presented were the research questions, assumptions, significance as well as the scope and limitations of the study.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter discusses the theoretical framework upon which this study is based and presents discussions on related literature. Literature review provides a framework for establishing the importance of the study and fills the gaps as well as extends prior studies by relating the study to larger on-going dialogue (Creswell, 2003). This study covered an in-depth identification and analysis of related literature with special reference to the teaching of information ethics in LIS curricula in public universities in Kenya.

2.2 Theoretical Framework

A theoretical framework is a collection of interrelated and properly argued ideas; variables or prepositions intended to explain and present a systematic view of a phenomenon. It is an examination of existing or self-formulated theories in relation to the research objectives (Oso and Onen, 2008). A theoretical framework guides the researcher in determining the things to measure and the relationship between them and the purpose of explaining a phenomenon. The theoretical framework for this study is derived from Moral Reasoning theory developed by Lawrence Kohlberg (1971) and Albert Bandura’s (1941) “Social Learning theory”, also known as Social cognitive theory. The study also considered the “Operant conditioning theory” by B. F. Skinner (Tayo 2001) but was not used for the research since the contributions of this theory were addressed by Social learning theory.
2.2.1 Kohlberg Moral Reasoning Theory

Kohlberg classified moral reasoning into three levels: Pre-convention, Conventional, and Post–conventional levels, composed of six development stages, each adequately responding to moral dilemma than the previous level (Kohlberg 1984).

Pre-convention or the first level has a focus on the self. This level begins with punishment avoidance stage, whereby behaviour that avoids punishment is right. An individual avoids punishment and moral reasoning is governed by the standards of others rather than the person’s own internalized standards of right and wrong. The second stage may be referred to as “benefit seeking” whereby what is right is what benefits the individual or gains favours in return (Armstrong, 1993; Kohlberg, 1984).

At the second or Conventional level, the individual has internalized the standards of others and focus shifts from the self to the group and its rules. This level consists of social conformity stage, which emphasizes on the morality of mutual relationships. The other is the authority acceptance stage where the person considers how his or her actions will affect the social system and conscience. Regarding the later stage, law is of central value (Armstrong, 1993; Kohlberg, 1984). Right is doing’s one’s duty, respecting authority, and maintaining the social order.

The Post–conventional or third level is the highest level of moral reasoning. Its focus is on one’s inner principles and the individual considers the principles upon which a good society operates. The first stage in this level is the “social contract shaping” concerned
with morality of contract or respect for individual rights and laws that are democratically agreed on. The second is “ethical principles shaping” stage where morality focuses on universal ethical principles and the person acts according to internal standards, independent of legal restrictions or opinions of others (Armstrong 1993; Kohlberg 1984). Other models that add new dimensions to Lawrence Kohlberg’s model are the works of Jean Piaget on “Infant development stage theory”; James Rest work on “Moral development” and Carol Gillian research on “Women’s moral reasoning” (Armstrong 1993).

According to Kohlberg (1984), moral reasoning is the ability which an individual uses principled moral thought process in solving an ethical dilemma. He argues that ethical development progresses from a self-interested moral perspective and recognizes that others also have needs and interests, to the acceptance that social norms should be followed for efficient social coexistence especially with the significant others, and finally to the realization of social contacts and higher international ethical principles. As a person matures, he or she is able to reason at higher levels, ultimately peaking at some levels. At the final stage, right is defined by the decisions of conscience in accordance with chosen ethical principles centered on liberty, justice and human rights (Armstrong, 1993; Kohlberg, 1984). According to this theory, the highest level of moral reasoning requires people to use ethical principles to define their moral standards and then to live in accord with them (Rathus and Nevid 1992). However, Morris and Maisto (2006) notes that this theory has been criticized for failure to take account of cultural differences in moral values; as sexist, and that many people in society never progress beyond the
conventional level of moral reasoning. Quoting another research, Sheppard and Young (2007) note that this theory has been challenged in that when people are faced with new moral dilemmas, people revert back to the use of lower moral development stages.

### 2.2.2 Banduras Social Cognitive theory

The premise of Bandura’s Social Cognitive theory is that people learn by observing others, hence behaviour is modeled. Groves (2008) points out that the theory has its root in the studies of Miller and Dollard (1941); and that the theory centers on personality being developed as an interaction between the environment, behaviour, and ones psychological processes. The theory is mainly concerned with how children and adults operate cognitively on their social experiences and with how these cognitive operations then come to influence their behaviour and development (Grusec 1992). If an individual would like to learn something, they have a great chance of succeeding simply by observing, and then imitating the action than through direct experience (Groves 2008; Lahey 2004). Modeling can remind people of appropriate behaviour in a given situation, reduce peoples’ inhibitions concerning certain behaviours that they see others engaging in, or suggest to people what behaviour will lead to reinforcement (Lahey 2004). The four components involved in the process of modeling are pay attention to events, retention, reproduction in appropriate action and motivation (Groves 2008; Grusec 1992). Bandura showed that people can learn behaviour without being reinforced directly and argues that although people may learn a behaviour, they do not necessarily act on what they have learned (Groves 2008; Morris and Maisto 2006). Lahey (2004) observed that people are
more likely to imitate behaviour that is reinforced than when they see that behaviour being punished in the model.

Several areas of learning are influenced by social cognitive theory which includes behaviour modification, learning of complex tasks and Socratic methods of questioning (Groves, 2008). However the theory has been criticized for its lack of attention to the importance of changes with age that might have an impact on behaviour (Grusec 1992 citing Coates and Hartup. Other criticisms noted by Groves (2008) are: - difficulty in implementing the self efficacy portion and self regulatory component, and the problem of choosing a model for behaviour. He adds that problems associated with this theory are that some learners might model the opposite reason that the particular model was chosen; that punishment from a teacher or lack of certain positive reinforcement behaviour by the teacher can influence behaviour and learning in a classroom, and that it is difficult for the teacher to help students develop their sense of self regulation and self efficacy. The ability is informed by self evaluation by the lecturer and student that they have the knowledge to model certain accepted behaviour in information ethics.

2.2.3 Application of the Theories to the Study

Kohlberg’s cognitive moral development theories relate to the thought processes people go through when making ethical decisions. The moral reasoning stages progress from a self- interested moral perspective and recognizes that others also have needs and interests, to the acceptance that social norms should be followed for efficient social coexistence especially with the significant others, and finally to the realization of social
contracts and higher international ethical principles. This study focuses on the final stage, where right is defined by the decisions of conscience in accordance with chosen ethical principles centered on liberty, justice and human rights (Armstrong, 1993; Kohlberg, 1984). Kohlberg cognitive moral development theory model has been utilized by Chang (2011) in the study on “The effect of an information ethics course on the information ethics values of students - A Chinese guanxi culture perspective”.

An information ethics course should be taught to LIS students to expose them to ethical standards applicable to their profession. Lee, Dark and Chen (2005) argued that the ultimate objective of the information ethics course should be to foster moral development among LIS students and therefore students should be exposed to activities that inform and challenge their moral reasoning. This would enable them understand the consequences of their actions and the implications of their moral choices. Students should be able to reason if they have a right to cheat in examinations, if they are violating the department’s rights, and what sentence the judge should give them once they are caught. Moral development according to Kohlberg is a process; therefore teaching information ethics should not be a one time activity. Students should be allowed to develop their moral reasoning gradually and at individual level. Advancements in moral development are internal to an individual and complex in nature (Lee, Dark and Chen 2005). Teaching IE in LIS should be progressive from introduction of concepts to advanced application of information ethics theories and moral reasoning. For example, an introduction of IE concepts may be done in first year at the beginning of LIS course to create awareness among students of IE concepts and principles. A full fledged IE course may be offered in
second year to build on the information ethics concepts and advance on moral development. At this level, students will have conceptualized mainstream LIS principles and therefore easy to relate and apply the ethical aspects. As students progress in their training to third and fourth year, their moral reasoning is developed depending on learning outcomes of the curriculum and the expectations of the work environment.

Using Bandura’s theory, the necessity of teaching an information ethics course in LIS schools is to elicit a desire for moral reasoning ability among students both at the learning stage and later in industry in the information age as consumers and producers of information.

During the training, LIS schools instill integration of information ethics during learning and model certain desired behaviour to their students, with the hope that this would be portrayed both at the university and even later at the work place. The student observes what is going on socially in the learning environment and responds emotionally and cognitively to the stimuli. Morality is a construct that is cognitive, effective and social in nature (Lee, Dark and Chen 2005). Becoming ethical is a process and it is fostered and developed by one’s relational environment. Teaching of the course should therefore consider individual learners existing ideas about information ethics and/or information ethics violations in relation to their social settings and cultural environments. Meng-Hsiang and Feng-Yang (2003:61) have used this theory in their study “an investigation of volitional control in information ethics” and acknowledge that transgressive conduct is regulated by both social sanction and internalized self-sanction that operate concurrently and anticipatorily. In agreement, they explain the view of Bandura (1941) that due to
social sanctions, people refrain from transgressing because they anticipate that such a conduct will bring them social censure and other adverse consequences. Further, people exercise self-reactive control, in order to behave pro-socially out of self satisfaction and self-respect and refrain from transgressing because such a conduct will give rise to self reproof.

During information ethics course the lecturer exposes students to modeled behaviour and assists them to identify key ethical concerns and ethical decision making areas contained in the curriculum. Students should be able to appreciate behaviour that is reinforced and also shun from behaviour that is punished in the model. The lecturer should be able to manipulate all the components of modeling namely attention, retention, reproduction and motivation. For example, there must be sufficient incentives to motivate the actual performance of modeled actions. A variety of instruction methods including lectures and active learning methods should be used which provide a forum for LIS students to express internalized ideas from their perspective and assist to capture the attention of students. Varied media would also assist the lecturer to understand his/her students in order to explain ethical dilemmas in an information society. Lecturers ought to be very careful on the behaviour they themselves model to their students because they become a role model to the students they teach. For example, students copy from their lecturers on how to make citations on their assignments from the references made by the lecturer in course outline or even course handouts. The university should provide incentives to strongly influence good behaviour and also institute strong punishment to strongly discourage students from engaging in amoral information ethics practices such as
plagiarism, hacking and privacy violation. Students develop morally as they train and as they become conscious of information ethics aspects and professional codes of ethics in LIS. Gradually, students appreciate the necessity for acceptable moral conduct and are able to apply what they have learnt in their studies and profession. ICTs have been embraced in all spheres of life at the social, institutional and individual level. New forms of use and misuse of ICTs have impact on LIS education in Kenya.

Society has adapted technology as part and parcel of their day to day life. LIS students form part of the society and they use ICTs for personal and academic purposes. Use of technology is prone to misuse depending on a student’s value system. A student’s moral development is constructed by the society which they come from and the established institutional culture. Therefore, student’s morality is identified with both the culture of their social backgrounds and that of their training institutions. The university admits students from a society which has prescribed cultural practices and beliefs; and also sends them after training to practice in the same or different society. It is expected that during LIS training, students will be exposed to certain knowledge in information ethics that will enhance their ethical development, hence Kohlberg’s moral reasoning. The ethical decision making of information professionals is identified with their alma mater and stipulated code of ethics for the profession.

The moral standards of society have been affected by ICTs both positively and negatively. ICTs have been used to promote good cultural, social and political practices among the public. However, moral systems have been destabilized and no longer work
well anymore as in earlier days. Society is confronting new dimensions and challenges not addressed in existing rules and regulations. The legal systems are not any better in that they are not adequate to handle some of these challenges because of the rapid pace of the development of new ICTs. For example, there are new forms of inequality in access to information and participation in decision making by people even of the same society. This therefore justifies the necessity for integrating information ethics in LIS curriculum.

Universities admit students to a particular undergraduate programme irrespective of their social backgrounds. The students could be at different levels of moral development according to moral reasoning theory. It is the responsibility of LIS departments to model acceptable behaviour among their graduates which is portrayed during training and in future at the workplace. When studying the information ethics course, students are presented with various ethical dilemmas that relate to LIS professions and challenged to make decisions. They are educated on the code of ethics and regulations in the information industry. Students should be educated about the ethical issues of information in order to enable them practice and apply correct moral and professional obligations in industry.

2.3 History of Information Ethics

The concept of information ethics was reconceived in the 1990s by scholars like Stephen Almagno, Rafael Capurro, Luciano Floridi and Robert Hauptman (Ocholla 2009, Froehlich 2005). The field has grown very quickly and with time, it has been embraced by many other disciplines and has evolved into a multi-threaded phenomenon stimulated
by the convergence of many disciplines on issues associated with the internet (Capurro 2010, Froehlich 2005).

Early contributions on information ethics are credited to Kostrewski and Oppenheim (1980), for their discussion on issues such as confidentiality of information, bias in information provided to clients or consumers, the quality of data supplied by online vendors and the use of work facilities (Froehlich 2004). Hauptman (1988) is acknowledged by Froehlich (2004) for his works and articles on ethics and for starting the Journal of information ethics in 1992. The work on “Ethical challenges in librarianship” addressed some of the problem areas of librarianship including censorship, privacy, access to information, balance in collection development, copyright, fair use, codes of ethics, and problem patrons (Froehlich 2004 citing Hauptman 1988). In addition, Froehlich (2004) recognizes the contributions of Capurro (1988) to information ethics through “Informationethos und Informationsethik” (Information Ethos and Information Ethics). Other earlier contributors are Mason, Mason, and Culnan (1995) who discussed issues in professionalism and ethical concerns in information systems, organizations and society with some treatment of library matters.

Ocholla (2009) noted that the integration of information ethics in the curriculum has been embraced in developed world. This is corroborated by Conway’s (n.d.) observation that the field of scholarship and teaching in information ethics is concentrated in developed economies such as Germany, Japan, United Kingdom and the United States. However, the situation in Africa is still wanting. Mabawonku (2010) found that very limited research efforts have been carried out on IE by scholars and academicians. Mutula (2011)
shares the same view by pointing out that the concept of information ethics is yet to be understood and appreciated in African scholarship as reflected by limited research and publications on the subject. Britz (2010) points out a similar observation through a search carried out on publications related to African information ethics by African scholars, which yielded very limited number of publications. Particularly, Britz (2013) observed that this problem became more apparent at the first International Centre for Information Ethics (ICIE) symposium in October 2004 held in Karlsruhe, Germany, where African scholars were absent and he attributed this among other factors, to the fact that not much research has been done on the African continent on information ethics. According to him it seemed, in terms of scholarly publications, that African scholars did not have much to offer to their global counterparts on the ethical challenges facing Africa in the era of globalization (Britz 2010; Britz 2013). Capurro (2010) reiterates this fact by noting that information ethics in Africa is a young academic field and not much has been published on the role that African philosophy can play in thinking about the challenges arising from the impact of ICT on African societies and culture. This is considered to be a problem according to Buchanan and Ocholla (2010) because the responsibility of scholars includes teaching the next generation of professionals and scholars; and also mentor and influence through their teaching. Mutula (2012) opined that the laggard position of Africa with regard to information ethics has been instrumental in the strategic attempts by African scholars to infuse information ethics in the curriculum especially at the university level.

UNESCO working closely with African scholars continue to support several workshops on the ethical dimensions of information society in Africa (Mutula, 2012). The first
African conference on information ethics under the theme the Joy of Sharing Knowledge was held in Tshwane/ Pretoria, South Africa from 5th -7th February 2007, under the auspices of UNESCO. It was sponsored by the South African Government’s department of communications and organized by the University of Wisconsin-Milwaukee, University of Pretoria, University of Pittsburgh, and the International Center for Information Ethics (ANIE 2012; Capurro 2013; Mutula 2011). The conference brought together 80 policy makers, academic staff and scholars from Africa and around the world, to discuss the impact of the use of modern Information and Communication Technologies (ICTs) on the African continent and formulate a specific African perspective on the challenges involved locally and globally (ANIE, Capurro 2013). The Tswane declaration on information ethics in Africa was formulated as a result of the conference, which called for the mobilization of academic research on information ethics and adopted by all participants of the conference as a genuine African contribution to the UNESCO code of Ethics for the information society (Mutula 2011). Another contribution of this forum was the establishment of the African Network for Information Ethics (ANIE) which encourages and facilitates sharing among African scholars by giving them a platform to exchange and realize their ideas in information ethics (Capurro, 2013). In addressing the challenges of the information society on the African continent, this conference was inspired by the Geneva declaration adopted by the Geneva world summit information society (WSIS) of 2003.

Another information ethics forum was a high level workshop on Ethics and e-government in Africa held on 23rd -26th February 2009, also under the auspices of UNESCO and sponsored by the South African Government and organized by the
University of Wisconsin-Milwaukee, University of Pretoria, University of Pittsburgh, and the International Center for Information Ethics (Capurro 2013). The workshop addressed among other subjects the global perspectives of information ethics with regard to transparency, secrecy, trust, rights, responsibilities, and accountability (Mutula 2012).

The second conference took place in Gaborone, Botswana from 6th – 8th September 2010. The theme of this event was ‘Teaching ethics in Africa: current status, opportunities and challenges’. It was indicated during the conference that the subject of information ethics is not mainstreamed across tertiary education institutions, but elements of information ethics are only present in several courses, hence resulting in the development of information ethics tool kit for information ethics curriculum. (ANIE 2012; Mutula 2012). The fourth forum of information ethics in Africa was held in September 2011 at the University of Pretoria focusing on generating information ethics curriculum for undergraduate study at the university; with another in the same venue in September 2012 on the ethical dimensions of social media (Mutula, 2012).

Another effort was the partnership between the University of Wisconsin Milwaukee (USA), the University of Botswana and the University of Zulululand (Mutula 2011 citing Britz, Mutula and Ocholla). This partnership would facilitate curriculum development and faculty training for library and information science schools on Africa. It also focused on ethics as an interdisciplinary field dedicated to critical reflection on moral values and practices related to production, storage and distribution of information as well as the related information systems, infrastructures and policies that are embedded in modern culture and society (Mutula 2011). A recent development is the proposed Trainer of
Trainers (TOT) for information ethics in Uganda by the African Center of Excellence for Information Ethics. The College of Computing and information sciences, Makerere University in conjunction with the African Center of Excellence for Information Ethics in the department of information sciences, University of Pretoria is sensitizing TOT on the proposed curriculum and giving pedagogical training in the teaching of information ethics. This is in preparation for the implementation of the proposed curriculum to teach information ethics at universities in Africa. The objectives of the TOT training/workshop are:-

- To sensitize key stakeholders on the broader concept of information ethics and the proposed curriculum
- To impart pedagogical knowledge and skills in the teaching of information ethics
- To discuss and propose institutional framework of extending the training to more lecturers of information ethics in Uganda.

With the above substantial commitment to information ethics on the continent, Kenya has a basis to learn from and develop strategies to enhance especially the teaching of information of information ethics in LIS for undergraduates in universities.

2.4 Ethics Issues in LIS

Hannabuss (1996) states that a close association is made between ethics and professional behaviour in library and information work. He expounds that important indicators of such behaviour are providing accurate and reliable information, maintaining a confidential relationship with the client, observing the intellectual property rights connected with information products and ensuring equitable access to information. Four main ethical
issues in an electronic age identified by Mason (1986) are privacy, accuracy, property and accessibility (often referred to as PAPA). Mutula (2011) expands on these ethical issues as follows:

- **Privacy.** What information about one self or one’s association must a person reveal to others, under what conditions and with what safeguards? What things can people keep to themselves and not be forced to reveal to others?

- **Accuracy.** Who is responsible for authenticity, fidelity and accuracy of information? Who is to be held accountable for errors in information and how is the injured party to be made whole?

- **Property.** Who owns information? What are the just and fair prices for its exchange? Who owns the channels, especially the airways, through which information is transmitted? How should access to this scarce resource be allocated?

- **Accessibility.** What information does a person or an organization have a right or a privilege to obtain, under what conditions and with what safeguards?

According to Hauptman (2002) information ethics concerns itself with the production, storage, retrieval, security, and application of information within an ethical context. Buchanan and Henderson (2009) citing Capurro state that information ethics explore and evaluate the following fundamental information issues: the development of moral values in the information field; the creation of new power structures in the information field; information myths; hidden contradictions and intentionalities in information theories and practices, and the development of ethical conflicts in the information field. Additional information ethical issues described by Sueur, Hommes and Bester (2013) include: access
to information, cloud computing, cooperate social responsibility, cyber bullying, electronic stewardship and social engineering.

2.5 Teaching Information Ethics in Library and Information Science Schools

There has been concerted effort and research to justify the rationale for integrating information ethics into the higher education landscape in Africa (Capurro, 2010; Mutula, 2011; Ocholla, 2009). Ocholla (2009) acknowledges research effort by information ethics scholars all over the world on information ethics education and notably by the University of Pittsburgh through the initiative of Toni Carbo and Stephen Almagno. Debate and dialogue on information ethics integration in the curriculum for Africa is gaining momentum as scholars from developed and developing world engage on the subject (Mutula 2011). In particular, Mutula (2011) acknowledges the concerted efforts through the partnership of information science scholars from Southern African library schools, supported by their counterparts at the University of Wisconsin Milwaukee to develop information ethics curriculum for Africa.

2.5.1 Necessity for IE Education

Concerning the necessity of IE education, Ocholla (2009) observed that: IE education encourage LIS professionals to practice and apply correct moral and professional obligations in the performance of their duties; that students should be aware of the ethical issues that arise from information, especially in the current knowledge society where information is often the factor determining competitive advantage in many enterprises; that ethical behaviour is part of professional conduct and should be taught within the first professional qualification, and that ethics as it relates to information is an issue that we
cannot ignore particularly in the so called information society. Vagaan (2003) poses a question “would LIS scholars and educators want their students to drive on this superhighway without knowing the traffic rules? Should our students not also be provided with moral benchmarking tools so that they can better assess the challenges and pitfalls referred to initially, such as globalization, and the possibility of ethical misconduct such as the misuse of information? Dadzie (2011) adds that information ethics education has become increasingly important due to questions posed on the influence of ICT usage on moral values, and the unequal access to and use of ICT popularly referred to as the digital divide.

Ocholla (2009) raised pertinent questions concerning information ethics education: is information ethics education in LIS schools necessary? Who should offer such education in terms of discipline and academic department and individual/expertise? Who offers such education and why? Who should learn information ethics? How long should information ethics education take in the curricula? At what learning level should it be offered? What should be learnt or taught at an information ethics course? What are the challenges and opportunities of information ethics education in Africa?

The learning outcomes of the IE course according to Liu and Yang (2012) are to improve IE cognition and judgment and attaining a higher level of critical discourse quality. The ALISE Special interest group (2007) notes that IE education should achieve the following:

- Enable students to recognize and articulate ethical conflicts in the information field;
• Inculcate a sense of responsibility with regard to the consequences of individual and collective interactions in the information field;
• Provide the foundations for intercultural dialogue through the recognition of different kinds of information cultures and values;
• Provide students with basic knowledge about ethical theories and concepts and about their relevance to everyday information work; and
• To teach them to reflect ethically and think critically and carry these abilities into their professional life?

Carbo (2010) is concerned with ensuring a diversity of specializations, levels of expertise, and cultural backgrounds which need to be integrated with different cultural views and global perspectives. To achieve success in information ethics education, Carbo (2010) urges a continued emphasis on the careful use of language, as well as promotion of imparting critical thinking skills. Through these strategies, students can be helped to think critically, and not just react with expected responses; this would enable students be better armed to address complex ethical dilemmas when they leave classroom (Zimmer, 2010)

2.5.2 Models for Information Ethics

There are several models that have been proposed as tools to help facilitate ethical development among students learning ethics or information ethics. Some models were consulted including the Cognitive flexibility theory model (Schmidt and Boncella 2006) and the Parallel space methodology (Morris 1999), but not used because they had little
relation to aim of the study. This study discusses three models used for teaching moral development, which are closely related to the aim of this study namely: - Laudon and Laudon model on “the relationship between ethical, social and political issues in an information society”; the miniature guide to critical thinking concepts and tools model by Paul and Elder and the Potter Box model by Ralph Potter.

a) Laudon and Laudon Model

Laudon and Laudon (2012) designed a model to demonstrate the ethical, social and political issues in the information age. They suggest that ethical dilemma faced by an information systems manager is reflected in social and political debate as represented in Figure 2.2.
The relationship between ethical, social and political issues in an information society

According to Laudon and Laudon (2012), this model is useful for identifying the main moral dimensions of the information society, which cut across various levels of action - individual, social and political. In their explanation of the model, society is considered as a calm pond on a summer day, whereby there is a partial equilibrium between individuals and with social and political institutions. Individuals know how to act in this pond because social institutions have developed well-honed rules of behaviour, and these are supported by laws developed in the political sector. These laws prescribe acceptable behaviour and promise sanctions for violations. They argue that if a rock is tossed into...
the center of the pond, it will create ripples; and this is similar to the introduction of new information technology to society which has a ripple effect, raising new ethical, social and political issues that must be dealt with on the individual, social and political level.

Laudon and Laudon (2012) note that there are five moral dimensions:-

- **Information rights and obligation.** What information rights do individuals and organizations possess with respect to themselves? What can they protect?

- **Property rights and obligation.** How will traditional intellectual property rights be protected in a digital society in which tracing and accounting for ownership are difficult and ignoring such property rights is easy?

- **Accountability and control.** Who can and will be held accountable and liable for the harm done to individual and collective information and property rights?

- **Systems quality.** What standards of data and systems quality should we demand to protect individual rights and the safety of society?

- **Quality of life.** What values should be preserved in information and knowledge based society? Which institutions should we protect from violations? Which cultural values and practices are supported by the new information technology?

When society is disturbed by new information technology and systems hitting a society at rest, suddenly, individual actors are confronted with new situations often not covered by old rules (Laudon and Laudon 2012). Social institutions cannot respond overnight to these ripples and it may take years to develop etiquette, expectations, social responsibility, politically correct attitudes, or approved rules. Political institutions also require time before developing new laws and often require the demonstration of real
harm before they act. During such occasions, people may have to act, and they may be forced to act in legal grey area. This reflects the Kenyan situation whereby the laws and regulations do not adequately address ethical challenges relating to ICT. Mason (n.d) concurs with this view that with the rise of modern technology, the logistics of the workplace have changed forever, and that new rules are needed to govern behaviour, and to develop procedures for librarians on the frontlines.


Paul and Elder (2006) developed the miniature guide to critical thinking concepts and tools as presented in figure 2.3.

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**Figure 2.2 The Miniature Guide to Critical Thinking Concepts and Tools**
Carbo (2004) notes that Paul and Elder (2006) proposed an eight-step process to determine the logic of an ethical question as follows:

1) Purpose (considering an individual’s rights and needs as well as those of others)
2) Key ethical question(s)
3) Information needed to answer the question(s)
4) Concepts and principles to guide thinking
5) Main assumptions used
6) Points of view of all stakeholders
7) Main inferences/conclusions (what are the alternatives, are all being considered)
8) Implications (for self and others, including consequences, questions of harm/good).

This model has been proposed by Carbo (2004) as the best tool in information science to help students work through ethical reflections towards making moral decisions. He argues that the model focuses on steps in critical thinking and encourages students to work through the steps, looping back to earlier steps in the process. He further notes that he has successfully used the model as part of a brief introduction to information ethics (Carbo 2004).

e) The Potter Box Model

The Potter Box model of reasoning was created by Ralph Potter. It utilizes four categories which involve defining the situation, identifying one’s values, knowing one’s principles, and choosing loyalties then eventually making judgment (Christian 2001 et. al). It is often used by communication professionals but can be used by any one facing an ethical dilemma. It is based on the notion that ethical dilemma result
from conflicts that arise between the values we hold, the principles we use to make our decision and the duties we have to others (Christian, 2001et. al). This model is presented as figure 2.4.

**The Potter Box Model**

The first step concerns defining the situation by setting out all facts of the issue at hand so that you can understand it better. This helps one understand exactly what ethical dilemma he/she is trying to solve. In step two, the person considers those aspects considered important in guiding decisions about what is right or wrong. The person(s) should compare and contrast different values including those held at personal level and/or corporate level that influence decision making. The values of a society, church and organization often influence individuals in identifying and choosing values. In addition, choice of values are often influenced by one’s profession. The third step involves
identifying one’s guiding principles by considering fundamental ethical principles that may be applicable to the situation. Step four encourages one to choose his/her loyalties. It determines to whom you must pay allegiance or be loyal in the situation. This step may also include a re-examination of the previous steps and if something goes wrong in one of the steps of decision making then you have to go through the box again. When two different people analyse the same situation using the potter box, they can come to different conclusions. This model has been developed further to include decision criteria which correspond to Kohlberg stages of moral reasoning (Swain 1994).

2.5.3 Teaching Methods Used in Information Ethics Education

Researchers hold different views about teaching methods that are best suited for teaching information ethics. Buchanan and Ocholla (2010) observed that the sharing of experiences in the information field in how and what is taught, and how and why students engage in IE remains virtually unexplored. This raises a concern about the competencies and methodologies used in teaching IE subjects. Lee, Dark and Chen (2005) observe that the purpose of ethics education is to make students understand the importance of ethics and its consequences, thus moral development. They believed that the teaching methods suitable for facilitating ethical development are those methods that promote the students’ cognitive, effective and social development, which include case study, team education, group discussion, and role modeling (Lee, Dark and Chen, 2005). This view is supported by Forester and Morrison cited by Liu and Yang (2012) who suggest adopting scenarios and role-playing and using case studies to: - increase learners’ motivation, engage them in ethical behaviour, and clarify their values systems and worldviews. It has been argued
that discussing case oriented professional ethics without an adequate understanding of basic ethics often fails to achieve the overall goal; instead, students are only made aware of individual dilemmas or become ensnared in legal analysis and fail to develop a systematic mechanism for moral judgments (Sun in Liu and Yang 2012).

To provide opportunities for active learning and enhance education, a combination of teaching methods should be used which incorporate models, diverse readings, active discussions and interaction among students, and perspective from outside speakers (Ndwandwe, Ocholla and Dube, 2009). Rikowski (2006) suggests several teaching methods including lecturers and seminars, online collaboration tools, worksheets, storybooks, role playing, classroom discussions, brain storming sessions, use real life examples, news stories, developing billboards, conduct surveys, speakers, musicals and inputting information into databases. Carbo (2005) notes that information ethics teaching requires a hybrid of teaching methods which integrate pragmatism and realism instruction methods. Lee, Dark and Chen (2005) believe that the teaching method should be used in a manner that allows students to have an experience in order to advance students’ sense of ethics. They state that teaching tools such as case study, team education, group discussion and role modeling, should be facilitated in a manner that allows students to understand wholes, their constituent parts, and relationship therein. Students must also utilize continuous active agency if they are to acquire experience that contributes to their ethical development (Lee, Dark and Chen 2005).
Beaton (2009) describes eight instruction methods used to teach ethics in Information technology. The first method is to hold a trial whereby students are assigned homework in the previous class research topic, with the lecturer as the judge who entertains arguments and intervenes when team members get off-line. A ruling is made after closing arguments and a debriefing is held to discuss the realities of ethical questions posed to the students. The second method involves holding debate based on the topic taught by the lecturer in the previous lecture. Everyone participates in the debate and evaluation is done via 4 Post-It notes. The third method is to have a “lead the class assignment” whereby a group of students leads the class on a topic of their choice. The group may use video clips, power points, handouts, short news stories, or self-made videos to entertain their peers by demonstrating their new found knowledge.

A fourth method concerns having a breaking news class, where the lecturer hands out various recent news articles teams who read the article to the class. The teams share the general gist of the article with the rest of the class, and whether or not the actions within the article were ethical, based on a specific ethical model. The fifth method is to do case studies whereby case scenarios are provided, and then students analyse the scenarios and answer questions. The six methods employs discussion boards, where students read assigned articles and offer comments which are evaluated by examining the post in relation to a grading rubric. The seventh method shows students a movie and thereafter asked to writes a reaction paper based on the content of the movie as it relates to ethical or unethical behaviour. Lastly, in the eighth method, students are asked to present anything of their choice to a particular audience, that clearly demonstrates ethical
behaviour in information technology. Fallis (2007) sums up that while several teaching methods are suitable for teaching information ethics, the ultimate responsibility for their effective use depends on the instructor.

Teaching information ethics may be challenging since the concepts are ever increasing and the decision between bad and good is not easily decided. Liu and Yang (2012) contend that since the goals of an IE course include cultivating moral awareness and sensitivity, fostering critical thinking and developing discourse quality, instruments that directly evaluate those abilities are lacking. They suggest that the construction of globalized information ethics is urgently needed, with its focus placed on the combination of theory and practice to develop curriculum and the assessment of the learning outcomes of IE course. Universities are ideally placed to play a pre-eminent role in developing and supporting ethical behaviour in their students and future information professionals, through the marrying together of sound pedagogical practices, appropriate technology and a conceptualization of information ethics which has relevance to information science students. They have the power to influence awareness and knowledge of information ethics issues through their curriculum.

2.5.4 Content for Information Ethics Course

Debates are on-going regarding what constitutes a model curriculum for information ethics course at university level. Mutula (2011) argues that understanding the subject of information ethics is important in order to appreciate the dynamics and implications of its integration in the curriculum for Africa. Capurro (2010) and Mutula (2011) share the
same idea by suggesting that the oral and written traditions of the African philosophy and
the theories underpinning information ethics could provide a basis for the content. They
propose the interrogation of the ubuntu philosophy to provide information ethics
curricula that is relevant to Africa. According to Ndwandwe, Ocholla and Dube (2009) an
information ethics course should include: terminology, importance, history; information
ethics and society; ethics theories; information ethics in the work place; intellectual
property-copyright and industrial property; information policy; cyber ethics; information
ethics dilemma; code of professional ethics for information workers; access and
protection theme issues, information and communication freedoms, privacy, security,
censorship; role of professional association; security and integrity of information content;
digital divide; ethical dimensions of information and case studies. To Samek (2010), in
order to properly engage with information ethics instruction from a critical stance, the
framework must be extended into emergent information ethics terrains such as
knowledge economy, indigenous knowledge, cybernetic pluralism, and global tightening
of information and border controls.

Suggestions by the ALISE Special Interest Group (2007) on the core areas that should go
into an information ethics course include intellectual freedom, intellectual property; open
access; preservation; balance in collection; fair use; surveillance; cultural destruction;
censorship; cognitive capitalism; imposed technologies; public access to government
information (Ndwandwe, Ocholla and Dube, 2009). Laudon and Laudon (2005) suggest
that an information ethics course should cover areas such as: - relationship between
ethics, social and political issues in information society; and moral dimensions of the
information age. Mutula (2011) observes that technology offers opportunity for wrong doing which include hacking, viruses, high cost of access, restrictive intellectual property rights, limited freedom of expression and censorship, lack of freedom of information, policy vacuums, intrusiveness of information, rapid technological development and social exclusion. He argues that these information ethics violations should be included in the course content and information science students made aware of the penalties meted by the university on students proved guilty of academic related malpractices.

The Association for Library and Information Science (ALISE) further propose four areas that should form the basis for an information ethics curriculum namely:-

- Curriculum should be informed by information ethics through a unit in the required foundations (or equivalent) course devoted.
- One or more courses, specifically on information ethics offered on a period basis based in international literatures from a diversity of viewpoints.
- Include a study and discussion across the library and information curriculum.
- On-going engagement with information ethics as challenging questions and issues need to be revised through the lenses of individuals, institutions and societies.

2.5.5 Who Should Teach the Course

There have been debates on who should teach the course. Ndwandwe, Ocholla and Dube (2009) citing Fallis (2007) argue that the course should be taught by library and information science professionals in conjunction with the department of philosophy. Ocholla (2009) gives a different view by supporting a multidisciplinary approach, basing
his argument on pedagogical and resource oriented reasons. He adds that LIS schools would rely on qualified staff from other schools for support in offering IE courses.

2.5.6 Types of IE Courses

There have been debates on whether the course should be fully dedicated to IE or integrated into other mainstream LIS courses. Liu and Yang (2012) note that existing disputes involve the nature of IE education on whether IE courses should be provided independently or in combination with other disciplines. Ocholla (2009) preferred an autonomous IE course basing his argument on the fact the there are evident differences between the objectives of an integrated and autonomous undergraduate IE courses. He explains that integrated units are likely to focus more on the general awareness, while autonomous courses provide more in-depth education. The justification for an autonomous course was the importance given to the course and the problems arising from reckless misuse of information throughout the world, and to ensure that LIS graduates at whatever level have some knowledge of IE (Ocholla 2009:13). Ndwandwe (2009) shared the same view for a full fledged module in that an integrated module will only cover basic components of information ethics. However, those in favour of an integrated mode in Ocholla (2009:14) stated that while it is useful to teach IE as a stand alone course for a semester, it is more meaningful if it is integrated into different aspects across the curriculum. In addition, it is argued that professionals should not view IE as an isolated component of the curriculum but as part and parcel of the information architecture.
2.6 Challenges of Teaching Information Ethics in Information Science Curricula

Kenya has the potential to integrate information ethics in information science curriculum but it has to contend with several challenges that have been highlighted. A major challenge of integrating information ethics in curricula in Africa as presented by Ocholla (2009) is lack of well defined content for the course. Much of the available literature is confined to addressing the extent to which information ethics is necessary, who should offer information ethics and why, but the content of the programme has not been addressed (Mutula, 2011).

Ocholla (2009) identifies the challenges of integrating information ethics in information science to include inadequate teaching capacity, bloated curriculum and lack of awareness of the importance of information ethics by scholars. Curricula in universities are designed by every university therefore attaining uniformity may not be achieved. Curriculum developers influence the course to be included and in many cases lead to bloated curriculum that has no room for extra new courses however noble the idea may be. Mutula (2011) contends that more challenges relate to digital divide, interoperability of systems issues; lack of enabling policies, poor ICT infrastructure and bad governance. In Kenya, the national information policy is still at formative stages. The media Act (2009) makes references to the use of technology in information cycle. The bill requires journalist to “use technological tools with skill and thoughtfulness, avoiding techniques that skew facts, distort reality, or sensationalize events” (Media Act, 2009). Information professionals are faced with the challenge of enforcing these regulations especially when there are political influences associated with the information in question (Limo 2010).
Other challenges include the need for African literature and an African perspective on the subject, and keeping abreast with the latest developments in information legislation (Ndwandwe, Ocholla and Dube 2009). Several authors have decried the absence of publications on IE by African scholars (Britz 2013; Capurro 2010; Mabawonku 2010 and Mutula 2011).

Other challenges that must be addressed and overcome include access and accessibility—digital divide and the ethical consequences of social exclusion (Mutula, 2011). Several suggestions were made by Zimmer (2010) to address the situation including integrating information ethics across diverse educational contexts, framing information ethics within multiple discourses and critically reflecting on the ethical implications of African pedagogical methods and environments themselves. Nd wandwe, Ocholla and Dube (2009) stated that getting students to participate in group discussions and challenge certain views may pose a problem due to cultural taboos. Zimmer (2010) suggests that to address this challenge, LIS community of educators and professionals would need to explore new ways to encourage and capitalize on a diversity of perspectives within the information ethics classroom. He adds that they ought to provoke critical thinking and push students into new intellectual terrain including critically interrogating our own languages and positioning when teaching information ethics.

2.7 Summary

This chapter discussed the theoretical framework and literature related to the study as well as the history of information ethics. Information ethics in the Africa region is a
young academic field and it is yet to be well understood by scholars. There has been concerted effort and research to integrating information ethics in LIS curriculum in higher education in the region. Discussions were also made on the challenges of teaching information ethics in LIS curriculum and suggestions on how these challenges could be addressed.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methods and procedures used in carrying out the study including how the study was planned and carried out. It describes the research design, study population, population sampling, size of the population and sampling procedures. The chapter further describes the research instruments as well data collection strategies and instruments as well as reliability and validity; data analysis and ethical considerations of research. The chapter is organized into the following thematic areas: research paradigm; research design; research approach; target population; population sample, and sampling techniques.

3.2 Research Paradigm

A paradigm is a basic set of beliefs that guide action (Creswell 2009:19). There are various research paradigms that have been identified by Creswell (2003) namely: Post positivism, constructivism/ interpretivism, advocacy/participatory, and pragmatism. This study was based on a pragmatic philosophical orientation for various reasons.

3.2.1 Pragmatic Paradigm

Teddlie and Tashakkori (2009:7) defined pragmatic paradigm as a deconstructive paradigm that debunks concepts such as truth and reality and focuses instead on what works as truth regarding the research questions under investigation. A pragmatic research
paradigm was best suited for the nature and scope of the problem being investigated in this study. Douglass (2012) citing Hjorland (2000) once questioned whether the study on information ethics education in Africa should remain as a pragmatic philosophy. Information ethics is a relatively young academic field, and the formative works already done in this discipline are mainly exploratory that offer limited conceptual and theoretical reach (Capurro 2010; Douglass 2012; Hjorland 2000). Literature indicates that although scholars have engaged in the study of how and where information ethics is taught in Africa, they have not fully achieved methodological rigour because a theoretical framework has yet to emerge (Douglass 2012).

Creswell (2009; 2003) notes that a pragmatic paradigm is concerned with applications of what works in presenting solutions to problems; thus, the important aspects of research are the problem being studied and the questions asked about the problem. This is supported by the fact that through pragmatic approach, a researcher will use multiple methods of data collection to best answer the research questions and may employ both quantitative and qualitative methods in data collection, focus on the practical implications of research and emphasize the importance of conducting research that best addresses the research problem (Creswell 2009). Consequently, this research used both qualitative and quantitative approaches hence the choice of a pragmatic approach.

Earlier studies which have adopted other paradigms have come under criticism. Douglass (2012) citing Ponterotto (2005) notes that given the novelty of IE discourse, scholars are necessarily using exploratory studies to provide depth of understanding rather than
breadth of understanding. These studies have been restricted to their ability to establish cause- and- effect relationships, thus their ability to predict future behaviour. Consequently, given the limited number of study cases, it was impractical and unproductive to immediately begin with positivist approach (Douglass 2012). On the other hand, the surveys carried out by Ocholla (2009, 2010), Akakandelwa (2010) and Mabawonku (2010) demonstrated constructivism or critical ideological approaches, but the open ended questions used in these surveys had an effect on the participant’s natural space for constructing meaning; hence the likelihood of less meaning being infused by subjects and more from the researcher (Douglass 2012). Owing to the above, pragmatic approach was considered the most appropriate for this study. The researcher blended both the questionnaire and interviews to circumvent the problem pointed out in earlier studies.

The researcher adopted a pragmatic approach for this study because it is a new field of study; consequently, it was evident that there was limited theoretical framework on information ethics education in Africa. As such the study was guided by the research problem and the research questions, hence a pragmatic approach was considered more appropriate as pointed out by Creswell (2009). Besides, Creswell (2003:21) recommends a pragmatic approach for a mixed method research, which was the case in this study.

3.3 Research Design

A research design is a plan or structured framework on how a person intends to conduct the research process in order to solve the research problem (Babbie and Mouton 2001).
Research design refers to all the issues involved in planning and executing the research study from identifying the problem through to reporting and publishing the results (Punch 2003). It presents a plan of how the researcher intends to conduct a research showing how all the major parts of the research work together in achieving the objectives of the study (Mikkelsen 2005). The two main research strategies are qualitative and quantitative. Within these, there are several different research designs such as survey, experimental, ex post facto, historical, case study, ethnography, correlation which a researcher may choose from (Oso and Onen 2008).

3.3.1 Survey

This study is an exploratory survey research because some research questions focused on “what questions” of IE teaching in LIS curriculum with the goal being to develop pertinent prepositions for further inquiry (Creswell 2009:9). Babbie (2005:252) notes that surveys may be used for descriptive, explanatory and/or exploratory purposes, and are chiefly used in studies that have individual people as units of analysis. Survey research presents oriented methodology used to investigate trends, attitudes, or opinions of some part of a population by studying a sample of that population (Creswell 2003; Oso and Onen 2008). The characteristics of a sample group of respondents may be taken to reflect those of a larger population and generalizations made about the population (Babbie and Mouton 2001:232). Since the purpose of a survey research is to generalize and make inferences from a sample to a population, this study generalized the findings from the four (4) LIS departments to represent all LIS training schools in Kenya.
Yin (2009:9) points out that research questions which focus mainly on who, what, where, how many, and how much on their line of inquiry are likely to favour survey methods. Survey research was therefore preferred for this study because the study sought to answer questions on what IE content was taught in LIS training and to what extent had it been integrated in LIS curriculum.

### 3.4 Research Approach

Creswell (2003) defines research methodology as a set of procedures and methods used to conduct research. Payne and Payne (2004) observe that the choice of a research method depends on the type of research questions the study is trying to answer. To examine and analyze the teaching of information ethics in universities, this study employed mixed method approaches that integrate both qualitative and quantitative research methods in collecting and analyzing data in a single study (Creswell 2003; Bryman 2008). Mixed method has been defined as a type of research design in which qualitative and quantitative approaches are used in types of questions, research methods, data collection and analysis procedures and/or inferences (Tashakkori and Teddlie 2003:711). Bryman (2008) opines that using both quantitative and qualitative research should involve a mixing of the research methods involved and not just using them in tandem.

To avert the inherent weaknesses of either qualitative or quantitative method, the research design adopted a mixed method approach which combined research methods that cross the two research strategies (Bryman 2008).
3.4.1 Justification for the Use of Mixed Method Approach

Using mixed method research enabled the researcher to capitalize on the strengths of both qualitative and quantitative methods and at the same time, compensate for the weakness of each method (Bryman 2008; Punch 2003). The study applied the concurrent mixed method strategy whereby data was collected using both qualitative and quantitative data collection methods at the same time. This approach was important because the research was a blend of both qualitative and quantitative research questions. It integrated the “why” and “how” questions (for example, why should information ethics be incorporated in LIS curriculum?), which has been associated with qualitative research, and the “what” and to “what extent” questions identified with quantitative research. For example, as pointed out by Yin (2009: 63), to what extent has information ethics been integrated in LIS curriculum?

Creswell (2003) believes that researchers employ a mixed method design to expand an understanding from one method to another, and to converge or confirm findings from different data sources. Bryman (2008) proposed three approaches to mixed method research as triangulation, facilitation and complementary. The mixed method approach facilitated triangulation of data sources sought by qualitative and quantitative data collection methods, and information obtained from multiple respondents.

The purpose for this study was to investigate the nature and level of teaching information ethics in LIS schools in public universities in Kenya. This purpose was instrumental in the determination of the mixed method approach in that by using a combination of the
two research approaches, the researcher was able to obtain comprehensive data that realized the objectives and answered the research questions for this study. The research question of this study reflected a mixed approach in that questions 1, 5 and 6 were qualitative in nature, while questions 2, 3 and 4 elicited quantitative data.

The mixed method approach refers to triangulating data sources by seeking convergence across the quantitative and qualitative methods. Questionnaires were credibly used to collect data from a dispersed and a wide population of students and teachers from which the larger sample of this study was drawn. On the other hand, interviews and documentary analysis provided in-depth and useful insights on the teaching of information ethics in LIS departments in universities in Kenya. The mixed method approach was used by Ndwandwe (2009) in his MA thesis on: “Teaching and learning of information ethics in Library and information science departments/schools in South Africa”.

3.5 Target Population

This study was conducted in four schools/ departments offering LIS programmes in public universities in Kenya namely: - Kisii University, The Technical University of Kenya, Kenyatta University, and Moi University. However, exceptions were made of Laikipia University and Pwani University on the grounds that the LIS programme had just been launched. The four universities were identified on the basis of the length of time that Library and information science training has been in existence and the level of establishment of information science departments in these institutions. As earlier stated, information ethics is a young academic discipline, and the study considered these
universities to have build staff capacity and have reviewed their curricula over the years to reflect emerging and contemporary issues in Library and Information Studies. Study participants were in three groups namely: - head of LIS departments; lecturers who teach information ethics or courses that integrate information ethics aspects, and LIS undergraduate students from four universities.

Moi University had a unique integrated Information Sciences programme, whereby students pursuing a Bachelor of Science in information sciences (BSc. information sciences) specialized in their fourth year of study. After specializations, the students then belonged to three departments namely: - Library, Records Management and Information Studies (LRM&IS), Publishing and Media Studies (PMS) and Information Technology (IT). This necessitated the inclusion of additional two heads of department (Publishing and Media Studies and IT) into the study since the fourth year information science students belonged to these departments. The other three universities namely: - Kisii University, The Technical University of Kenya and Kenyatta University had only one department offering LIS programmes.

The six departments are listed in Table 3.1.
Table 3.1 List of Departments Offering LIS Related Courses

<table>
<thead>
<tr>
<th>Department</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Technology</td>
<td>Moi University</td>
</tr>
<tr>
<td>Library, Records Management and</td>
<td>Moi University</td>
</tr>
<tr>
<td>Information Studies</td>
<td></td>
</tr>
<tr>
<td>Publishing and Media studies</td>
<td>Moi University</td>
</tr>
<tr>
<td>Library studies</td>
<td>Kenyatta University</td>
</tr>
<tr>
<td>Library and Liberal studies</td>
<td>The Technical University of Kenya</td>
</tr>
<tr>
<td>Library and information studies</td>
<td>Kisii University</td>
</tr>
</tbody>
</table>

Heads of department (HODs) were key informants for this study and provided information on curriculum implementation. The HOD is charged with the responsibility of coordinating teaching, learning and examination based on the curriculum. Their participation was important specifically on matters relating to integration of information ethics in LIS curricula and facilitation of IE education in their departments. Heads of the six (6) LIS departments (or related departments) were involved in this study.

Lecturers who teach information ethics or related ethics courses formed the second stratum of the study. This category of the population was responsible for the content and mode of delivering the content to the students. Lecturers translate the course description provided in the curriculum into a course outline which guides teaching and learning of a course, thus they are better placed to comment on embedded IE aspects in LIS. The researcher inquired from HODs on courses covered in their curriculum that had an ethics
or information ethics component. Literature reviewed in this study indicate that information ethics aspects are taught as components of major subject such as: Legal aspects of information; Management information systems; Management of libraries; Collection Development; publishing, and Information Technology (Otike 2010). Information provided by HODs during the pilot study provided similar observations, with just slight variations in terminology and description of courses. Basing on the information provided by HODs during the pilot study, lecturers teaching information ethics or ethics related courses were targeted for the study.

Students formed the third category of the study population. They were involved in the study to provide information on the learner’s perspective on information ethics education. It is important to note that only those students admitted for undergraduate programmes in LIS or Information sciences or their equivalent were targeted for the study. This was necessary because the other two departments (IT and PMS) from Moi University which were incorporated into this study offered other degree programmes which were outside the mandate of this study.

3.6 Population Sample

The study population is an aggregate of all individuals, events or objects that conform to some observable or designated set of characteristics. A sample in research is the smaller group from which conclusions are drawn and then generalized to the larger group (Fraenkel and Wallen 2000). The population comprised of students, Heads of department (HODs) and lecturers.
The study targeted three hundred and thirty eight (338) undergraduate students pursuing LIS training in public universities (table 3.2). The heads of the six (6) departments presented in table 3.1 were also targeted by this study. Another sample comprising of twenty four (24) lecturers who teach information ethics courses or related ethics courses as indicated by the HODs and/or as indicated in the curricula participated in the study. Since it was difficult to gain access to curricula in most universities, information provided by the HODs was used as the basis for sampling lecturers. However, a limitation was encountered in sampling the lecturers who teach information ethics courses in that the number ended up being smaller than anticipated prior to the study. The researcher was working on the assumption (first assumption of this study) that information ethics courses are integrated into LIS curriculum even though not adequately, and therefore the number of targeted lecturers would be sizeable. However, it proved difficult to ascertain the actual number of lecturers because approximation was made using the information provided by HODs based on the curriculum, which was the reference guide to these courses or units, yet curricula was safely guarded for reasons beyond this research. Even the pilot study could not provide actual insights since some heads of department contacted were not well versed in information ethics. The students’ sample is represented in Table 3.2.
Table 3.2: Sampling of Undergraduate Students for the Study

<table>
<thead>
<tr>
<th>Name of university</th>
<th>Year of study</th>
<th>Total</th>
<th>Sample population (30%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moi University</td>
<td>112 148 175 164</td>
<td>599</td>
<td>180</td>
</tr>
<tr>
<td>Kisii University</td>
<td>35 30 21 19</td>
<td>105</td>
<td>32</td>
</tr>
<tr>
<td>The Technical University</td>
<td>40 37 33 41</td>
<td>151</td>
<td>45</td>
</tr>
<tr>
<td>of Kenya</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kenyatta University</td>
<td>75 72 66 58</td>
<td>271</td>
<td>81</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>262 287 295 282</strong></td>
<td><strong>1126</strong></td>
<td><strong>338</strong></td>
</tr>
</tbody>
</table>

The student sample was 338 undergraduate students proportionately sampled (30%) from each university but equally selected (disproportionately) from first year to fourth year of study (Table 3.2). This sample group comprised of students from the four universities, the highest number of (180) students was from Moi University and the least number of (32) students were from Kisii University. This sample represented 30% of the total student population was satisfactory for this study (Mugenda and Mugenda 2003).

3.7 Population Sampling Techniques

Purposive sampling was employed for the purposes of identify the heads of department and the lecturers who teach information ethics. Purposive sampling involves deliberately
selecting a sample based on the experience and knowledge of the group to be sampled (Gay and Airasian 2000, Punch 2003).

Heads of department in LIS schools or faculties were purposively sampled because they are directly responsible for curriculum implementation, allocation of teaching loads and administration of examinations. Purposive sampling was also used to identify the lecturers who teach courses that integrate information ethics because this group is directly involved with the content on information ethics as documented in the curriculum.

Stratified random sampling was used to sample undergraduate students in the respective universities who responded to the questionnaires. The students were stratified according to their year of study (i.e. 1\textsuperscript{st}, 2\textsuperscript{nd}, 3\textsuperscript{rd} and 4\textsuperscript{th}) and randomly selected within their year of study. Random sampling ensures that each individual has equal probability of being selected from the population, ensuring that the sample will be representative of the population (Creswell 2003).

3.8 Data Collection Instruments

A research instrument is a device that the researcher uses to collect data (Fraenkel and Wallen 2000). Data collection instruments used by the study included questionnaires, interviews and content analysis. Both quantitative and qualitative data collection instruments were employed consistent with the research method chosen for the study. The fieldwork for this research was done from March to August 2012.
3.8.1 Questionnaires

Self-administered questionnaires were used to collect data from students and lecturers. Questionnaire was considered appropriate for this study because the population was drawn from four dispersed LIS departments in Kenya. It was also viewed as an appropriate technique to cover a large and dispersed sample of respondents especially when dealing with students. Two different questionnaires (see Appendix 1 and 2) were used to collect data from the lecturers and students registered for studies in the four information science schools. One questionnaire was administered to lecturers teaching information ethics or related ethics courses with the assistance of HODs in each department. The other questionnaire was administered to undergraduate students undertaking LIS training with the assistance of the respective class representatives. The questionnaires were different because they were intended to elicit responses from two different groups of respondents.

The questionnaires were semi-structured so as to allow the respondents to freely express their views. The questions were made up of multiple choices, open expressions by respondents and semantic differential scale (Likert scale). The assistance sought from class representatives in the distribution and collection of questionnaires to and from students made the exercise relatively easier. This greatly helped to control the loss of questionnaires to students, which is an inherent weakness whenever questionnaires are used. Another strategy employed to cater for the weakness of low response rate when using questionnaires was the distribution of extra questionnaires to respondents, far above the minimum target.
Despite the fact that the number of lecturers ended up being small, a detailed questionnaire was still found to be more appropriate for lecturers. One reason for this was that some of the lecturers were very busy and not easily available and a questionnaire which they could complete at their convenience was considered a better option. Another reason was that some of the information sought by the study necessitated reference to some teaching materials, which may not have been possible through an interview. However, to enhance the capacity of the questionnaire, a detailed questionnaire with a number of open ended questions was designed. The range of questions asked compensated for some of the interrogations that would have been well handled through interviews. The researcher made several follow ups to ensure that the return rate of questionnaires was as much as possible. Research has shown that questionnaire can be used to collect data from a large cluster and respondents that are not easily accessible (Woods 2006). In addition, content analysis of the course descriptions and course outlines assisted in confirming information provided by these respondents.

### 3.8.2 Interviews

The primary purpose of interviews is to enable the researcher to access people’s perceptions, meanings, and definitions of situations and constructions of realities (Punch 2003). The researcher personally conducted interviews with heads of departments. The interviews were guided by an in-depth semi structured interview schedule (see Appendix 3) which was developed based on the authors’ personal experience and a review of the literature. Interviews have the advantage of allowing the researcher to probe issues in
detail and possibly obtain more information than earlier anticipated in the design of data collection instruments.

Visits were arranged to each of the sampled universities to conduct interviews with the heads of department. The aim of the visits was to investigate the level of teaching information ethics courses and to study curricula (if possible) or documentary sources including university statutes, course outlines, and students handbooks, that support teaching of information ethics. The interviewees were asked to choose the most convenient time to them and interview sessions were tape recorded to facilitate transcribing into written text and analysis afterwards. The questions were fairly uniform to all interviewees.

3.8.3 Content Analysis

The researcher sought permission to access and study existing university documentary sources that relate to information ethics for its coverage of information ethics issues. Course descriptions of the LIS curriculum provided by the heads of department in each of the training schools and course outlines provided by individual lecturers were explored to check on the content and nature of information ethics teaching. University statutes and students handbooks were also studied to find out their coverage of information ethics issues.

3.9 Validity and Reliability

Validity is the measure of ascertaining the accuracy of the instruments by describing a measure that accurately reflects the concept it is intended to measure (Babbie and Mouton 2001:122). It is the extent to which an instrument measures what it claimed to
measure and concerns the accuracy of research findings (Creswell 2009:190; Punch 2003:100). Fraenkel and Wallen (2000) states that validity refers to the appropriateness, meaningfulness and usefulness of the specific inferences researchers make based on the data they collect. Ways of enhancing validity of research include:

- Confirming or triangulating data from several sources to address the same problem during data collection and having studies reviewed and corrected by participants and having other researchers review the procedures;
- Matching unfolding patterns and building explanations during analysis making reasonable inferences from indicators to the concept; and
- Paying attention to rival explanations and highlighting them (Creswell 2009:191; Punch 2003:101; Yin 2010:40)

Reliability is a matter of whether a particular technique, applied repeatedly to same object would yield the same results each time (Babbie and Mouton 2001:119). According to Fraenkel and Wallen (2000), reliability refers to the ability of a research instrument to enable a researcher collect consistent data. Consistency in this case refers to the stability of measurement over time and internal consistency of concept indicators (Punch 2003:99). Yin (2010:45) states that if a later investigator used the same procedures and conducted same study all over again, he/she should arrive at the same findings and conclusions.

To check on validity and reliability of results in this research study, the researcher carried out a pilot study and triangulated data from various data collection instruments.
3.9.1 Pilot Study

Prior to the actual collection of data, the data collection instruments were tested and revised on a volunteer sample that had similar characteristics to the target population, but did not form part of the targeted sample. Saunders et al. (2003) opines that a research instrument should be pilot tested before using it to collect data. The purpose of pre-testing data collection instruments was to enable the researcher to: - determine the completeness of the research tools; verify the language and the content of the questions; identifying any ambiguity in the questions; ensure that the instruments would elicit desired data and test the relevance of the collected data in relation to study research questions.

To establish validity, the instruments were pretested on a small sample of teaching staff and students with similar characteristics to actual respondents of the study. The instruments were pretested using the LIS coordinator, three (3) lecturers and ten (10) students enrolled for the Bachelor of library and information sciences at Egerton University. The researcher took note of the comments and recommendations indicated by the pilot respondents on the research tools. Using the outcome of the measures by the pilot sample, the researcher then revised and developed the instruments before using them for data collection.

3.9.2 Triangulation

Triangulation involves confirming data from several sources (Creswell 2009). It can be done by means of asking different questions, seeking different sources and using different
data collection methods (Babbie and Mouton 2001:277). The researcher sought evidence from multiple sources including reviewing course descriptions, course outlines and documents containing the rules and regulations so as to obtain clues on how the teaching of information ethics was carried out in LIS schools in public universities. The study employed both quantitative and qualitative methods to obtain data from the respondents. Questionnaires were used to collect data from a dispersed and a wide population of students and teachers, while interviews and content analysis provided in-depth insights into the teaching of information ethics in LIS departments in Kenya. Similar questions (see questions of appendix1) were investigated using both quantitative and qualitative approaches and then triangulated to confirm the data provided by the respondents. In this study, the researcher triangulated data obtained from lecturers on the content of IE course with information obtained from content analysis of the course descriptions and course outlines.

3.10 Data Analysis

Analysis of the three data sources employed a combined coding strategy. The interview sessions were taped and the data provided was processed and analysed immediately after every session. The tape recorded interviews were transcribed then merged with interview notes into coherent description of discussions and the data was coded and analyzed according to themes. The questionnaires were analyzed using descriptive statistics using SPSS software. Data collected from the content analysis was coded and analyzed. The data collected from the multiple methods employed was coded and analysed according to themes derived from the objectives of the study.
3.11 Constraints Experienced During Data Collection and Mitigation Measures

The researcher faced some constraints during data collection which had implications on the research. One of the challenges encountered concerned sampling of lecturers who teach information ethics courses. The researcher was working on the assumption that information ethics courses are integrated in various LIS courses and the number of targeted lecturers would be large. However, it proved difficult to ascertain the actual number of lecturers because approximation was made using the curriculum, which was the reference guide to these courses or units, yet it was safely guarded for reasons beyond this research. In this case, the researcher relied on the extracts from the curriculum provided by HODs for information on ethics courses.

Data collection took a longer period than anticipated since the semester dates varied from one university to another. The problem affected the data collection schedule in that it proved difficult to administer questionnaires to students at the beginning of a semester before they settled for classes and also at the end of the semester when they were preparing for exams. In situations like this, the researcher timed durations in the middle of the semester when classes were running smoothly.

3.12 Ethical Considerations

This study strictly adhered to ethical consideration of academic research since the research dealt with human beings and the topic was likely to bring sensitive issues into the forefront. The researcher sought the informed consent of the participants. The informants were informed that their responses were entirely for research purposes and their participation was voluntary. The rights, values and desires of the participants were considered. The participants were also assured of anonymity and confidentiality and in
the discussion and analysis of findings; individual names were not mentioned in excerpts from the thesis. The identity of individuals remained confidential in order to maintain privacy and discourage repercussions from their statements.

The researcher sought approval from the National Council for Science and Technology (currently referred to as NACOSTI) to conduct research and also from the universities selected to access their documents. Pseudo names were used in respect to the participants and information science schools that have been selected for the purpose of this study. The researcher included a consent note in every instrument to enable her gain informed consent from the participants and assure them that the information obtained would remain confidential between the two parties and used only for the purpose of the study. The researcher ensured that anonymity and confidentiality were maintained as much as possible.

3.13 Summary

This chapter described the research procedures used in this study and the measures taken in the field. It looked at the research paradigm, approach and design; study population; population sampling; data collection instruments and procedures, and the validity and reliability of data collection instruments used in the study. Mixed method approach was employed in this study and justification for its adoption was made. The chapter explored the methods of data analysis and interpretation, and the ethical consideration of the research. It further highlighted the challenges encountered during data collection and the measure taken to address them.
CHAPTER FOUR
DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This study investigated the teaching of information ethics in schools offering Library and Information Science (LIS) education in four public universities in Kenya with a view to proposing ways and means of enhancing its integration. Data was collected from heads of LIS departments in the universities, lecturers teaching information ethics courses or topics and students pursuing undergraduate degree programmes in LIS. This research employed a mixed method approach.

The study focused on information ethics issues including what is taught as IE content, relevance of teaching the course, extent of coverage of IE aspects, methods of curriculum delivery, and the learners’ perspectives on IE education in universities in Kenya. Discussions were also made on the challenges encountered in IE education and suggestions were made on what needs to be done to enhance teaching of IE in LIS schools. Data collected from both qualitative and quantitative research instruments is blended and inferences made on the findings (Creswell 2003; Tashakkori and Teddlie, 2003). Documents surveyed provided details of the content of IE and confirmed the information given by the respondents. Data was analyzed according to themes and descriptive statistics.

Data collected was organized and analyzed into six thematic areas according to the objectives of the study namely:- respondents demographic data, purpose for teaching
information ethics in LIS, coverage of information ethics in LIS curriculum, extent of integration of Information ethics in LIS curriculum, methods of instruction and the challenges faced in teaching information ethics in LIS schools in Kenya.

4.2 **Response Rate**

This study was carried out in four LIS schools drawn from four universities in Kenya namely; Moi University, Kenyatta University, The Technical University of Kenya and Kisii University. Respondents were drawn from undergraduate students, lecturers and Heads of department of information science schools (or their representatives). Two sets of questionnaires were administered, one to students and the other to lecturers, while the heads of department were interviewed.

The name Library and Information Studies (LIS) was selected for this study as a common name for all the four undergraduate programmes studied. The degree programmes studied were:-

1. Bachelor of Science in Information Sciences( BSc. IS) at Moi University
2. Bachelor of Library and Information Studies (BLINS) at Kisii University
3. Bachelor of Technology in Information Sciences (BTech. IS) at the Technical University of Kenya
4. Bachelor of Library Studies (BLIS) at Kenyatta University

The study population comprised university students totaling 1126 undergraduate students drawn as follows: 599 students from Moi University; 271 students from Kenyatta University; 151 students from The Technical University of Kenya, and 105 students from
Kisii University. A sample size of 338 students representing 30% of the study population was targeted for the study. This sample population was proportionately sampled (30% of the student population) per university but equally selected according to year of study within each university.

The responses by the targeted lecturers and students are represented in Table 4.1.

Table 4.1 Response Rate for Students and Lecturers

<table>
<thead>
<tr>
<th>Target respondents</th>
<th>University</th>
<th>Questionnaires issued</th>
<th>Questionnaires returned</th>
<th>Return rate (%)</th>
<th>Study sample(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students(n=252)</td>
<td>Moi</td>
<td>180</td>
<td>122</td>
<td>67.8</td>
<td>48.4</td>
</tr>
<tr>
<td></td>
<td>Kisii</td>
<td>32</td>
<td>29</td>
<td>90.6</td>
<td>11.5</td>
</tr>
<tr>
<td></td>
<td>Technical</td>
<td>45</td>
<td>38</td>
<td>84.4</td>
<td>15.1</td>
</tr>
<tr>
<td></td>
<td>Kenyatta</td>
<td>81</td>
<td>63</td>
<td>77.8</td>
<td>25.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>338</strong></td>
<td><strong>252</strong></td>
<td><strong>74.6</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td>Lecturers(n=20)</td>
<td>Moi</td>
<td>7</td>
<td>6</td>
<td>85.7</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Kisii</td>
<td>6</td>
<td>6</td>
<td>100</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Technical</td>
<td>6</td>
<td>5</td>
<td>83.3</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Kenyatta</td>
<td>5</td>
<td>3</td>
<td>60</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>24</strong></td>
<td><strong>20</strong></td>
<td><strong>83.3</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The overall response rate as presented in Table 4.1 was 252 (74.6%) for students and 20 (83.3%) for lectures of the target sample from the four universities studied. The response rate for both lecturers and students was satisfactory. According to Babbie and Mouton (2001:261), a response rate of 70% is very good. The return rate of the questionnaires distributed to students was quite high in all the universities. This was made possible due
to the assistance of class representatives who were requested to assist in distribution and collection of questionnaires from their classmates, which proved very effective. Students provided information on the learners’ perspective on IE education in LIS schools in Kenya. Individually, the response rate of lecturers from Kisii University (100%), Moi University (87.7%) and the Technical University of Kenya (83.3%) was very high. This was attributed to the persistent follow up by the researcher who is a member of two of these universities. To identify the lecturers who teach information ethics courses or topics, the study used the information provided by heads of department. Lecturers provided useful insights on the content of the IE course, the methods of curriculum delivery and suggestions on what needed to be done to enhance teaching of IE in LIS schools.

A hundred percent (100%) response rate was achieved with regard to interviews with heads of department. All the six (6) heads of department targeted by the study were interviewed as follows: Three (3) from Moi University, and one (1) each from Kisii University, Technical University of Kenya and Kenyatta University. The Bachelor of Science degree in Information Sciences (BSc. IS) programme offered at Moi University and the Bachelor of Library and Information Studies (BLINS) programme offered at Kisii University are integrated courses whereby students pursue common courses in the first and second years and then specialize in their third and fourth years of study. The specializations are: Publishing and Media studies; Information Technology; Archives and Records Management, and Library and Information studies. Heads of departments from
Moi University were drawn from these specializations (the last two are integrated into one department).

Heads of department were questioned on curriculum related issues on information ethics education in Kenya. Among the issues discussed included: what is taught in IE course and the relevance of teaching the course and who teaches the course. To maintain confidentiality of information as promised, the Heads of Department will be referred to as R1 to R6.

4.3 Demographic Data for Students and Lecturers

This section sought to find out the gender, year of study and area of specialization of LIS students. Although gender was not a major issue in the study, it was relevant in the profiling of the students.

4.3.1 Students Demographic Data

Table 4.2 presents background information for students.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>145</td>
<td>57.5</td>
</tr>
<tr>
<td>Female</td>
<td>107</td>
<td>42.5</td>
</tr>
<tr>
<td>Total</td>
<td>252</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year of study</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>42</td>
<td>16.7</td>
</tr>
<tr>
<td>Second</td>
<td>54</td>
<td>21.4</td>
</tr>
<tr>
<td>Third</td>
<td>73</td>
<td>29.0</td>
</tr>
<tr>
<td>Fourth</td>
<td>83</td>
<td>32.9</td>
</tr>
<tr>
<td>Total</td>
<td>252</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area of specialization</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Technology</td>
<td>43</td>
<td>17.1</td>
</tr>
<tr>
<td>Library Studies</td>
<td>31</td>
<td>12.3</td>
</tr>
<tr>
<td>Publishing and Book trade</td>
<td>24</td>
<td>9.5</td>
</tr>
<tr>
<td>Records Management &amp; Archives Administration</td>
<td>37</td>
<td>14.6</td>
</tr>
<tr>
<td>General LIS</td>
<td>117</td>
<td>46.4</td>
</tr>
<tr>
<td>Total</td>
<td>252</td>
<td>100</td>
</tr>
</tbody>
</table>
There was a balance between the two gender groups with 145 (57.5%) respondents being male and 107 (42.5%) female. The respondents were distributed evenly according to the year of study as follows: fourth year (32%); third year (29%); second year (21.4%) and first year (16.7%). This was similar to the representation of the areas of specialization with Information Technology (17.1%); Archives and Records Management (14.6%); Library and Information Studies (12.3%), and Publishing and media studies (9.5%). However, there was a unique group that did not specialize in any option which constituted all the respondents in first and second year of studies in all the universities, who have not moved to their specialization(s). Part of this group was drawn from Kenyatta University which by the time of this study offered an LIS option only in their curriculum.

4.3.2 Lecturers Demographic Data

Lecturers were asked to indicate their designation and area of specialization. The information obtained provided an understanding of the respondents but not necessarily as factors that determined the research findings. The study described the lecturer’s field of study and designation on an assumption that probably these had a bearing on the teaching of information ethics course as pointed out in prior literature (Ndwandwe 2009). The responses are presented in table 4.3.
Table 4.3  Lecturers Demographic Data  n=20

<table>
<thead>
<tr>
<th>Designation</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Senior lecturer</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Lecturer</td>
<td>13</td>
<td>65</td>
</tr>
<tr>
<td>Part-time lecturer</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**Area of Specialization**

<table>
<thead>
<tr>
<th>Area of Specialization</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Records Management and Knowledge Management</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>LIS</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td>IT Management</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

From table 4.3, most respondents were lecturers (65%) and senior lecturers (25%). There was only one (1) Professor (10%), and 3 (15%) part-time lecturers (20%) comprising of two (2) university librarians and one (1) consultant in records management. The findings also showed that all the lecturers had a LIS background, specializing in Library and Information Studies (60%); Information Technology (25%), and Records and Knowledge Management (15%). The term “lecturer” was used in this study to represent all the academic ranks in the LIS departments.

4.4 Purpose for Teaching Information Ethics in LIS undergraduate Programmes

The first objective of this study sought to establish the purpose of teaching information ethics in LIS programmes in universities in Kenya. This objective was ascertained from three dimensions: respondents were asked to comment on the importance of
incorporating IE in LIS curriculum; to rate its relevance to LIS curriculum, and to comment on information ethics vices, which has been indicated by literature to contribute to the necessity of IE in LIS (Limo 2010; Smith 2002).

### 4.4.1 Relevance of IE Course

With reference to the importance of teaching information ethics to LIS education and training, all the HODs and lecturers were of the view that an information ethics course was very important in LIS education and training. Students on the other hand were divided about the importance of IE to their training, with a majority (78.2\%) indicating the course was important in LIS training. To probe the matter further, HODs were asked to give their opinion on the relevance of integrating IE education in LIS curriculum. All of them were of the opinion that information ethics education was relevant to LIS students. In order to shed more light on the issue at hand, HODs were asked to explain why they thought IE was relevant. Various answers were given as presented in table 4.4.
Table 4.4 Responses from HODS on Relevance of IE Courses

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Response</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3, R5</td>
<td><em>To be good managers of ICT or Information centers in the future, students require knowledge in this area</em></td>
<td>Prepare students to be ethically equipped for the information profession</td>
</tr>
<tr>
<td>R6</td>
<td><em>Course helps to fill the lapse in legal systems relating to ICT.</em></td>
<td>The law lags behind rate of ICT development</td>
</tr>
<tr>
<td>R4</td>
<td><em>Course would assist to inculcate in students the culture of responsibility by making them see from a point of view that will serve society.</em></td>
<td>Ethical behaviour is based on societal norms and beliefs</td>
</tr>
<tr>
<td>R2</td>
<td><em>Ethics is taught to fill the gap that we believe exist between the ideal ethical standards and the real ethical standards that we engage in.</em></td>
<td>Society is experiencing ethical issues relating to ICT that need to be addressed</td>
</tr>
<tr>
<td></td>
<td><em>“Why be sorry in the future, set it right now”</em>.</td>
<td></td>
</tr>
<tr>
<td>R1</td>
<td><em>There are emerging cases of ICT abuse by students in information handling</em></td>
<td>Create awareness among students on the consequences of ICT abuse and encourage them to desist from indulging in such practices</td>
</tr>
</tbody>
</table>

Table 4.4 above presents responses drawn from interviews with HODs on the relevance of IE course. It was established that LIS students needed to be prepared and equipped with knowledge in information ethics as future information managers. It was also
suggested that ethics play a major role in filling the gap between Information technological advancements and the adequacy of the laws governing ICT, therefore a course in ethics would be necessary. In addition, it was noted that society is experiencing emerging ethical issues relating to ICT that need to be addressed and checked before the issues escalate. From the responses received, there is need to teach IE to LIS students in order to prepare them to be accountable producers and users of information now and in the future.

Lecturers were also asked to rate the relevance of the IE course(s) that they teach. The responses from lecturers were similar to those of HODs, with all of them affirming that the course(s) on IE was relevant to LIS students. Lecturers were further asked to provide reasons to support their responses on the relevance of IE teaching. They provided the following reasons: - that an IE course would help trainees to handle ethical dilemma faced in access and providing information as future information managers; that it would enable students to understand and appreciate legal and ethical aspects of information; it would assist to reduce the increasing rate of plagiarism in universities; and it would encourage responsible use and dissemination of information. However, they gave additional reasons that information ethics is an emerging area of debate in information sciences and that ICT misuse and abuse is increasing among information users and handlers.

Regarding the same question, students were asked to rate the relevance of the IE course(s) they learnt to their training. The responses are presented in table 4.5 below.
<table>
<thead>
<tr>
<th>Course Relevance by Students</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Relevant</td>
<td>95</td>
<td>37.7</td>
<td>37.7</td>
</tr>
<tr>
<td>Relevant</td>
<td>109</td>
<td>43.3</td>
<td>81.0</td>
</tr>
<tr>
<td>None</td>
<td>22</td>
<td>8.7</td>
<td>89.7</td>
</tr>
<tr>
<td>Not Relevant</td>
<td>26</td>
<td>10.3</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>252</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

As indicated in table 4.5, the respondents (students) overwhelmingly (81%) agreed that the course (they did) in information ethics was relevant to their studies. The study showed that only a few (10.3%) students did not find the course on IE relevant, with a minimal (8.7%) number not certain on the relevance of the course to their training.

**4.4.2 Information Ethics Violations**

In determining the purpose for teaching information ethics, respondents were asked questions relating to incidences of information ethics violations in LIS. It had been determined from literature that plagiarism concerns; increased hacking; privacy violation and threats to information access, accuracy and privacy as well as matters relating to the digital divide and alternative technologies necessitate teaching of ethics to Library and Information sciences in universities (Smith, 2002). To ascertain this question, three aspects were determined: presence of IE violations in LIS; prevalence, and contributing factors.
a) Presence of Information Ethics Violations

The study sought to ascertain whether LIS students engaged in any IE violations. HODs and lecturers were asked whether they had handled information ethics violations cases in their respective departments. All the respondents confirmed that information ethics incidences existed in LIS.

Students were asked three questions relating to their awareness on the level of information ethics violations in their schools: - whether IE violations existed; incidences observed, and awareness of penalties. Their responses were analysed and presented in table 4.6.

<table>
<thead>
<tr>
<th>Table 4.6 IE Violations in LIS Schools</th>
<th>N=252</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE Concerns</td>
<td>Response</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td>a) Existence of information ethics violations in your school</td>
<td>198</td>
</tr>
<tr>
<td>b) Incidences observed of IE violation at your university</td>
<td>152</td>
</tr>
<tr>
<td>c) Students awareness of university penalties on violators</td>
<td>99</td>
</tr>
</tbody>
</table>
To capture this data, students were asked varied questions within the students’ questionnaire as presented in questions 22, 23 and 24. From the findings, it is observed that out of the 252 respondents, majority (78.6 %) of students were aware of the existence of information ethics violations and over (60%) had observed information ethics violation incidences, while (21.4%) seemed ignorant of the existence of information ethics violations. It is clear therefore that IE violations exist in LIS and are prevalent.

Despite the fact that students were aware and had even observed incidences of IE violations, a follow up question on whether LIS students were aware of the penalties stipulated by their university on students found guilty of information ethics violations provided different results. A majority (60.7%) respondents said that they were not aware of these penalties, while only (39.3%) said that they were aware of the penalties meted out on information ethics violators by their universities.

The study established that students were not informed about sanctions imposed by their universities for violators of IE. In particular, the findings from the document survey confirmed that universities omitted this information in the student handbook. It was also reported by a majority (66.8%) of students that IE regulations were not provided in their students’ handbook. In fact, content analysis of the student handbooks confirmed that none of the students’ handbook from the four universities provided IE guidelines to students. During orientation of all freshmen in the four universities, every undergraduate student was issued with a student handbook which stipulated the rules and regulations
that govern a student’s conduct while at the university. The penalties for academic dishonesty or misconduct were also spelt out therein. The student handbook therefore acts as a tool to guide students on what is expected of them during their stay in the university.

b) Prevalence of Information Ethics Violation

The second indicator of IE violations was the prevalence of information ethics violations in LIS. All the respondents were asked to indicate IE violations that they thought were most common among LIS students. Responses from students showed that plagiarism (75.4%) was the most prevalent IE violation among LIS students, followed by piracy (63.5%), hacking (41.3%) and bridge of confidentiality (41.3%). Lecturers were of the same opinion regarding the high prevalence of plagiarism (80%). However, they differed on the prevalence level of bridge of confidentiality (53.3%) and hacking (46.7%), which they considered not to be much prevalent.

All HODs said that they had handled cases of plagiarism in undergraduate final year projects and/or in assignments. In one case, a HOD handled a case where students hacked examination through the Local Area Network (LAN) in their university. Another HOD reported a case of impersonation whereby two different students wrote and handed in the same assignment on behalf of another student. Yet another indicated that there was an emerging trend of students “buying” ready made assignments from computer bureaus around the university. When probed for further clarification, the HOD said that some of these bureaus are highly secretive but some publicly advertise to students for assistance
in assignments, projects, take-away continuous assessment tests (CATs) and even thesis writing.

c) Contributing Factors
The third variable of IE violations were the factors that contributed to its presence in LIS schools. HODs reported several factors that encouraged information ethics violations, including lack of clarity in regulations to guide on matters relating to information ethics; inadequate research skills; competing interests (students engage in so many other activities besides academics); laxity among lecturers to detect and curb the vice, and peer influence.

According to the students, contributing factors to IE violations included: - bureaus which offer research assistance at very little fee, academic pressure, inadequate time to do serious research; limited knowledge on how to do research and influence by other students. Another contributing factor pointed out by students was that they saw other students get away with it without being detected. One student said that there was no need to use a lot of effort yet there were commercial papers available online at a small fee.

When asked to comment on the same issue, lecturers had a numbers of reasons as presented in figure 4.1.
From figure 4.1, lecturers pointed out the key contributing factors included reluctance in conducting rigorous research (80%); inadequate research skills (75%); poor time management (55%), and inadequate information resources (50%). In addition, other factors that seemed to contribute included limited access to relevant information resources to support research (40%) and lack of creativity among the students (35%). From these responses, one can deduce that some factors are due to students own making like poor time management, reluctance in conducting rigorous research, and influence by peers, while other factors are as a result of poor research support systems by universities.

**Figure 4.1 Lecturers Perception on contributing Factors towards IE Violations N=20**
such as inadequate information resources; lack of clarity in regulation and poor research skills.

4.5 Coverage of Information Ethics Issues in LIS Curricula

The second objective of this study sought to find out whether information ethics topics were embedded into LIS curriculum. This was measured in four levels; whether they had done an IE course; IE content including information ethics violations incorporated in LIS curriculum; types of IE courses, and application of knowledge gained from these courses.

4.5.1 Course Done in Information Ethics

With reference to the first question, students were asked to indicate if they had done a course with ethics or information ethics issues. Their responses are presented in table 4.7 below.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>169</td>
<td>67.1</td>
</tr>
<tr>
<td>No</td>
<td>83</td>
<td>32.9</td>
</tr>
<tr>
<td>Total</td>
<td>252</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 4.7 shows that a majority (67.1%) of students had done a course on IE, while (32.9%) had not. This shows that although a high proportion of LIS students had done a course in IE, not all of them have had the privilege to pursue such a course.
With reference to the curriculum, respondents who had done a course were asked to indicate the code and name of courses with ethics or information ethics issues. Their responses are presented in table 4.8.

Table 4.8 Information Ethics Courses

<table>
<thead>
<tr>
<th>No.</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Year of study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LINS 100</td>
<td>Introduction to information science &amp; Knowledge Mgt</td>
<td>First</td>
</tr>
<tr>
<td>2</td>
<td>ALLQ 1111</td>
<td>Introduction to information science</td>
<td>First</td>
</tr>
<tr>
<td>3</td>
<td>COMS 100</td>
<td>Communication skills</td>
<td>First</td>
</tr>
<tr>
<td>4</td>
<td>UCCC 1103</td>
<td>Society and culture</td>
<td>First</td>
</tr>
<tr>
<td>5</td>
<td>INS 113</td>
<td>Information Literacy</td>
<td>First</td>
</tr>
<tr>
<td>6</td>
<td>BLISS 211</td>
<td>Information ethics and legal issues</td>
<td>Second</td>
</tr>
<tr>
<td>7</td>
<td>INS 227</td>
<td>Professional organization in Information Sciences</td>
<td>Second</td>
</tr>
<tr>
<td>8</td>
<td>INS 322</td>
<td>Management information systems (MIS)</td>
<td>Third</td>
</tr>
<tr>
<td>9</td>
<td>LINS 471</td>
<td>Legal and professional aspects of information</td>
<td>Fourth</td>
</tr>
<tr>
<td>10</td>
<td>LLQ 4112</td>
<td>Legal and ethical aspects of information</td>
<td>Fourth</td>
</tr>
<tr>
<td>11</td>
<td>INS 414</td>
<td>Legal aspects of information</td>
<td>Fourth</td>
</tr>
<tr>
<td>12</td>
<td>ALLQ 4133</td>
<td>Professional ethics and practice</td>
<td>Fourth</td>
</tr>
<tr>
<td>13</td>
<td>INS 433</td>
<td>ICT management</td>
<td>Fourth</td>
</tr>
</tbody>
</table>

Table 4.8 shows that overall, 13 courses on ethics or information ethics were offered in LIS departments. All the courses integrated topics on information ethics except for three fully dedicated courses namely: Professional ethics and practice; Legal and ethical
aspects of information, and Information ethics and legal issues. The results show that information ethics courses were offered from first to fourth year of study. These courses were offered mainly at fourth year and first year each accounting for 5(38.5%) courses. Lesser courses were offered at second and third years of study, with both accounting for only 3(16.7%) courses. Several authors have advocated for the integration of information ethics courses at the undergraduate level so as to cultivate ethical value among students early in their academic careers (Mutula and Mmakola 2013; Chang 2012; Ocholla 2009).

4.5.2 Application of Knowledge Gained from IE Course

The students who had done an IE course were asked to indicate whether they had been able to apply the knowledge acquired in information ethics to LIS course. Majority (61.5%) of students had been able to apply the knowledge while (38.5%) had not applied the knowledge gained from the course(s) studied to their studies. Those who had applied the knowledge acquired in information ethics were further asked to indicate how they had been able to apply the knowledge gained from the course. The responses from students on knowledge application varied from one student to another. Notably, one student wrote:

“After the course, I was able to resist plagiarism of others peoples’ works when faced with an opportunity”.

Another student said that

*I was able to desist pirating unlicensed software and antivirus from colleagues.*
4.5.3 Information Ethics Content Incorporation in LIS Curricula

To ascertain the content coverage of IE in LIS, the study analysed the IE content of courses offered. With reference to the curriculum, the study sought to find out from HODs, lecturers and students the content on information ethics and information ethics violations that was integrated in LIS curriculum.

a) Information Ethics Content Covered in LIS Courses

HODs, lecturers and students were required to indicate the topics on IE that were included in LIS curriculum. Using a three-point Likert scale, students were asked to rank the adequacy of coverage of various information ethics aspects, where a score of one (1) indicate that respondents found the coverage to be inadequate and a score of three (3) respondents found the coverage very adequate. The mean score for all the IE aspects was computed and ranked are presented in table 4.9.

Table 4.9 Students Perception on Coverage of Information Ethics Issues

<table>
<thead>
<tr>
<th>IE issues covered</th>
<th>Frequency of coverage</th>
<th></th>
<th>Score[^1]</th>
<th>Mean[^2]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inadequate</td>
<td>Adequate</td>
<td>Very adequate</td>
<td></td>
</tr>
<tr>
<td>Intellectual property</td>
<td>33</td>
<td>88</td>
<td>161</td>
<td>692</td>
</tr>
<tr>
<td>Information availability</td>
<td>34</td>
<td>74</td>
<td>144</td>
<td>614</td>
</tr>
<tr>
<td>Confidentiality</td>
<td>27</td>
<td>97</td>
<td>128</td>
<td>605</td>
</tr>
<tr>
<td>Service to clientele</td>
<td>39</td>
<td>77</td>
<td>136</td>
<td>601</td>
</tr>
<tr>
<td>Equitable access</td>
<td>56</td>
<td>93</td>
<td>103</td>
<td>551</td>
</tr>
<tr>
<td>Information privacy</td>
<td>72</td>
<td>84</td>
<td>96</td>
<td>528</td>
</tr>
</tbody>
</table>
Responses from students presented in Table 4.9 above indicate that only intellectual property was very adequately covered with a mean of 2.75. Availability of information (2.44), confidentiality (2.4) and service to clientele (2.38) were adequately covered in all the universities. In contrast, respondents felt that “do no harm” (1.86) electronic waste (1.78) and cultural diversity (1.49) were inadequately covered in LIS curriculum. From the above findings, it can be deduced that electronic waste, do no harm and cultural diversity were the least covered information ethics issue in LIS curriculum.

Responses from HODs and lecturers on the coverage of IE topics in LIS curricula in the four universities were varied. HODs gave the following topics which included: professional codes of ethics, freedom of expression, copyright, invasion of privacy, freedom of information, defamation, and piracy. Response from lecturers on the coverage of information ethics differed from one university to another. IE issues taught among the four universities were; Intellectual property, information privacy; service to clientele; confidentiality; availability of information, equitable access and fair use. Lecturers are
bestowed with the responsibility of interpreting the content from the course description to the course, thus had a command on the IE content integrated in LIS curriculum. However, lecturers suggested the following IE topics which they considered relevant but have not been included in LIS curricula:-

- LIS professional codes of ethics
- Cyber ethics and cyber crime
- Computer and internet crimes
- Netiquette (social media journalism)
- E-waste
- Social media

b) **Information Ethics Violations Integrated in the Curriculum**

The study sought to find out the content on information ethics violations that were integrated in LIS curriculum as presented in figure 4.2.
On average, all the four IE violation aspects covered in the data collection instruments were found to have been covered in the curriculum. Responses by students indicated that plagiarism (87.3%), piracy (81.7%), bridge of confidentiality (71.8%) and hacking (70.6%) were all equally covered. The responses from lecturers provided similar results to that of students with all IE violations given emphasis in that plagiarism (80%), hacking (55%), piracy (70%), and bridge of confidentiality (65%) were taught in LIS curriculum.

In addition to the content for teaching specific information ethics aspects and information ethics violations, lecturers were asked whether they introduced their students to professional codes of ethics as part of the IE course content. From the responses, most (80%) lecturers agreed that they introduced their students to professional codes of ethics.

Figure 4.2 Coverage of IE Violations

N=252
for information professionals. In addition, a majority (55.6%) of lecturers engaged their students in discussions on best practices of IE education in the world.

4.5.4 Types of IE Course

To ascertain the extent of IE coverage in LIS curriculum, the study analyzed the contents of the courses offered. It was established that there are two types of IE courses: fully fledged and integrated courses. The course content of the two types of courses were analysed to give the scope of their coverage.

a) Fully Fledged Information Ethics Courses

The study established that fully fledged courses were in two categories: one category was the fully IE dedicated courses in LIS curriculum, and the other is the mandatory IE courses done by LIS students that are offered in other curricula, referred to in this study as audited courses.

a) Fully Fledged Courses in LIS Curricula

It was found out that there were three fully dedicated IE courses in LIS from two universities under study and another two audited from other related departments in one university. To establish the degree to which information ethics content was integrated in the fully dedicated IE courses, the course content of the two courses was described. Document surveys on the course description and course outline for these courses provided additional information on the course content of the two courses specifically dedicated to IE.
Information Ethics and Legal Issues

- Legal systems in Kenya
- Legal information services
- Codes of ethics
- Definition of the concept of ethics; developing a good code of ethics and professional ethics in provision of legal information.
- Professional associations
- Challenges in legal information services

Professional Ethics and Practice

- Conceptualize ethics
- Ethics and society & development/governance/ law
- Information ethics
- Professional association and development of codes of ethics
- Ethics and professional responsibility
- Ethics and records keeping
- Records keeping and whistle blowing
- Records and archives management codes of ethics: importance; functions and values
- Records and archives management ethics and freedom of information
- Legislation council on archives (ICA) code of ethics in various countries

Legal and Ethical Aspects of Information

- Introduction to law: Meaning; sources, and legal systems
- Legislation relating to information systems
- Censorship meaning; purpose and types
- Managing censorship
- Information policy; information standards; copyright & media laws;
- Morality
- Professional responsibility
- Ethical code of conduct
- Freedom and choice
- Application of ethics by information professionals
- Emerging issues

ii) Audited Fully Fledged IE Courses

This study found out that two departments offered mandatory full fledged courses on information ethics from other degree courses within the same department for their fourth year LIS students. It was established that the Department of Information Technology audited INF 371: Law Ethics and Professional Practice in IT from BSc. Informatics for fourth year students (IT specialization). The Department of Publishing and Media Studies audited INS 410: Mass Media Law and Ethics from BSc. in Media Science for fourth year students (Media and publishing specialization).

INF 371: Law Ethics and Professional Studies

The course description for this course was as follows:-
Concepts of law in ICT; legal issues in ICT; digital signatures; internet/cyber law; service provider liability; trademarks on the internet; copyright law, intellectual property, domain name disputes; web page linking and legal liability; privacy and confidentiality; ICT policies and laws, National ICT policy(2006); the role of regulating authorities (Communications Authority of Kenya); ethics: concepts of ethics, ethical issues in ICT; computer ethics; netiquette; ethical decision making in the network environment; ICT code of ethics; environment and health concerns; professional practice; need for ICT professionalism; the role of WIPO on online arbitration; role of ICT professional associations in law and ethics (ACM, IEEE and CSK); challenges to ICT professional practice; strategies to mitigate the challenges.

**INS 410: Mass Media Law and Ethics**

The following was the course description:-

Introduction to mass media law and ethics; freedom of expression and media; copyright; defamation; contempt of court; invasion of privacy; constitutional provisions and laws governing and regulating mass media and journalism practice in Kenya; ethical issues in mass media, and ethical and legal challenges in the electronic environment.

In justifying for an additional course besides that offered by LIS department, one HOD indicated that because of the orientation of LIS, some aspects like copyright and books and newspaper Act were adequately covered. The heads of IT department and PMS department argued that with the advent of ICT, there were emerging ethical and legal issues which had direct implications on their field. For example, relating to new media,
issues such as defamation; Photoshop, and citizen journalism have arisen and need to be addressed. This was evident in the course content of the audited courses whereby the coverage of ethics was emphasized with an inclination to the specific area of specialization. Concerning duplication of content, the HODs contended that this would not have much implication on the course because their orientation was more towards their field and different from that of LIS department.

b) Integrated IE Courses

It was found that in all the four universities, topics on information ethics were integrated in other mainstream LIS courses. Courses that integrated information ethics were; Introduction to Information Science, Information Literacy, Communication Skills, Legal Aspects of Information, Society and Culture, and Professional Associations in Information Sciences.

4.5.5 Preferred IE Course Mode

Lecturers were asked to comment on their preferred mode of IE course and the responses are presented in table 4.10 below.

<table>
<thead>
<tr>
<th>Course Mode</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully dedicated</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td>Integrated course</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>Combine both</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 4.10 Preferred Mode of IE  

n=20
Lecturers were asked to indicate how they preferred the course to be taught and give reasons to support their choice. They were asked to choose from: - as a fully dedicated course; as part of another course or both. The respondents overwhelmingly (60%) preferred a fully dedicated course. A few (35%) opted for an integrated mode, while (5%) chose both. The reasons given for a fully dedicated course were: it would give the course the rightful emphasis; it would provide room for the lecturer to cover content in detail and tailor- make the course to the specific class; and promote awareness of the course, and appropriate the course to the various specializations in LIS. The respondents in favour of an integrated course indicated that the curriculum was congested hence no space to include an extra course; there were no guidelines on the framework of a fully dedicated IE course; IE content could be taught adequately in an information literacy course so long as the objectives of the course are met and teaching it as part of other courses helped students to appreciate its value in other aspects of LIS. The respondent who chose both indicated that it depended on learning outcome and teaching resources available in a particular university.

4.6 Extent of Integrating Information Ethics into Information Science Curricula

The study sought to find out the extent to which information ethics had been integrated into LIS curricula. To test this, various questions were asked to determine the adequacy of coverage of IE issues in the course outline, adequacy of coverage within the curriculum, preferred course type, assessment in examination and coverage within university guidelines.
4.6.1 Provision in the Course Outline

The course outline reflects the course description in the curriculum and the aspects the individual lecturer intends to cover in a particular course. Both the lecturers and students acknowledged that IE issues were covered in course outlines as presented in Figure 4.3.

![Bar graph showing IE coverage adequacy in course outlines](image)

**Figure 4.3 Adequacy of IE Coverage in Course Outline**

From figure 4.3 above, lecturers and students were in agreement that IE aspects were adequately covered in the course outline(s). Lecturers said that IE issues were adequately (45%) covered in the course outline. The same number of students indicated that IE aspects were adequately (44.0%) covered in their course outlines.
4.6.2 Adequacy of Integrating IE in LIS Curriculum

The study sought to evaluate the lecturers’ perception on incorporating information ethics into the courses that they teach. Over 60% of the lecturers said that more information ethics aspects should be incorporated into LIS courses. Lecturers were further probed on IE concepts that are integrated in LIS curriculum and the responses were computed, compared and ranked in table 4.11.

Table 4.11 Adequacy of Incorporating IE Concepts \( n=20 \)

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Very inadequate</th>
<th>Inadequate</th>
<th>Adequate</th>
<th>Very adequate</th>
<th>Score</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual property</td>
<td>0</td>
<td>1</td>
<td>9</td>
<td>10</td>
<td>69</td>
<td>3.45</td>
</tr>
<tr>
<td>Information availability</td>
<td>0</td>
<td>2</td>
<td>14</td>
<td>4</td>
<td>62</td>
<td>3.1</td>
</tr>
<tr>
<td>Confidentiality</td>
<td>0</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>60</td>
<td>3</td>
</tr>
<tr>
<td>Information privacy</td>
<td>1</td>
<td>4</td>
<td>10</td>
<td>5</td>
<td>59</td>
<td>2.95</td>
</tr>
<tr>
<td>Service to clientele</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td>4</td>
<td>51</td>
<td>2.55</td>
</tr>
<tr>
<td>Equitable access</td>
<td>2</td>
<td>8</td>
<td>9</td>
<td>1</td>
<td>49</td>
<td>2.45</td>
</tr>
<tr>
<td>Fair use</td>
<td>3</td>
<td>9</td>
<td>5</td>
<td>3</td>
<td>48</td>
<td>2.4</td>
</tr>
<tr>
<td>Do no harm</td>
<td>13</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>31</td>
<td>1.55</td>
</tr>
<tr>
<td>Electronic waste</td>
<td>12</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>30</td>
<td>1.5</td>
</tr>
<tr>
<td>Cultural diversity</td>
<td>12</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>28</td>
<td>1.4</td>
</tr>
</tbody>
</table>

\( ^a \) IE issues ranked in terms of adequacy of incorporating IE course in LIS curriculum

\( ^b \) Score was calculated as \((\text{Freq. very inadequate} \times 1) + (\text{Freq. inadequate} \times 2) + (\text{Freq. adequate} \times 3) + (\text{Freq. Very adequate} \times 4)\)

\( ^c \) mean was calculated as \((\text{Score} / \text{Sample size}(n=20))\)
Table 4.11 indicates that the adequacy of integration in LIS curricula differed for various IE aspects using their average mean. Those that were adequately incorporate were intellectual property (3.45), information availability (3.1), confidentiality (3) and information privacy (2.95). On the contrary, fair use (2.4) and “do no harm” (1.55) were inadequately incorporated in the curriculum. Of concern was electronic- waste (1.5) and cultural diversity (1.4), which were very inadequately incorporated in LIS curriculum. With slight variations, this pattern corresponds with the adequacy of coverage of the various aspects in IE courses.

4.6.3 Assessment and Examination of IE in LIS Training

This study sought to find out whether IE issues were assessed and/or examined in LIS training with a view to giving the aspects due emphasis in LIS curricula. According to the document survey respondents, the score of a student is constituted by 30% from Continuous Assessment Tests (CATs) and 70% from the main exam in every course registered for.

4.6.4 Assessment of IE in LIS

This section of the study sought to establish whether information ethics aspects in general are tested in stipulated assessment tools in LIS schools. To inform this question, examination of IE in various assessment methods were investigated in the four universities. The responses are presented in figure 4.4.
The responses indicated that assessment of IE issues was given emphasis in examinations; Continuous Assessment Test (CATS) and class presentations. Similar responses were obtained from lecturers and students on the adequacy of assessing IE in exams, CATs and class presentations. The same results were obtained from lecturers (55%) and students (47.2%) on the adequacy of assessing IE in exams. Though below average, the responses were same for adequacy of assessment in CATs (40%) for both lecturers and students. The responses were also similar for adequacy of assessment in class presentations for lecturers (45%) and students (47.2%). There was also agreement in the inadequacy of IE coverage in case studies by lecturers (45%) and students (31.7%). There was a slight difference between lecturers and students on the assessment of IE in class assignments.
Students indicated that assessment of IE was adequate in assignments (40.9%), but lecturers seemed to differ by indicating that the coverage was inadequate (25%).

4.6.5 Coverage of IE in University Regulatory Guidelines

Avenues that students use to get information pertaining to their academic conduct include the student handbook and university statutes. When students were asked whether guidelines on IE were covered in the students’ handbook, responses from 167 students representing (66.8%) indicated that IE was not covered in the students’ handbook. Document survey confirmed the students’ statements that their handbook did not cover IE as part of the student guidelines either on academics or student conduct. Every undergraduate student is issued with a copy of the student handbook during orientation immediately they join the university, which stipulates the rules and regulations that govern a student’s conduct while at the university.

The study sought to find out from lecturers whether IE issues were covered in university regulatory guidelines. Their responses resembled those from students, with only 25% of lecturers indicating that they were aware of the coverage of IE issues in university statutes, while majority (75%) were not aware of its coverage in university statutes. The respondents, who believed that IE issues were covered in the statutes, were asked to indicate areas of coverage. Their responses indicated that IE was covered in; corporate social responsibility, ethics in research, examination regulations, post graduate rules and regulations, and core values of the institution. However, they didn’t seem to adequately address information ethics issues. One respondent pointed out that students are informed
during orientation that their marks would be deducted or work completely disqualified if found guilty of examination violations. From the document survey, IE is briefly mentioned in the rules and regulations for undergraduate and graduate students. At Moi University, for example, the rules and regulations for undergraduates (Moi University rules and regulations, 2009, p31) under section 12 no. 11 read:

**Candidates are not allowed, in their course and assignments, to reproduce the works of another person, other persons without acknowledgement, and with intent to deceive. This amounts to plagiarism, a serious offence which will lead to disciplinary action being taken against such a candidate.**

The rules and regulations are clear about what amounts to plagiarism, but do not advise on the measures to be taken in case of such a violation. In addition, the guideline does not include other information ethics violations that are emerging in universities.

### 4.7 Methods of Instruction for Teaching Information Ethics in Universities

The fourth objective of this study sought to establish the methods of instruction used in teaching information ethics. Respondents were asked what teaching methods were employed; who teaches IE in LIS, what training have lecturers acquired in IE, and how they upgraded their knowledge in IE, and what information resources were used for teaching and learning IE in LIS schools.
4.7.1 Teaching Methods used for IE in LIS

In order to obtain views on this issue, students and lecturers were asked to comment on the teaching methods used in information ethics courses. The responses from students on teaching methods used by their lecturers during the IE courses are presented in table 4.12.

<table>
<thead>
<tr>
<th>Method</th>
<th>Response</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
</tr>
<tr>
<td>Lectures and seminars</td>
<td>200</td>
<td>79.4</td>
<td>52</td>
</tr>
<tr>
<td>Classroom discussions</td>
<td>189</td>
<td>75</td>
<td>63</td>
</tr>
<tr>
<td>Case studies</td>
<td>176</td>
<td>69.8</td>
<td>76</td>
</tr>
<tr>
<td>Real life examples</td>
<td>101</td>
<td>40.1</td>
<td>151</td>
</tr>
<tr>
<td>Speakers</td>
<td>90</td>
<td>35.7</td>
<td>162</td>
</tr>
<tr>
<td>Online collaboration</td>
<td>74</td>
<td>29.4</td>
<td>178</td>
</tr>
<tr>
<td>Role play</td>
<td>46</td>
<td>18.3</td>
<td>206</td>
</tr>
</tbody>
</table>

Lectures and seminars (79.4%) and classroom discussions (75%) were the two main methods of instructions for teaching information ethics. Apart from the two methods, real life examples (69.8%) is also a commonly used teaching method for information ethics courses. In contrast, online collaboration tools (29.4%) and role playing (18.3%) are the least employed methods of instruction.
Lecturers were asked to comment on adequacy of teaching methods used for information ethics. The responses are computed and ranked according to the mean score using a four-point Likert scale as presented in table 4.13.

**Table 4.13 Ranking of Teaching Methods**

<table>
<thead>
<tr>
<th>Method</th>
<th>Very inadequate</th>
<th>Inadequate</th>
<th>Adequate</th>
<th>Very adequate</th>
<th>Score&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Mean&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture/seminar</td>
<td>0</td>
<td>2</td>
<td>8</td>
<td>10</td>
<td>68</td>
<td>3.4</td>
</tr>
<tr>
<td>Classroom discussions</td>
<td>0</td>
<td>4</td>
<td>10</td>
<td>6</td>
<td>62</td>
<td>3.1</td>
</tr>
<tr>
<td>Case studies</td>
<td>2</td>
<td>7</td>
<td>8</td>
<td>3</td>
<td>52</td>
<td>2.6</td>
</tr>
<tr>
<td>Role play</td>
<td>4</td>
<td>8</td>
<td>8</td>
<td>0</td>
<td>44</td>
<td>2.2</td>
</tr>
<tr>
<td>Real life</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>43</td>
<td>2.15</td>
</tr>
<tr>
<td>Online collaborations</td>
<td>13</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>31</td>
<td>1.55</td>
</tr>
<tr>
<td>Speakers</td>
<td>12</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>30</td>
<td>1.5</td>
</tr>
</tbody>
</table>

<sup>a</sup> teaching methods ranked in terms of their adequacy of use in IE course

<sup>b</sup> Score was calculate as (Freq. inadequate*1) + (Freq. adequate*2) + (Freq. Very adequate*3)

<sup>c</sup> mean was calculated as (Score/ Sample size(n=252))

From table 4.13 above, lecturers adequately employed lectures and seminars (3.4), classroom discussions (3.1) and case studies (2.6) as teaching methods for teaching information ethics. Role plays (2.2) and real life examples (2.15) were inadequately used.
Online collaboration tools (1.55) and speakers (1.5) are the least employed methods of instruction.

The responses from lecturers strongly affirmed these findings. Lecturers indicated that the preferred methods of teaching were lectures and seminars, and classroom discussion. The study further sought from lecturers on the adequacy of the teaching methods used. It was pointed out that lectures and seminars and classroom discussions were adequate mainly because of the large sizes of classes, limited time allocated to a course and lack of orientation to some pedagogy. It was established that in one university, an average undergraduate class had one hundred and eighty (180) students, thus using teaching methods for smaller groups may not have been possible. The time allocated to a course was relatively found to be forty five (45) hours per semester, and the course content for the course had to be covered within this duration.

While acknowledging there was a high students’ population in classes, the remarks of heads of department pertaining to this scenario were:

* R1 noted that the classes are so big to employ teaching methods for small groups
* R2 said that the method of teaching does not matter but how you employ it
* R3 pointed out that in order to use speakers as a mode of delivery, it must be shown in the curriculum to support facilitation of the invited speaker.

In addition, some lecturers expressed the view that their universities did not induct them on some teaching methods. This therefore limited the choice of pedagogy not only in LIS but in all LIS courses.
4.7.2 Who Teaches IE in LIS Schools?

The findings showed that all the lecturers who taught information ethics had a LIS background. From the background information provided at the beginning of this chapter, the lecturers who taught IE specialized either in LIS, Records Management, Knowledge Management and/ or IT. With regard to the duration they had taught IE course(s), majority (70 %) of the respondents had taught IE course for 0-2 years, while a few (40%) had taught for 3-5 years.

Lecturers were asked to give their views on the academic discipline that should facilitate the teaching of IE course. The respondents said that IE courses should be taught by a lecturer who has authority in LIS but has a background in ethics, philosophy, sociology and/or law. In support of this, responses from lecturers indicated that they opted for more than one discipline with respondents preferring LIS (85%), Philosophy (55%), Sociology (35%) and Law (15%).

All heads of department preferred the course to be taught by a lecturer with a command and experience in LIS but with knowledge in ethics. Some suggested that LIS lecturers facilitating IE course should be inducted in short courses on ethics.

R3 said:

*It should be taught by a hybrid lecturer, with a command in LIS and has background knowledge in ethics.*

R5 said:

*I would prefer collaboration with other departments like philosophy and sociology for proper coverage of the nature and concepts of ethics.*
R6 suggested:

Since information ethics is drawn from various disciplines including philosophy and computer science, a multidisciplinary approach in teaching should be adapted but tailor make/ customize to LIS needs.

4.7.3 Training Lecturers in IE

None of the respondents who teach IE in LIS had undergone training information ethics. Only a minimal (25%) had attended seminars and conferences in information ethics. One respondent had not attended any conference or seminar on IE. When asked on what motivated them to teach despite the absence of training in IE, majority (70%) of lecturers said they had an interest in the area, while a smaller (25%) number of respondents had been asked to take up the course as part of their teaching load by their head of department.

None of the universities studied had facilitated any of their lecturers to attend conferences or workshops in information ethics. Lecturers perceived that the factors that contributed to the limited facilitation by the universities to enable them participate in conferences included: limited resources, contractual terms of employment, lack of planned schedule on IE seminars and little awareness of IE. One respondent said that when an IE conference opportunity arose, he/she was asked to cost share the conference attendance fee with the university, but was not in a position then to raise the funds needed.
However, most (80%) lecturers teaching IE reported that their respective universities provided support for them, while only 20% reported that there was no support. In this regard, the respondents said that the support was provided through procurement of e-resources to aid in teaching, development and implementation of curricula and curriculum reviews.

4.7.4 Knowledge of Information Ethics
The lecturers were asked to indicate how they upgraded their knowledge of IE. From the findings, all the respondents updated their knowledge of IE mainly through independent reading. Other ways used to update knowledge were contacting experts and using knowledge gained from conferences attended. A unique case presented by one lecturer was that he received Google alerts on updates on ethics and IT and/ law. The same lecturer gets notifications on information ethics from Pearson publishers whereby he is considered an institutional instructor with the publishing firm.

4.7.5 Information Resources for Teaching and Learning IE
In order to assess whether information resources for teaching and learning IE were adequate, respondents were presented with questions on this issue. Students were asked to comment on the availability of selected information sources namely: - books, electronic- journals, internet and conference proceedings. Their responses are presented in table 4.14.
Table 4.1 Sources in Information Ethics  

<table>
<thead>
<tr>
<th>University</th>
<th>Books</th>
<th>Journal</th>
<th>Internet</th>
<th>Conference proceedings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kisii University</td>
<td>F</td>
<td>A</td>
<td>NA</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>18</td>
<td>8</td>
<td>21</td>
</tr>
<tr>
<td>%</td>
<td>37.9</td>
<td>62.1</td>
<td>27.6</td>
<td>72.4</td>
</tr>
<tr>
<td>Moi University</td>
<td>F</td>
<td>A</td>
<td>NA</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>82</td>
<td>62</td>
<td>60</td>
</tr>
<tr>
<td>%</td>
<td>32.8</td>
<td>67.2</td>
<td>50.8</td>
<td>49.2</td>
</tr>
<tr>
<td>Kenyatta University</td>
<td>F</td>
<td>A</td>
<td>NA</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>46</td>
<td>43</td>
<td>20</td>
</tr>
<tr>
<td>%</td>
<td>27</td>
<td>73</td>
<td>68.3</td>
<td>31.7</td>
</tr>
<tr>
<td>Technical University</td>
<td>F</td>
<td>A</td>
<td>NA</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>26</td>
<td>25</td>
<td>13</td>
</tr>
<tr>
<td>%</td>
<td>31.3</td>
<td>68.3</td>
<td>65.8</td>
<td>34.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>F</td>
<td>A</td>
<td>NA</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>172</td>
<td>138</td>
<td>114</td>
</tr>
<tr>
<td>%</td>
<td>31.7</td>
<td>68.3</td>
<td>54.8</td>
<td>45.2</td>
</tr>
</tbody>
</table>

1 A=Available  
2 NA=Not Available

Table 4.14 presents students’ responses from the universities studied on how information ethics aspects are covered in information sources. There were mixed reactions from students across the four universities about the coverage of information ethics in various information sources as follows:-
i) Books

A majority (68.3%) of students from the four universities agreed that books were not available and were rarely used to support learning information ethics. In particular, 73% of those polled at Kenyatta University agreed that books were not available as compared to 68.3% from The Technical University of Kenya, 67.2% from Moi University and 62.1% from Kisii University.

ii) E- Journals

Though not overwhelmingly used, majority (54.2%) of students agreed that e- journals were available and that they accessed them as sources of information ethics, although a relatively equal number (45.2%) said that they had not used journals. Except for Kisii University where 27.6% rarely access e-journals, the other three universities had a very large number of respondents who used journals as their sources of information on IE. This could imply that libraries in the three universities have enhanced the level of access to e-journals through subscription.

iii) Internet

The internet is available to the majority (81.3%) of the respondents. A larger percentage of students from Kenyatta University (84.1%), The Technical University of Kenya (81.6%) and Moi University (81.1%) used internet as their sources of information ethics.

Only 21% of students said that they used conference proceedings as sources of information ethics. However, majority (79%) indicated that they had never used conference proceedings, with The Technical University of Kenya (94.7%) and Kenyatta University (82.5%) posting the highest percentages in this category.

Concerning the sources of information ethics, the internet (81.3%) and journals (54.8%) were often used as sources of information ethics, while, books (31.7%) and conference proceedings (21%) were rarely used by students. The use of the internet was higher at Moi University and The Technical University of Kenya.

Lecturers were asked give their opinions on the adequacy of information ethics coverage in selected information sources. Their responses, ranked according to the mean are presented in table 4.15 below.

<table>
<thead>
<tr>
<th>Information source</th>
<th>Very inadequate</th>
<th>Inadequate</th>
<th>Adequate</th>
<th>Very adequate</th>
<th>Score(^b)</th>
<th>Mean(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>9</td>
<td>66</td>
<td>3.4</td>
</tr>
<tr>
<td>E-Journals</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td>4</td>
<td>54</td>
<td>2.7</td>
</tr>
<tr>
<td>Conference proceedings</td>
<td>4</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>49</td>
<td>2.45</td>
</tr>
<tr>
<td>Books</td>
<td>4</td>
<td>9</td>
<td>4</td>
<td>3</td>
<td>46</td>
<td>2.3</td>
</tr>
</tbody>
</table>

\(^a\)Teaching methods ranked in terms of their adequacy of use in IE course

\(^b\) Score was calculate as \((\text{Freq. very inadequate}\times1) + (\text{Freq. inadequate}\times2) + (\text{Freq. adequate}\times3) + (\text{Freq. very adequate}\times4)\)

\(^c\) Mean was calculated as \((\text{Score/ Sample size(n=20)})\)
Table 4.15 shows that the internet and e-journals adequately cover content in information ethics. Lecturers noted that the coverage of IE in the internet was adequate with a mean of 3.4, with some 9(45%) of them finding the coverage to be very adequate. This was followed by coverage in e-journals which was found to be adequate though with a lesser mean of 2.7. However, some 6(30%) lecturers were of a different opinion regarding the coverage of IE in e-journals, which they considered to be inadequate. One lecturer raised a concern that some IE articles were in e-journals which could not be accessed due to the requirement of access rights which may not have been subscribed by the university library. Responses indicate that the coverage of IE in conference proceedings was inadequate with a mean of (2.45). However, a few 5(20%) respondents found the coverage in conference proceedings adequate. This could imply that lecturers, who had access of conference proceedings (may be through attendance to conferences), found the coverage of IE to be adequate. The findings suggest that books have inadequately covered IE content with a mean of (2.3). Moreover, some 9(45%) respondents found the coverage of IE in books to be inadequate.

4.8 Challenges Encountered in Teaching Information Ethics

The three sets of respondents were asked to comment on the key issues that they believed hindered the teaching and/or learning of information ethics in LIS.

4.8.1 Challenges Expressed by Lecturers

Lecturers were asked whether they had encountered any challenges in teaching information ethics and if so which one? All the lecturers stated that they had faced
various challenges in teaching information ethics in LIS curriculum. The challenges expressed are presented in figure 4.5.

![Challenges facing lecturers](chart.png)

**Figure 4.5 Challenges Faced in Teaching Information Ethics n=20**

From figure 4.5 above, the greatest challenges faced in teaching IE course in LIS were limited access to e-journals and text books on IE (80%); inadequate information resources (65%) and lack of financial support by universities (55%), which were cited by over a half of the respondents. This was followed by little awareness of information ethics (45%) and IE is an emerging area of study (40%). Other challenges cited were contextualizing information ethics (30%); limited research done on IE (30%); short duration allocated for a course (20%); very limited local literature on IE (15%), and little incorporation of IE content in curriculum (20%).
On the issue of access to journals, one respondent noted that not much of the published literature on IE is available locally, and they had to heavily rely on e-journal for teaching content on IE. Much of the available literature on IE was from the western world, yet access to most of these publications was based on subscription. This was a measure to protect the intellectual property right of the authors and also enable them to earn from their works. Another respondent linked lack of awareness to lack of financial support and the minimal incorporation of IE content in LIS curriculum. The respondent opined that due to lack of awareness, it was difficult to convince the university administration to fund forums on IE or acquisition of IE resources, and also justify to curriculum developers the necessity to incorporate additional content/course on IE.

According to two respondents, information ethics was still a young academic discourse in Kenya and not much had been written on this topic. It was therefore challenging to access local content which one can use to refer and assist to redraft the content of IE. On the issue of scarce content on IE, one respondent noted that very few academicians had the knowledge of what IE entailed and this was manifested in course descriptions of courses purported to include information ethics. The lecturers could only include content on IE that they were aware of especially from the LIS orientation. Two lecturers found difficulty in understanding the concept of IE since different authors provided different orientation to the topic especially on models for teaching of IE.
4.8.2 Challenges Identified by LIS Students

The study also sought to find out from students whether they faced challenges in learning information ethics. Their responses are presented in table 4.16.

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited information resources on IE</td>
<td>115</td>
<td>45.6</td>
</tr>
<tr>
<td>Lecturers not well versed with IE aspects</td>
<td>105</td>
<td>41.7</td>
</tr>
<tr>
<td>Little coverage of IE aspects in the course outline</td>
<td>101</td>
<td>40.1</td>
</tr>
<tr>
<td>Lack of literature on IE education in Kenya</td>
<td>83</td>
<td>32.9</td>
</tr>
<tr>
<td>Concepts were hard to understand</td>
<td>76</td>
<td>30.2</td>
</tr>
<tr>
<td>Inaccess to e-journals</td>
<td>51</td>
<td>20.2</td>
</tr>
<tr>
<td>Lecturers not well versed with IE aspects</td>
<td>17</td>
<td>13.5</td>
</tr>
</tbody>
</table>

The major challenges expressed by students mainly related to: - Limited information resources on IE (45.6%); lecturer not well versed with the course (41.7%), and little coverage of IE content in course outline (40.1%). Other challenges expressed were lack of literature on IE education in Kenya (32.9%) and the concepts were hard to understand (30.2%).

4.8.3 Challenges Expressed by Heads of Department

Interviews with the HODs revealed the following challenges:-

- limited research in the area of IE in Kenya
- Inadequate resources both material and human to support IE education
- Limited finances allocated to departments to facilitate lecturers to attend conferences
- Poorly defined content
- Little awareness
- The time allocated to a course (semester dates) is very short to exhaustively cover the content and also allow flexibility in using other pedagogical methods besides lectures
- Incompetency of lecturers in teaching information ethics
- Lack of policy guidelines on the mandatory ratio of textbooks per course
- Lack of a local forum to facilitate awareness and provide training of trainers in IE

4.9 Suggestions for Improving the Teaching of Information Ethics in LIS Schools in Kenyan universities

The study sought to establish the measures that can be put in place to enhance the teaching and learning of information ethics in LIS schools in Kenyan universities. Respondents suggested various measures that are analyzed and presented below.

4.9.1 Suggestions by HODs

The suggestions presented by HODs on how to improve the teaching of information ethics included the following:-

- Encourage publications in Information ethics.
- Encourage research especially at post graduate level for advanced discourse in the topic.
- Mentor specialists in IE.
- Organize regular seminars and workshops in IE for advanced discussions.
- Sensitize students, lecturers and university management on the importance of IE.
- Increase internet availability.
- Encourage collaboration and partnership.

4.9.2 Suggestions by Lecturers

The suggested measures of improvement stated by lecturers are presented in the table 4.17 below.

**Table 4.17 Measures by Lecturers  *Multiple Responses**

<table>
<thead>
<tr>
<th>Suggestions</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subscribe to more e-journal</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td>Source textbooks/ reading materials</td>
<td>10</td>
<td>55</td>
</tr>
<tr>
<td>Encourage discussions for exchange of ideas</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>Create awareness on IE education</td>
<td>13</td>
<td>65</td>
</tr>
<tr>
<td>More workshops/ seminars for levering knowledge</td>
<td>9</td>
<td>50</td>
</tr>
<tr>
<td>Encourage more research and publication</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td>Advocate for a local network on IE</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>Advocate for a full fledged course</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td>Facilitate training in IE</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Increase internet availability</td>
<td>5</td>
<td>25</td>
</tr>
</tbody>
</table>
Information ethics is a young academic discipline and there is need to create awareness about the course. Majority (65%) of respondents lobbied for more awareness on IE so that the university population may have a clear understanding of the importance of IE education. Due to the novelty of the field, not much had been published on the subject. This was reflected by a call made by many respondents for the subscription of more journals (60%) and sourcing for more textbooks or reading materials on IE (55%).

Some (60%) respondents advocated for a stand-alone course so as to give the course enough time to assist students to understand and appreciate information ethics. Training on the teaching of information ethics should be offered to lecturers to enable them appropriately handle the course. More workshops and seminars should be organized to provide opportunities to share ideas (50%). These forums are ideal for sharing experiences with others teaching IE and assist to create more awareness on the subject. Providing opportunities for discussions was suggested by (35%) respondents to encourage advanced discourse in IE course(s). Other measures suggested by respondents were encourage more research and publications (45%); advocate for a local network on IE (35%), and facilitate training in IE (30%).

4.9.3 Suggestions by Students

The suggested measures for improvement by students are presented in table 4.18.
Table 4.18 Measures by Students

<table>
<thead>
<tr>
<th>Suggestions</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide reading materials on IE</td>
<td>129</td>
<td>51</td>
</tr>
<tr>
<td>More coverage of IE content in course</td>
<td>118</td>
<td>46.8</td>
</tr>
<tr>
<td>Provide discussion forums to share knowledge</td>
<td>66</td>
<td>40.1</td>
</tr>
<tr>
<td>Make the course easy to understand</td>
<td>98</td>
<td>38.8</td>
</tr>
<tr>
<td>Increase access to journals</td>
<td>80</td>
<td>31.7</td>
</tr>
</tbody>
</table>

Majority (51%) of the respondents reiterated the request by lecturers for provision of reading materials in IE. Closely related to this was the request by 31.7% students for increasing access to the internet since this was their main source of literature on information ethics. Other measures suggested by students were to increase the coverage of IE in the course (46.8%), and provide discussion forums for leveraging knowledge in IE (40.1%). The students seemed not to have understood what the course entailed and some (38.8%) stated that the course should be made easy to understand.

4.10 Summary

This chapter has presented and analyzed responses from three sets of the study population namely Heads of department, lecturers and students. All the respondents stated that an IE course is very important to LIS training. The responses showed that IE is taught both as a fully dedicated and as an integrated mode. From the findings, there appeared to be substantial commitment in integrating information ethics education in LIS curriculum. Challenges encountered in teaching information ethics in LIS schools were identified and the suggestions therefore presented in this chapter.
CHAPTER FIVE
DISCUSSION OF FINDINGS

5.1 Introduction

This chapter discusses major findings arising from the presentation, analysis and interpretation of data relating to the aim and objectives of the study. The discussion of findings is compared to documented literature in areas of support and ties together other parts of the study that relate to one another. The chapter is organized into the following thematic areas: purpose for teaching information ethics in LIS; coverage of information ethics; extent of integrating information ethics in LIS curriculum; methods of teaching information ethics in universities; challenges facing information ethics education in LIS schools and suggestions for the improvement of teaching information ethics in LIS schools in Kenya.

5.2 Purpose for Teaching Information Ethics in LIS

Teaching information ethics in LIS curriculum has been considered to be significant. This was highly supported by several authors who have argued for the rationale for incorporating information ethics courses in LIS programmes (Ocholla 2009; Carbo 2005; Smith 2002; Dadzie 2011; Mutula 2011; Carbo and Almagno 2001, and the information special interest group 2007). The empirical study by Ndwendwe’s (2009) shared the same opinion from HODs of various LIS schools in South Africa that information ethics education is necessary in LIS. This is supported by Carbo and Almagno (2001) who opined that individuals seeking to become professional librarians or archivists or seeking to work in other information related organizations must be educated about ethical issues.
of information. In this study, two perspectives were discussed that support the rationale for integrating IE in LIS curriculum namely the relevance of integrating IE and information ethics violations indicating its prevalence and contributing factors.

5.2.1 Relevance of Integrating IE

The study findings supported the relevance of integrating information ethics in LIS curriculum in order to prepare and equip LIS students with knowledge in ethics. HODs in particular stressed the need to infuse information ethics in LIS education in order to encourage students to practice and apply correct moral professional obligations as future ICT and Information managers. Lecturers supported this idea by stating that an IE course would help trainees to handle ethical dilemma faced in accessing and providing information as future information managers, and encourage LIS students to responsibly use and disseminate information. This is in line with what the social cognitive theory adopted for this study postulates that behaviour is modeled through teaching information ethics in LIS curriculum. As Mabawonku (2010) states, LIS departments have the responsibility to train students so that “as practitioners, they would be able to educate the government, policy makers and the society at large on the value of maintaining ethics in accessing and using information in decision making and problem solution”. Schmidt and Boncella (2006) support this rationale particularly in the integration of information technology ethics at the undergraduate level. The Information Ethics Special Interest Group (2007) suggested that this would allow information professionals to learn and understand their responsibilities and real consequences of their actions, and learn to use their power ethically and responsibly.
The necessity for incorporating information ethics was linked to the need to prepare LIS students to become accountable information producers and users. This confirms the second assumption of this study that the teaching of information ethics to LIS students will make them aware of and encourage them to adapt good practices which they will demonstrate in their academic pursuit and also in industry. This was supported by the responses from students regarding the relevance of teaching information ethics courses in LIS curriculum, whereby most respondents were of the view that an information ethics course is very important to LIS education and training. Besides, majority of students were positive concerning the application of knowledge gained from these courses. Limo (2010) states that the reasons for integrating IE in LIS curriculum are to build a culture of responsibility among the youth using information technologies and to inculcate key principles of information ethics. The findings indicated that an IE course would assist to inculcate in students the culture of responsibility as information managers. Ocholla (2009) notes that IE education encourages LIS professionals to practice and apply correct moral professional obligations in the performance of their duties. The study established that that the course could encourage responsible use and dissemination of information. Mutula (2011) argued that information professionals have the responsibility to provide unfettered access to information, and therefore equipping information workers with information ethics would enable information mediators in verifying quality and accuracy of information to clients.
The study findings showed that IE course would help fill the gap between the level of ICT advancements and the inadequacy of laws governing ICT related issues. It has been observed that the rate at which technology advances is faster than the formulation of laws that govern these developments. Martin et. al. (2005) noted that technology has evolved quite rapidly and legal systems have inevitably lagged behind. The findings showed that the course would enable students to understand and appreciated legal and ethical aspects of information hence decrease the legal lapse. Technology is developing a lot faster than the legal system and the law making process, therefore sometimes there is no legal protection offered against the misuse of new technology (SANs institute 2002). Laudon and Laudon (2012) provide an assessment of the implications of introducing new ICTs to social and political fronts. With reference to the former, they note that individual’s actions will be confronted with new situations often not covered by societal rules of behaviour, since social institutions may take years to develop etiquette, expectations, social responsibility, politically correct attitudes, or approved rules. Severson (1995:13) in agreement with Laudon and Laudon (2012) states that automated environments are unfamiliar worlds and peoples’ old intuitive habits of evaluation, which are adequate for determining what is best in traditional worlds, are inadequate in new and different settings. On the political front, institutions will require time before developing new laws and often require the demonstration of real harm before they act, thus people may be forced to act in legal gray area due to lack of laws that prescribe acceptable behaviour and promise sanctions for violations. The findings indicated that the course would enable students to understand and appreciate legal and ethical aspects of information, hence fill
the legal and societal gap created by the introduction of ICTs especially in legal grey areas.

The findings showed that Information ethics education is a new academic discourse and an emerging area of debate in LIS curricula in Kenya. Various authors have presented their arguments for the mandate to integrate information ethics education in LIS. Ocholla (2009) argues that IE education would encourage LIS professionals to practice and apply correct moral and professional obligations in the performance of their duties; that students should be aware of the ethical issues arising from information, especially in the current knowledge society; that ethical behaviour is part of professional conduct and should be taught within the first professional qualification, and that ethics as it relates to information is an issue that cannot be ignored particularly in the information society. Other reasons given by Limo (2010) for integrating IE in LIS curriculum are to build a culture of responsibility among the youth using information technologies, and to inculcate key principles of information ethics which include but not limited to intellectual property, privacy and decency.

5.2.2 Information Ethics Violations
The study further established that the need to check and address emerging cases of ICT abuses within the university provided the rationale for integrating information ethics in LIS curriculum. Dadzie (2011) was of the same opinion that IE education has become increasingly important due to the influence of ICT usage on moral values and the unequal access to and use of ICT. Smith (2002) notes that the need for IE education arises from
the urgency of issues in the global information justice. Respondents reported increasing abuse of ICTs among information users and handlers within the university that demand immediate attention and mitigation measures. Lecturers were particular that an IE course would assist to reduce the increasing rate of plagiarism in universities and increasing moral decadence characterized in some universities through ICT misuse and abuses. The emerging amoral behaviours among the students should be addressed and the necessary corrective measures put in place.

There was consensus among HODs, lecturers and students that IE violations incidences existed in LIS schools. This was manifested in the form of plagiarism, acts of hacking, lack of confidentiality and piracy. The emerging incidences of IE violations necessitate the teaching of information ethics. The study established that LIS students were aware of some of their colleagues who engaged in information ethics violations. This implies that some students engaged in information ethics violations even with the knowledge of fellow students. This finding was reinforced by responses from lecturers who indicated that they had noticed violation incidences which included: students plagiarizing in their academic assignments; hacking into information systems (Local Area Network (LAN) within the university; information exclusion depending on access, and digital divide especially with social media. These findings are supported by the arguments of Limo (2010) and Smith (2002) that the mandate for IE education in LIS arises from the need to check and eradicate emerging information ethics violations. Smith (2002) presented additional factors to include threats to information access, accuracy and privacy and matters relating to the digital divide and alternative technologies. Limo (2010) asserts
that exposing students to such a course would prohibit mischief like hacking and other internet crimes.

5.2.3 Prevalent Information Ethics Violations

Among the information ethics violations reported, plagiarism was the most prevalent among LIS students. Kaddu (2007) established similarly that plagiarism was widespread among LIS students in Uganda especially in assignments and projects. Park (2003) shares the same observation that plagiarism has become more common and more widespread, being fuelled by increased student access to digital information resources. Laudon and Laudon (2012) support the argument that computerized information can easily be copied. To curb this academic malpractice, some universities have introduced plagiarism checkers as a deterrent to plagiarism especially by postgraduate students. For example ‘Turnitin’ is being used to prevent and detect plagiarism in academic writing at some universities and this has assisted to instill adherence to and responsibility in research ethics. However, Patel, Bhakhtiyari and Taghvani (2011) observe that students have already devised innovative ways to go around plagiarism detectors. In addition, Savage (2004) notes that concerns have been raised about the legal issues concerning privacy, copyright and ownership of labour. Among the concerns raised were: that turnitin software would detect unintentional plagiarism; lacks discretion if left to be the only arbiter without the scrutiny of the human assessor; that the software assumes guilt on the part of the student submitting the paper and required that they prove innocence, which is a direct violation of human rights. Yet, a participant at ANIE (2014) conference in Kampala raised pertinent ethical questions relating to the use of such software during the
discussion session on plagiarism including: - academic freedom:- are you forced to use the software? Who made the decision that the software should be used? At what level do you determine plagiarism in a piece of work? The participant further suggested that students should be educated on plagiarism, plagiarism policy and the process used in the university.

Other forms of IE violations reported included piracy, hacking, and lack of confidentiality, which were also prevalent to some extent. Cited examples included cases of copying in assignments, out sourcing the services of doing assignments and “take-away” CATs (Continuous Assessment Tests) from computer bureaus, and hacking examinations through LANs within the university. All these lend support to Bell’s (2002) argument that the necessity for information ethics education in universities is due to plagiarism concerns; increased hacking; privacy violation and lack of training for teachers and students. Despite some evidence that in certain circumstances some students were aware of the rules governing IE violations, this did not deter them from malpractice. This is in agreement with the observation of Culwin and Lancaster (2001) that not punishing those caught cheating can trigger fellow students, who are aware of such cases, to also engage in the practice or simply stop putting much effort into their own work. Basing on the observations above, universities should therefore put in place measures to curb the vices otherwise, if left unattended; amoral behaviour will spread to other students.
Every undergraduate student is issued with a student handbook during orientation which stipulates the rules and regulations that govern a student’s conduct while at the university. The penalties for student’s misconduct are spelt out therein. None of the students’ handbooks studied mentioned information ethics issues neither the penalties against violations. In addition, the findings from the document survey confirmed the omission of this information in the student handbook. In addition, majority of students indicated that IE regulations were not covered in their students’ handbook. This omission is confirmed by the findings from a survey of student handbooks from the four universities. This finding was amplified by one lecturer who stated that during orientation, students are cautioned that their marks would be deducted or work completely disqualified if found guilty of examination violations. Students should be made aware of information ethics not only during orientation but reminded as they progress in their education and training.

Regulations governing exams are provided in the rules and regulations for undergraduate programmes, albeit very shallowly. Mechanisms to reinforce adherence to these rules are inadequate and in some places not clear. For instance, although the rules and regulations are clear about what amounts to plagiarism, the guidelines are not exhaustive on other information ethics violations that are emerging in universities. In this connection, majority of lecturers and students were unaware of IE regulations addressed in the university regulatory guidelines. Only a handful of lecturers were conversant with IE issues covered in varied organs of the university including corporate social responsibility, code of conduct and ethics, ethics in research, examination regulations, post graduate rules and regulations, and core values of the institution.
The findings showed that IE issues are briefly mentioned in the rules and regulations for undergraduate programmes. For example, at Moi University, the rules and regulations for undergraduate students are clear about what amounts to plagiarism, but the regulation does not advise the heads of department on the measures to take in case of violation. Consequently, lack of supporting policy presents challenges in dealing with and trying to curb the vices. It therefore leaves the discretion of the departmental administration at the university to decide on the measures to take when faced with such a challenge. This confirms the third assumption of the study, which postulated that lecturers and university administrators are not well equipped to address information ethics vices. From the above arguments, there is need therefore to raise awareness among lecturers and students on these regulations.

5.2.4 Contributing Factors

Several factors contributed to information ethics violations by LIS students. Reluctance in conducting research and inadequate research skills were given prominence by students. HODs were particular that limited knowledge on how to conduct research and lack of time to do serious research contributed significantly to these vices. This means that poor research skills have a bearing on the presence of information ethics violations in LIS schools. A major finding of this study was the revelation that students considered the availability of commercial research assistance either around the university or downloading papers online as a major contributing factor. Maxymuk (2006) notes that term paper mills exists and openly operate online, which provide research services for a fee.
Another factor brought out by the study was lack of clarity in regulations on matters relating to IE. Lack of supporting policy guidelines can be a major hindrance to the enforcement of university regulations at departmental level. Other factors included laxity among lecturers to detect and curb the vice; competing interests on the student’s time and attention, peer influence; poor time management; inadequate information resources; lack of creativity, and limited access to relevant information resources to support research. Some of these factors are within the control of individual students but other factors relate to poor research support systems by universities. Jackson and Baltes (2010) found similar contributing factors among online doctoral students including convenience or laziness, lack of understanding of issues, stress or deadlines, intentional acts performed by students who were confident that they could get away with it and societal influence. Similar findings were established in Kaddu’s (2007) work, in which copying could be associated with lack of confidence in producing an individual work, lack of skills to produce a good piece of work and peer pressure where students believed that “everyone does it, why not me?” Amunga (2013) found that similar factors contributed to cheating in examinations. A positive move was reported by Kenyatta University which was in the process of establishing a committee to draft a plagiarism policy for the university.

5.3 Coverage of Information Ethics in LIS Curriculum

The coverage of IE is multidimensional and was measured against four variables namely: application of knowledge gained; information ethics courses and IE content incorporated into LIS curriculum. The study established that majority of LIS students had either done a course in IE or covered IE topics in their training. However, a few of them stated that
they had not done a course in IE. This was an indication that although most LIS students undertook IE courses, not all of them have had the opportunity for such a course. The findings of this study have demonstrated that LIS departments in Kenya tend to highly appreciate the importance of IE teaching in LIS education; therefore to encompass all students, deliberate effort should be taken to improve the coverage of IE course.

5.3.1 Application of Knowledge Gained from IE Course

Those that were of an affirmative response were asked to indicate whether they had been able to apply the knowledge acquired from the IE course to their education. The findings revealed that majority of LIS students had been able to apply the knowledge gained from the IE course(s) to their studies; with an exception of a few who had not applied the knowledge. The application of IE knowledge varied from student to another, but mainly pointed towards enhancing academic honesty and respect towards intellectual output among the students. For example, some students stated that they were able to resist plagiarism in their academic write ups even when tempting situations prevailed upon them to do so.

5.3.2 Information Ethics Courses

The findings showed that twelve (12) courses were being offered in LIS departments with ethics or information ethics issues. These courses were offered from first year to fourth year in the LIS curriculum. The results showed that courses offered in information ethics seemed concentrated in fourth year and first year of studies. Ocholla (2009) was of the view that all students at the university in all levels of training should learn information
ethics. Malan and Bester (2014) while in agreement with Ocholla provide a curriculum framework with information ethics themes aimed at first year to fourth year university students. Their views were shared by Chang (2012) ALISE Information Ethics Special Interest Group (2007), who argue that information ethics should be taught in the undergraduate curriculum. However, Limo (2010:8) opines that information ethics should be taught at the formative stages so that children can be equipped with “filters in the head” that could help them differentiate between right and wrong online. He argues that the entry point and entry age was very important for the success in teaching information ethics, and as such children should be taught IE on new media at places where they first accessed it. Carbo (2005) sums the two different view points by suggesting that although current focus of IE education has been primarily at undergraduate and masters level, this education should be expanded to become a fundamental component of information literacy programmes for all students from elementary education for young children, through undergraduate curricula and to advanced education programmes.

Courses offered in information ethics were: Introduction to information sciences; information literacy; professional organizations in information sciences; communication skills; professional ethics and practice; legal and ethical issues; legal aspects of information; ICT support in organizations, society and culture, and management information systems (MIS). The study found out that only three of the courses mentioned above were fully dedicated to information ethics. It was established that even the fully fledged courses may be wanting in IE dedicated content in that majority seems to incorporate other areas of professional practice. A common scenario observed in the four
universities was the integration of IE content as part of some major LIS courses confirming prior literature that it was rare to find a full fledged module or class dedicated to information ethics in information science institutions in Kenya (Limo 2010; Kemoni 2010; and Otike 2010). Further, Limo (2010) asserted that information ethics was sandwiched in traditional programmes thus likely to be allocated less time and seriousness. However, positive effort was noted in this study through the commitment made by LIS departments at Kenyatta University and The Technical University of Kenya to review their curricula and include full fledged information ethics courses.

The absence of fully dedicated IE courses was not confined to LIS schools in Kenya only, but similar situations have been reported in universities from other African countries. Similar findings were reported in Zimbabwe (Hikwai 2010); Nigeria (Mabawonku 2010) and Ghana (Dadzie 2011), whereby in all these cases there was no specific course devoted to information ethics in LIS schools. For example, Mabawonku (2010) reported from his survey that none of the heads of LIS schools in Nigeria taught IE as a separate course, but instead IE was mentioned or taught in a few lecture hours as part of a course, while Dadzie (2011) reported that a number of courses in Ghanaian LIS schools have aspects of IE embedded in them.

5.3.3 IE Content Incorporated in LIS

The scope and breadth of IE literature provides for varied views in terms of IE content integrated in LIS curriculum. Studies like Nd wandwe, Ocholla and Dube (2009) provides evidence in terms of the content included in LIS curriculum. Presently, efforts to deal
with this are being addressed by ANIE through the model curriculum framework for information ethics in Africa (Malan and Bester 2014). This study established that there were discrepancies in the content covered in information ethics aspects in the four universities studied. More so, most lecturers felt that more information ethics aspects should be incorporated into LIS curriculum and even provided additional IE aspects that ought to be included. This indicates that information ethics aspects are not adequately integrated by LIS departments, thus confirming the first assumption provided at the beginning of this study. Responses from lecturers indicated that the coverage of information ethics differed from one university to another. Triangulation was done using content analysis of course outline(s) and course descriptions to verify the data provided by the lecturers.

The findings showed that there was a concurrence in the data provided by the lecturers and content analysis. Information ethics content covered across the four universities were: - ethics and ethical theories; intellectual property/ copyright; invasion of information privacy; piracy; freedom of information; availability of information and equitable access; digital divide and information poverty; confidentiality; professional codes of ethics, freedom of expression, defamation, open access; computer crimes, freedom of information, defamation; piracy; availability of information, and fair use. The study also found out that coverage of information ethics violations tested in data collection instruments was adequate in all the universities. Responses obtained from the two questionnaires indicated that plagiarism, piracy, lack of confidentiality and hacking were all equally covered in LIS curriculum. Besides, the findings showed that
professional codes of ethics and best practices formed part of IE content in LIS curriculum.

When asked to comment on IE aspects not reflected in LIS curriculum, lecturers provided various topical areas, which included: E-waste; Computer and internet crimes ethics; cyber space and cyber crime; social media; Netiquette especially with social media journalism; crowd computing; non malfeasance (do no harm), and digital divide. The omission of the IE aspects suggested above in LIS curriculum was confirmed by students who noted that electronic waste, cultural diversity and do no harm were very inadequately covered in their curriculum as compared to other information ethics aspects. Lack of inclusion of some contemporary information ethics aspects indicate a missing link between theory and practice, which one can infer that LIS curricula has not adequately taken cognizance of emerging trends in the profession. For example, according to Holmer and Marais (2013), electronic waste (e-waste) was an information ethical issue that was becoming one of the leading global concerns in the information age. It would therefore be expected that such current trends should be reflected in curriculum.

Information ethics topics incorporated in LIS curriculum in Kenya were similar to those reported by Hikwai (2010) regarding the context of Zimbabwe. The findings were consistent with those of Dadzie (2011) who found out that prominent IE issues taught in Ghana were referencing, plagiarism and copyright. Suggestions by the information ethics special interest group(2007) included areas such as intellectual freedom, intellectual
property; open access; preservation; balance in collection; fair use; surveillance; cultural destruction; censorship; cognitive capitalism; imposed technologies; public access to government information.

The variations on areas of IE coverage evident in the four universities may be attributed to autonomy in curriculum development in universities and the absence of an IE network in the country. Each university has been given the mandate to develop its curricula and therefore they dictate the content of their courses. In addition, at the time of this study, there was no network that coordinated information ethics teaching activities in the country. With the absence of such a forum, the lecturers have no opportunity to share ideas or make contributions on IE content. The Kenya Library Association (KLA) is the umbrella body for librarians in the country. This body would facilitate the establishment and enforcement of professional codes of ethics in LIS, which is currently lacking in the country. In addition, KLA in collaboration with LIS practitioners and academicians, and professionals from Kenya who participate in ANIE forum would assist in the establishment of a national forum on information ethics. Such a forum would assist to reinforce professional codes of ethics and raise awareness on information ethics aspects.

5.4 Extent of Integrating Information Ethics into LIS Curricula

The study sought to find out the extent to which information ethics had been integrated into LIS curricula. Generally, there was a perception by both lecturers and students that IE was sufficiently integrated into the curriculum and assessment tools. However, measurement of IE integration remains a challenge in that what has been documented
focuses on levels of integrating IE in LIS education (Mutula and Mmakola 2013; Ndwandwe 2009). In this study, extent was determined by 1) Provision in the course outline 2) adequacy of coverage in LIS curriculum 3) preferred IE course mode and 4) Assessment and examination in LIS training.

5.4.1 Provision in the Course Outline

The study established that both the lecturers and students acknowledged adequate coverage of IE issues in course outline(s). Another important finding is that the entire course outlines surveyed included topics in IE. A course outline is generated from the course description in the curriculum and it directs teaching and learning of a course, thus it reflects the content of IE integrated into the curriculum.

5.4.2 Adequacy of Coverage in LIS Curriculum

In reference to the curriculum, there was evidence that IE topics were covered in various courses. However, when the issue was further interrogated, it was felt that the coverage of information ethics in LIS curriculum was inadequate. To answer this, the study sought to evaluate the lecturers’ perception on incorporating information ethics into the courses that they teach. The findings established that most (60%) lecturers agreed that more information ethics aspects should be incorporated into LIS courses. The mean score was 1.98, which indicated that lecturers had a strong intention of incorporating information ethics in LIS education. Inferences can be made that the content on IE was found not to be adequate in its coverage on information ethics.
5.4.3 Preferred IE Course Mode

Just as is in literature, this study established that there are two types of IE courses namely fully fledged and integrated courses. Generally, the trend seems to be in support of a full-fledged course as observed by Ocholla (2009) and Buchanan (2004). For example, Buchanan (2004) asserted that a full fledged course on information ethics is essential, rather than having the content dispersed and covered briefly in other modules. Fully fledged was chosen because it was considered for providing sufficient time, in-depth coverage and specific content on IE issues. This allows for the IE content to be centralized in one course rather than dispersed in various courses. This would also avoid the marginalized reference of IE aspects scattered across various courses as observed by Limo (2010). Unique to this study was what is referred herein as “audited IE courses ” which are fully fledged IE courses offered by other departments other than LIS curriculum but which LIS students specializing in either IT or publishing and media studies were encouraged to take.

There were equally strong arguments for integrated IE courses in LIS curriculum. Findings established that first, LIS curricula across the universities is highly congested in response to the emerging trend in information management, thus difficult to create room for an extra course. In relation to this, one respondent suggested that a well structured information literacy course could adequately incorporate information ethics aspects. Second, lecturers lack sufficient knowledge to draw up a comprehensive IE course as portrayed by the absence of guidelines on the framework for such a course; and third, there is an absence of a well defined IE content and finally, teaching information ethics as
part of other courses helped students to appreciate its value in other aspects of LIS. Integrating information ethics in other mainstream LIS courses would provide for the concepts to be taught as they relate to LIS practice progressively along the four years of undergraduate. This would be in line with what the cognitive moral development theory postulates that moral development is progressive. Lecturers would be able to make references to ethical issues as they relate to LIS profession at whatever level of the undergraduate training. This is true to some extent, in that even after students have undertaken an information ethics course, lecturers should often remind them of the need to uphold ethical behaviour. However, this study differs slightly by advocating for a full fledged course rather than integrating aspect in other courses. This would ensure that IE content is adequately addressed in a given course in LIS curriculum instead of marginalized references from other courses, which may not even be guaranteed.

5.4.4 Assessment and Examination of IE in LIS Training

This study investigated whether information ethics aspects in general were examined in various assessment tools in LIS schools. The findings established that assessment of IE in examinations, Continuous Assessment Tests (CATS) and class presentations was considered to be adequate. Assessment of IE was emphasized in examination according to lecturers (55%) and students (47.2%). Examinations are the main assessment tools at university level and they contribute to 70% of the overall mark for a course. Though to a lesser degree, respondents rated the assessment in CATs and class presentations as adequate. In contrast, the adequacy of assessing IE in case studies and assignments was relatively low, with a slight variation between lecturers and students on the assessment of IE in class assignment.
5.5 Teaching Methods Used in Information Ethics Education in Universities

This study sought to establish the methods of instruction used in teaching information ethics in LIS schools. It was found out that lectures and seminars, classroom discussion and case studies are the main methods of instruction used by lecturers in information ethics courses. This finding was reinforced by lecturers who stated that they preferred using lectures as well as seminars and classroom discussion for teaching IE courses. Similarly, Ndwandwe (2009) established that LIS departments in South Africa used a combination of lectures, group discussions and case studies as the principle teaching method for information ethics modules in LIS. Real life examples were also a preferred teaching method cited by 69.8% of students. Other teaching methods that were rarely employed were: inviting speakers, role playing and online collaborations. The choice of the teaching method was influenced by the large sizes of classes, limited time allocated to a course and lack of orientation to some pedagogy. The rare usage of some of these teaching methods could be attributed to the requirement associated with these instruction methods. This finding was validated by a HOD who was categorical that for the university to facilitate an invited speaker, it must be indicated in the curriculum as the teaching method. This implies that before a speaker is invited, prior arrangements must be made pegged on the curriculum. A unique observation by Ndwandwe (2009) was in one university that offered distance- learning, which employed study guides that included exercises, case studies and self-reflection opportunities as their teaching method for information ethics.
The objective of this question was to establish the adequacy of the teaching methods used in IE courses. Lecturers pointed out that lectures and seminars and classroom discussions were adequate mainly because of the large size of classes and the limited time allocated to a course. This was confirmed by a HOD who stated that there was a high students’ population per classes, thus it was not possible to use teaching methods for smaller groups. In addition, the course content for a course has to be covered within the hours allocated for each course within a semester. One HOD stated that the method of teaching does not matter but what matters is how it is employed. This statement concurs with Fallis (2007) who argued that despite the teaching methods used, the ultimate responsibility for their effective use depends on the instructor.

Carbo (2005) has emphasized that teaching information ethics requires a consideration of diverse styles of teaching that can effectively be used in IE courses. Lee, Dark and Chen (2005:4) proposed case study, team education, group discussion and role modeling as suitable methods for moral development. They argued that since the purpose of information ethics is to make students appreciate the importance of ethics and the consequences, the teaching methods appropriate for facilitating ethical development in students are those methods that attend to students’ cognitive, effective and social development. From the arguments, the teaching methods used should be appropriate to the lecturer and the class but also take cognizance of the objective of the IE courses.
5.5.1 Who Teaches IE in LIS Schools?

It was found out that majority (70 %) of lecturers had taught IE courses for a maximum of 2 years. This depicts the novelty of information ethics courses in LIS curriculum in Kenya as indicated in the literature (Limo 2010, Kemoni 2010).

This study sought to establish academic background of lecturers teaching IE in line with the concerns of Ndwandwe (2009) that since information ethics is multidisciplinary in nature, it was imperative to establish who is responsible for teaching information ethics modules in terms of academic departments and areas of knowledge and expertise. The findings revealed that all the lecturers who taught information ethics had a Library and Information Science background, with specializations in LIS, Records Management, Knowledge Management and IT. This finding is supported by Fallis (2007) who asserted that a module in information ethics should be taught by library and Information science professionals who understand the ethical dilemmas facing information professionals and who have faced these dilemmas. Carbo (2005:27) takes a neutral approach to the orientation of IE lecturers by stating that information ethics should be taught by knowledgeable and experienced person.

Respondents stated that IE course should be taught from a multidisciplinary approach. In supporting their views on the academic discipline that should facilitate the IE teaching, respondents stated that the lecturer should be an authority in LIS and also have a background in ethics. They gave emphasis to a lecturer with an LIS (85%) background, followed by philosophy (55%) and sociology (35%). This finding was validated by
HODs who preferred the course to be taught by a lecturer with a command and experience in LIS but with knowledge in ethics. For example, one HOD stated that the course should be taught by a hybrid lecturer, with a command in LIS and with background knowledge in ethics. A suggestion was presented by some respondents that LIS lecturers with an interest in information ethics should undertake short courses in ethics. In concurrence with this idea, another HOD advocated for collaboration with other departments like philosophy and sociology for proper coverage of the nature and concepts of ethics. A multidisciplinary approach was recommended by a HOD arguing that information ethics is drawn from various disciplines including philosophy and computer science. From the above, a multidisciplinary approach was strongly supported for teaching IE in LIS.

5.5.2 Training Lecturers in IE

With regard to training in information ethics, it was found out that none of the lecturers teaching IE in LIS had received training in information ethics. Only a very small (25%) number had attended seminars and conferences in information ethics, with a lecturer citing lack of awareness of such conferences or seminars. Lecturers stated that none of them had been facilitated to attend conferences or workshops in information ethics. Several factors contributed to the lack of facilitation to conferences such as: - limited resources, contractual terms of employment, lack of planned schedule on IE seminars and little awareness of IE. The level of awareness of information ethics within the university seem to be very low even among the lecturers themselves. Scholars in information ethics
in Kenya should embark on awareness programmes involving all the stake holders in the university including students and teaching staff.

Despite the absence of training in IE, lecturers were still motivated to teach the course. The greatest motivating factor was the interest they had in the area cited by 70% of lecturers. This interest provided the inner drive to venture into the field of IE even though the area was new to many of them. This could explain why most lecturers relied on personal reading to upgrade their knowledge in IE. Some lecturers had been requested to take up the course as part of their teaching load by their head of department. The problem with such an arrangement is that there is likelihood to allocate the course to a lecturer with very little knowledge in the area or with no interest in the subject, hence compromise the delivery of the course to students. This could be the reason why a number of students were not able to apply the knowledge gained from IE course while some of them did not conceptualize the course.

It is however, encouraging to note that most universities provided support to their lecturers teaching IE. It was established that the support was provided through procurement of e-resources to aid in teaching, development and implementation of curricula incorporating IE issues and curriculum reviews. This shows that there is little awareness about IE which can be harnessed to provide a better understanding and appreciation of the course.
5.5.3 Knowledge of Information Ethics

It was found out that all lecturers updated their knowledge of IE mainly through independent reading. As earlier mentioned in this study that there is no forum for scholars in the country to share ideas; therefore lecturers have to rely on their individual effort to gain knowledge in this area. This was confirmed by lecturers who stated that they relied on knowledge gained from papers presented in conferences and contacting experts. A noble case was cited by a lecturer who stated notifications from book publishers and alerts on updates on ethics from online search engines from Google. Online discussions forum by experts on topical issues in IE have been advanced in literature and could be resourceful to scholars in Kenya.

5.5.4 Information Resources for Teaching and Learning IE

The study assessed the adequacy of coverage of IE in various information resources used in teaching and learning. The findings showed that lecturers and students found the coverage of IE in the internet to be adequate. Coverage in the internet was pointed out to be equally very adequate and adequate by lecturers. According to students, the internet was available to majority of them, with a higher percentage of students from the Technical University of Kenya and Moi University citing the internet as their main sources of information. This indicates that substantial effort has been made by scholars to generate content in the field and also make it available online. Further, internet connectivity has been enhanced in most universities, although not to the same level. The study established that two universities were connected to wireless access points which has expanded internet access beyond the physical limits. Staff and students register to be
given credentials to access wireless connection. At the time of this study, the other two universities had not upgraded their connectivity; therefore connection speed was compromised by more people competing for the same resource.

Lecturers and students presented similar opinions regarding the adequacy of online journals as a source of information. Majority of lecturers cited e-journals as a major source for information ethics, although some felt that the coverage was inadequate. However, about half (54.8%) of the students said e-journals on information ethics were available. These contradicting views could be attributed to the level of access to e-journals in the various universities. The findings established that subscription and access to online journals was enhanced at Moi University and Kenyatta University. Access to e-journals by universities in Kenya has been enhanced through a consortium managed by the KENET project. It was found that none of the four universities had subscribed to any journal on information ethics. Although a few e-journals on information ethics were available, there were restrictions on access in that only those journals that had been subscribed by the library could be accessed. Failure to subscribe to any journal on information ethics was attributed to lack of awareness and lack of inclusion of these journals by the consortium. Additionally, access and use of subscribed journals was restricted within the university.

Generally, respondents felt that coverage of information ethics in conference proceedings was inadequate. In particular, students indicated that they rarely (21%) used conference proceedings as a source for information ethics. However, the findings showed divergent opinions on the coverage of IE in conference proceedings, with an equal number of
lecturers indicating the coverage of IE in conference proceedings adequate and inadequate. This implies that for those lecturers who had attended conferences or those that had easy access to conference proceedings found the coverage to be adequate; while on the other hand, those who had not attended conferences found conference proceedings inadequate. UNESCO is working closely with African scholars as pointed out by Mutula (2012) and continues to support several workshops on the ethical dimensions of information society in Africa. The conference proceedings of these forums are available online and in ANIE website.

The study established that coverage of IE in books was inadequate according to the respondents. Lecturers pointed out that the coverage of IE in books was inadequate. Majority of students in all the universities stated that books were not available and were rarely used to support learning information ethics. This is an indication that books available on information ethics are very few, especially those relating to Africa. This is supported by Sturges (2009) who observed that relevant literature in IE is much more by way of journal articles and web content but hardly any monograph-type material. Despite the novelty of the discourse surrounding information ethics education, there is indeed a positive and reassuring effort by African scholars to address the limitation of published literature in the subject. For example, Capurro et al. (2007) have produced the African Reader on Information ethics, which serves as a model volume for information ethics education in Africa (Douglass 2012).
5.6 Challenges of Information Ethics Education in LIS Schools in Kenya

The study established various challenges facing teaching and learning of information ethics in LIS schools in Kenyan universities. For purposes of clarity, the researcher consolidated major challenges of IE education cited by HODs, lecturers and students (the three sets of respondents) as presented in table 5.1.

**Table 5.1 Challenges of IE Education in LIS Schools**

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Category of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>HODs</td>
<td>Lecturers</td>
</tr>
<tr>
<td>Limited research done on IE in Kenya</td>
<td>x</td>
</tr>
<tr>
<td>Inadequate information resources</td>
<td>x</td>
</tr>
<tr>
<td>IE content not well defined</td>
<td>x</td>
</tr>
<tr>
<td>Little awareness of information ethics</td>
<td>x</td>
</tr>
<tr>
<td>Lack of a local IE network to provide training</td>
<td>x</td>
</tr>
<tr>
<td>Lack of a forum to facilitate sharing of ideas</td>
<td>x</td>
</tr>
<tr>
<td>Short duration allocated for a course</td>
<td>x</td>
</tr>
<tr>
<td>Limited financial support by universities</td>
<td>x</td>
</tr>
<tr>
<td>Competence of lecturers teaching IE</td>
<td>x</td>
</tr>
<tr>
<td>Lack of policy guidelines and course frameworks</td>
<td>x</td>
</tr>
</tbody>
</table>

The major challenges of IE education cited by respondents as shown in table 5.1 are analysed and presented as follows:-
5.6.1 Inadequate Information Resources

A major challenge cited by all the respondents was inadequate information resources on IE to support teaching and learning of IE. This challenge was as a result of the novelty of information ethics as an academic field, as shown in prior studies. The study established that very little has been written on information ethics education in Kenya; therefore it is challenging to access local content for reference and assist to generate content for IE course. This finding was closely tied to limited research in the area of IE education in Kenya. This confirms a search carried out on publications related to African information ethics by African scholars, which yielded very limited number of publications (Britz 2010). This observation is shared by Capurro (2010); Mutula (2011) and Mabawonku (2010). Douglass (2012) in validating the concern of participants of the Third International Information Ethics Conference for Africa decried the western dominance of Africa information ethics curricula.

Limited access to e- journals and books in IE was cited as a major challenge by respondents, yet the internet and e-journals were stated as the major sources of content for teaching IE. This can be attributed to the fact that books in information ethics are very rare, and as such the internet and online journals become the only available alternative. However, access to some of this literature is based on subscription, which was cited to be a major hindrance to some respondents.
5.6.2 Limited Research Done on IE in Kenya

This study found out that there was limited literature on information ethics especially by African scholars. Several authors reiterate the fact that not much research has been done on the African continent in information ethics (Britz 2013; Britz 2010; Capurro 2010, and Mutula 2011). Similarly, Mabawonku (2010) found out that there have been limited research efforts on IE by Nigerian scholars and tertiary institution lecturers. Capurro (2010) states that information ethics is a young academic field in Africa and attributes this to the limited scholarly publications in the area. Mabawonku (2010) is optimistic that there are prospects of more lecturers focusing their research efforts in this area as more awareness is raised on the global interest in information ethics.

5.6.3 Little Financial Support

Another challenge indicated in the study was inadequate financial support. Respondents raised lack of facilitation to IE forums, conferences and training sessions, which was linked to lack of awareness by universities.

5.6.4 Lack of Well Defined Content

Lack of a well defined IE content was cited as a major challenge in the teaching of information ethics. Similarly, Ocholla (2009) identified varying content as a challenge to the teaching of IE. It was established that very few lecturers knew what IE entails as manifested in the course outlines and course descriptions of these courses. Students particularly pointed out that some lecturers did not have mastery of IE content. Additionally, some lecturers admitted that they found difficulty in understanding the
concept of IE due to the different orientations to the topic in literature. This could be as a result of lack of clarity in the curriculum concerning the IE content or unavailability of competent staff to teach IE course. The same view is shared by Mabawaonku (2010) who felt that the lecturers in LIS schools may not be very knowledgeable on ICT application in libraries and issues relating to ethics of information provision and use. The study found out that very few academicians had knowledge in IE and this was manifested in descriptions of IE courses in the curriculum.

5.6.5 **Limited Awareness of IE**

The study established that there is little awareness about information ethics in Kenya. Limited awareness has led to inadequate financial support towards IE forums and acquisition of IE resources. It has also been blamed for the minimal incorporation of IE content in LIS curriculum since curriculum developers need to be convinced on the rationale for incorporating IE content in LIS curriculum.

5.6.7 **Short Course Duration**

The short duration allocated to a course was cited as a challenge because the course duration was not sufficient to exhaustively cover IE content in an integrated course. The study established that a common practice of LIS curriculum was integrating IE aspects in other mainstream courses. Based on this, it is upon the lecturer to apportion the time available for the content of the entire course. Because of sandwiching IE in other courses, it is likely that it may not receive adequate coverage and emphasis. The study found out that most universities offered information ethics as part of other LIS courses, and when
pressed with time, chances were that the aspects on IE were not given emphasis as observed by Limo (2010). In addition, the short time for courses inhibited the use of alternative teaching methods besides the traditional lecture method. Lee, Dark and Chen (2005) advocated for methods that facilitate ethical development in students, but this was not possible since the course content must be covered within the stipulated semester dates.

5.6.8 Lack of a National IE Network

It was established that a local forum is lacking to facilitate sharing of ideas, promotion of awareness and provision of training of trainers in IE. Respondents pointed out that there is very little awareness of IE education in all the four universities. According to the respondent, inadequate awareness was a major contributing factor for lack of financial support and the minimal incorporation of IE content in LIS curriculum. It was observed that without awareness, it is difficult to source for funding for IE activities from the university, or justify the necessity for a full fledge course on IE in LIS curriculum. With the absence of a national IE network in Kenya, scholars in this field have no forum to share or seek ideas, neither are IE activities coordinated in the country, which was portrayed in the IE content taught which varied in all the universities.

5.6.9 Lack of Policy Guidelines and Frameworks on IE Courses

The study established that it is rare to find a full fledged course dedicated to information ethics in LIS departments in Kenya (Limo 2010; Kemoni 2010; and Otike 2010). One of the reasons given for commonly integrating IE in other mainstream courses was lack of
sufficient knowledge to draw up a comprehensive IE course due to the absence of guidelines and frameworks for such a course. Lecturers therefore preferred integrating IE aspects in established LIS courses.

5.7 Suggestions on the Enhancement of Teaching Information Ethics in LIS Schools in Kenya

Various measures were suggested by respondents to enhance teaching of IE in LIS schools as presented in table 5.2.

**Table 5.2 Measure Suggested by Respondents**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Category of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourage more research</td>
<td>HODs: x, Lecturers: x</td>
</tr>
<tr>
<td>Encourage publication of readers in IE</td>
<td>Students: x</td>
</tr>
<tr>
<td>Avail relevant literature on IE</td>
<td>HODs: x, Lecturers: x, Students: x</td>
</tr>
<tr>
<td>Facilitate training and mentor specialist in IE</td>
<td>Lecturers: x</td>
</tr>
<tr>
<td>Raise awareness on IE education</td>
<td>HODs: x, Lecturers: x, Students: x</td>
</tr>
<tr>
<td>Encourage regular advanced discussion forums on IE</td>
<td>HODs: x, Lecturers: x, Students: x</td>
</tr>
<tr>
<td>Encourage collaboration and partnership</td>
<td>HODs: x, Lecturers: x</td>
</tr>
<tr>
<td>Improve on content coverage in IE</td>
<td></td>
</tr>
<tr>
<td>Advocate for a full fledged IE course</td>
<td>HODs: x, Lecturers: x, Students: x</td>
</tr>
</tbody>
</table>

5.7.1 Encourage More Research and Publication

Mutula (2011) and Ocholla (2009) note that the concept of information ethics is yet to be understood and appreciated in African scholarship. HODs suggested that research activities should be encouraged especially post graduate level. Supporting and encouraging research and publications especially at post graduate level is needed to provide advanced discourse on the topic and new insights into the teaching and learning
of information ethics. Undergraduate students should also be supported to undertake research because the study revealed that poor research skills contributed to the emerging information ethics violations. LIS students should be encouraged to undertake research activity and then present papers which are peer reviewed and later graded to a forum of lecturers and students. Public universities should therefore invest in equipping their students and teaching staff with relevant research skills and knowledge through workshops.

5.7.2 Raise Awareness on Information Ethics Education

To enhance the teaching of information ethics in LIS curriculum, majority of respondents stated that there was urgent need to create awareness on the necessity of IE education in LIS schools. Students suggested that the concepts of the course should be made clearer and presented in a way that is easier for them to understand. To address this situation, HODs were categorical that all students and lecturers in LIS departments and university management need to be sensitized on the importance of teaching IE. Seminars should be conducted to raise awareness among academicians, students and other university stakeholders.

5.7.3 Availing Relevant Literature

The respondents proposed the acquisition of textbooks and subscription to more journals, and encourage more research and publications in the area. In particular, students requested for more reading materials on IE. The study established that literature on information ethics was limited and much of what was available is in journal articles and
web content (Sturges 2009). The responses indicated that most of them relied on e- journals and the internet as the source of information on information ethics since there were hardly any books specifically on information ethics in libraries in the four universities. Lack of relevant literature has been cited as a challenge. Finances should be availed to acquire information resources to support learning and teaching of IE course.

5.7.4 Encourage Publications in IE

Respondents suggested that scholars and academicians dealing with information ethics should be encouraged to publish readers in information ethics. LIS scholars and students should be encouraged to publish articles relating to information ethics and rewarded for their research efforts. To increase visibility of these research output, publications should be made available for use through journals, books, web content and institutional repositories. The study established that the African Network for Information Ethics (ANIE) is encouraging and supporting scholars and researchers in information ethics to publish in this field, especially in relation to the African continent through publication of readers in information ethics.

5.7.5 Encourage Regular Discussion Forums

Other suggestions included organizing regular seminars and workshops on IE. Respondents felt that discussion forums should be organized to allow exchange of ideas and leveraging of knowledge among LIS students and specialists. HODs suggested that regular seminars and workshops should be organized to facilitate advanced discussions
on issues relating to IE. Such forums would provide avenues for discussions on matters pertaining to information ethics education in LIS schools in the country’s universities.

5.7.6 Increase IE Content Coverage

Students suggested that the content covered relating to IE should be increased. On the other hand, lecturers advocated for the inclusions of a full fledged course on information ethics in the LIS curriculum. The study established that a full fledged course was strongly supported instead of an integrated option in order to give the course the rightful emphasis in content coverage and promote awareness of the course.

5.7.7 Encourage Collaboration and Partnership

The respondents suggested that collaborations and partnerships in teaching information ethics should be fostered between LIS schools in universities in Kenya. Lecturers suggested that a local network on IE need to be established to manage the collaboration and coordinate activities in this area. The network would coordinate IE activities at national level or even at regional forums. Such an organ would coordinate training of trainers in IE activities. A recent development is the establishment of ANIE Kenyan chapter to be the liaison organ for information ethics in the country. A similar national ANIE chapter has been established in Tanzania and plans are underway for the Nigeria chapter. This could be a starting point for more networks and cooperation to be built and extended to the East African region and even beyond.
5.7.8 Facilitate Training and Mentorship

Lecturers suggested that they should be supported to train and develop in the field of information ethics. Universities should source for funds or grants to facilitate training and mentorship programmes in information ethics. LIS schools in Kenya could borrow ideas from the Ugandan programme on TOT for information ethics on mentorship programmes for specialists. Since the discipline is still new in the academic spheres, finances should be set aside for training lecturers.

5.8 Summary

This chapter presented discussion and interpretation of the research findings relating to the aim and objectives of the study and existing literature. The necessity for teaching information courses was linked to the presence and prevalence of plagiarism in LIS schools. It was evident that the content and scope of IE courses was inadequately covered in the curriculum. Respondents pointed out a myriad of challenges faced in teaching and learning IE and suggested measures to enhance the integration of information ethics in the curriculum. The next chapter provides the summary of findings, conclusion and recommendations of the study.
CHAPTER SIX
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter summarizes the research findings, draws conclusions and makes recommendations based on the findings of the study, suggestions by respondents and the literature review. The recommendations are aimed at suggesting ways of enhancing the teaching of information ethics in LIS schools in public universities in Kenya. The chapter proposes a model framework to enhance information ethics education in LIS curriculum. Finally, the chapter explains how the findings of the study will be disseminated and suggests area for further research.

The study was informed by Kolhberg’s moral reasoning theory (1971) and the social learning theory created by Albert Bandura (1941), which are discussed in the chapter on literature review. Moral development is seen as a progressive process that is nurtured and modeled as the students progress in LIS training through the integration of information ethics in their curriculum.

Data was collected from four LIS departments in public universities in Kenya namely: - Kenyatta University, Kisii University, Technical University of Kenya and Moi University. Respondents in this study comprised HODs, lecturers and students from LIS departments in the four universities.
6.2 Summary of Findings

The aim of this study was to investigate the teaching of information ethics in LIS curriculum in public universities in Kenya. The study established significant findings regarding information ethics education and the extent of its integration in LIS curriculum. The findings are summarized and presented according to the study objectives.

6.2.1 Purpose for Teaching Information Ethics in Library and Information Science Curriculum in Public universities in Kenya

The first objective of the study sought to establish the necessity for teaching information ethics in Library and information science curriculum in public universities in Kenya. The findings established that:

a) Information ethics education is a new academic discourse in Kenya and an emerging area of debate in LIS education. Most respondents were of the opinion that an information ethics course is very important in LIS education and training.

b) Most respondents stated that LIS departments should make the course mandatory and integrate information ethics in their training so as to prepare and equip their students with knowledge in ethics. They were of the view that LIS students need to be equipped and empowered with relevant knowledge in emerging ethical issues arising from information and to prepare them to be responsible information producers and users at their training level and later at the workplace. There is therefore need to inculcate a sense of responsibility among LIS students.

c) It was noted that the rate of technology supersedes the development of legal frameworks. Consequently, respondents suggested that a course in information
ethics was necessary in order to fill the gap in legal grey areas between the rapid advancement in technology and lapse in legal systems relating to ICT issues.

d) Emerging incidences of information ethics violations and ICT abuses in society and LIS departments were noted. Respondents felt that the presence of these vices calls for immediate attention, and mitigation measures need to be put in place to check and address academic malpractices before the cases escalate.

e) IE education would encourage LIS professional to practice and apply correct moral and professional obligations. Respondents felt that an IE course would enable LIS students after training and as information managers to handle ethical dilemma appropriately in accessing and providing information. Such a course would help to build a culture of responsibility in the performance of their duties especially in the current knowledge society.

f) The study established that respondents were aware of the existence of information ethics violations in LIS departments and had even observed students engaging in these vices. However, majority of students indicated that they were not aware of the sanctions stipulated on information ethics violations by their universities. Besides, the study found out that lack of supportive policies aggravated the problem.

g) It was established that plagiarism was the most prevalent academic malpractice among LIS students. Other IE violations reported were: piracy, hacking and lack of confidentiality, though they were practiced to a lesser magnitude. Respondents felt that an IE course would assist to check on the increasing rate of plagiarism in universities.
h) Several factors were pointed out that contribute to academic malpractices in LIS departments majorly reluctance in conducting research; inadequate research skills and presence of unethical research assistance provided by cyber cafes’ or online term paper mills. Other factors included lack of clarity of IE matters in regulations, laxity among lecturers to detect the vices, competing interests, peer influence, poor time management, lack of creativity and limited access to relevant information resources.

6.2.2 **Content of Information Ethics Education in LIS Curricula in Universities in Kenya**

The second objective sought to establish the content of information ethics in LIS curricula in universities in Kenya. The findings established that:-

a) Information ethics content was taught in LIS curricula across the four public universities. However, these were variations on the content covered across public universities.

b) Majority of LIS students had done a course that integrated information ethics aspects. A majority of these students have been able to apply the knowledge gained from the IE courses, though the application differed from one student to another. Students majorly pointed out that they applied the knowledge in fostering academic honesty and respect towards intellectual output.

c) LIS departments have begun to integrate information ethics courses in their curriculum, albeit shallowly. Despite efforts to incorporate information ethics, it was found out that the integration of IE content in LIS courses was not
adequate. Responses showed that only intellectual property was very adequately covered in all the LIS curricula. Moreover, lecturers pointed out omission of some information ethics aspects in the curricula including cyber ethics, e-waste, internet crimes, netiquette and social media.

d) Coverage of information ethics violations such as plagiarism, lack of confidentiality, piracy and hacking was adequate.

e) Responses from lecturers showed that there were common areas of information ethics coverage; although generally, discrepancies were noted in the content covered in the various LIS curricula. The variations in IE coverage are attributed to autonomy in curriculum development in universities and lack of an IE network in the country.

f) Respondents overwhelmingly preferred a fully fledged information ethics course to an integrated course. The reasons given for devoting a fully fledged course are that it would give the course the rightful emphasis; that it would provide room for the lecturer to cover content in detail and tailor-make the course to class; that it would promote awareness of the course, and that it makes it easier to appropriate the course to the various specializations in LIS. However, a strong argument was equally put forward for integrating information ethics aspects in LIS courses in that the curricula were congested hence no space to include an extra course; there were no guidelines on the framework of a fully dedicated IE course; it could be taught as a servicing course so long as the objectives of the course are met and that teaching it as part of other courses helped students to appreciate its value in other aspects of LIS.
g) A professional code of ethics for LIS specialists was found to be lacking in Kenya. Respondents suggested that since the Kenya Library Association (KLA) is the umbrella body for librarians, it should collaborate with practitioners and academicians to facilitate the establishment of a national network for information ethics and the development of professional codes of ethics.

6.2.3 Extent to Which Information Ethics has been Integrated into LIS Curriculum by LIS Departments in Kenya

The third objective sought to investigate the extent to which information ethics courses have been integrated into the curriculum for LIS departments in Kenya. The study established that:

a) LIS departments have integrated information ethics courses in their curriculum. Besides, these courses are scattered throughout all the levels of undergraduate LIS training, with a concentration of courses in the first and fourth year of study.

b) The coverage of IE content in LIS courses was inadequate. Most respondents agreed that more information ethics topics should be incorporated into LIS curriculum. It was noted that some information ethics aspects were inadequately incorporated in the curriculum. The few that were adequately incorporated were: intellectual property, information availability, information privacy and confidentiality. Except for slight variations, this pattern was found to correspond with the opinion on the coverage of IE aspects in LIS courses.

c) IE topics were adequately covered in course outline(s). All the course outlines surveyed had topics on information ethics.
d) IE issues were adequate in CATs, classroom presentations and examinations. However, assessment of information ethics in case studies and class assignments was found to be inadequate.

e) Three information ethics courses were offered as full fledged courses in LIS curriculum, though the content coverage on information ethics of these courses was found to be unsatisfactory. A common practice observed in the four universities was the integration of IE aspects in major LIS courses.

f) Most students stated that IE was not covered in the student’s handbook. Moreover, majority of lecturers indicated that they were not aware of its coverage in university statutes. However, some lecturers said that information ethics is covered in corporate social responsibility, research ethics, examination rules and regulations and core values of the institution.

6.2.4 Methods of Instruction Used for Teaching Information Ethics in LIS Departments

The fourth objective sought to establish the teaching methods used in information ethics courses in LIS departments. It looked into:-

a) A diverse range of pedagogy was employed by lecturers in teaching information courses, although at varying levels.

b) The main methods of instruction used for teaching information ethics courses were lectures and seminars, classroom discussions and case studies. Lecturers indicated that these teaching methods were adequate mainly because of the large size of classes and limited time allocated per course. It was noted that the student
populations in classes are big thus lecturers cannot employ teaching methods for small groups. However, it was pointed out that the teaching method does not matter but what matters is how it is employed.

c) The study established that inviting speakers, role play and online collaborations were the least employed teaching methods. Respondents attributed this finding to some specific requirements in the curriculum associated with certain teaching methods. For example, inviting a speaker must be indicated in the curriculum as the choice of teaching method.

d) A multidisciplinary approach in teaching information ethics was strongly supported, although it was found out that all the lecturers who taught information ethics had an LIS background. Respondents were of the view that IE courses should be taught by a lecturer who has authority in LIS but with background knowledge in ethics either from philosophy, sociology or law.

e) Training of lecturers in information ethics was absent, with only a few having attended conferences on information ethics organized by ANIE. Nonetheless, majority of lecturers were motivated to teach IE courses because of the interest they have in this area.

f) None of the universities had facilitated lecturers to attend conferences organized in information ethics. However, most lecturers reported that their universities supported teaching of IE through procurement of e-resources, development of LIS curriculum which incorporate IE aspects and curriculum reviews.

g) To upgrade their knowledge in information ethics, lecturers relied on independent reading, knowledge gained from conferences and contacting experts. Respondents
pointed out that the internet and online journals were the main sources of information for teaching and learning information ethics. This was attributed to the adequacy of coverage of IE content and ease of access to these information sources. Contrary, books and conference proceedings were rarely used by respondents as sources of information. Majority of respondents felt that the coverage of information ethics in books and conference proceedings was inadequate.

6.2.5 Challenges Encountered in Teaching Information Ethics in Information Science Schools in Universities in Kenya

The fifth objective sought to establish various challenges encountered in teaching information ethics in LIS schools in universities in Kenya. The major challenges identified were:-

a) Inadequate information resources: Very little has been written on information ethics education in Kenya. This supports the finding that books on information ethics are very rare, and only a few relate to Africa. Much of the literature available on information ethics are by way of journals and web content, which may not be accessed by a wider user group.

b) Little financial support: Inadequate financial support affected facilitation to IE forums, conferences and workshops.

c) Limited research done on IE in Kenya: There is limited literature on information ethics especially by African scholars because IE is a new academic discourse in Kenya.
d) Absence of well defined content: Varying content on IE in course descriptions and lack of command on IE content by lecturers posed a challenge in the teaching of information ethics.

e) Limited awareness of IE: The level of awareness on information ethics in LIS departments seems to be low even among lecturers themselves. Consequently, lack of awareness has been blamed for the inadequate financial support and inadequate incorporation of IE content in the curriculum.

f) Short course duration: Information ethics is in most cases integrated in other LIS courses as often mentioned in this study. Therefore, it was noted that topical issues in this area would not be given due emphasis, yet the purpose for teaching IE is for moral and professional development.

g) Lack of a national IE network: A local forum is lacking to facilitate sharing of ideas, raise awareness and provide training in information ethics.

h) Absence of policy guidelines and frameworks in IE course: A framework for teaching IE is lacking that could offer guidelines on what an information ethics course should entail.

6.2.6 Proposed Strategies to Improve the Teaching of Information Ethics in LIS Programmes in Universities in Kenya

The sixth and last objective proposed strategies to improve the teaching of information ethics in LIS training in universities in Kenya. Respondents made various suggestions which included:
a) Encouraging more research: More research should be encouraged and supported so as to interrogate further the teaching of information ethics by providing advanced discourse and new insights in IE education in Africa.

b) Raise awareness on information ethics education: There is an urgent need to raise awareness on the necessity of teaching information ethics among members of LIS departments including students, lecturers and university administrators. This was found to be true among all categories of respondents.

c) Availing relevant literature: Relevant literature should be availed through acquisition of books and subscription of e journals in information ethics.

d) Encourage publications of readers in IE: More publications in information ethics in Africa should be produced and supported in order to provide readership in IE. It was noted that very little has been written in information ethics education in Kenya. Besides, very few books have been published on information ethics that relate to Africa.

e) Encourage regular discussion forums: Regular discussion forums on matters pertaining to information ethics should be organized to facilitate exchange of ideas and leveraging of knowledge. It was reported that such forums would provide more areas to focus on content for IE courses.

f) Encourage collaboration and partnership: A national network needs to be established to raise awareness and coordinate activities in information ethics. It was reported that such a network would bring together scholars and academicians in information ethics to exchange ideas and expertise, and coordinate training in this area.
g) Facilitate training and mentorship: None of the lecturers teaching IE had been trained in the area. It was suggested that experts in information ethics should train and mentor lecturers who have an interest in this area so as to extend the knowledge base.

Overall, the findings of this study have demonstrated that LIS departments in Kenya tend to appreciate the importance of teaching of information ethics in LIS curriculum. The purpose for teaching is to foster moral and professional development among LIS students that would enable them to be responsible in practice and industry especially in the information society. This is supportive of the views of Dadzie (2011); Mutula (2011); Limo (2010); Mabawonku (2010); Ndwandwe (2009); Ocholla (2009), and the ALISE Special interest group (2007).

6.3 Conclusion

This study set out to investigate the teaching of information ethics in LIS curriculum in public universities in Kenya, with a view to proposing measures to improve its integration. Overall, it was found out that although there was substantive commitment by African scholars to integrate information ethics in LIS curriculum, particularly full fledged information ethics courses, it still lagged behind internationally. These courses were very few and the coverage of IE content was found to be inadequate. Nevertheless, the need for a plagiarism policy in universities is recognized and measures to draft such policies are being put in place in some institutions.
The need for integrating information ethics in LIS curriculum was found to be essential in order to inculcate a culture of responsibility among students using ICTs in public universities in Kenya. Several strategies and policies have been put in place in universities including those on research ethics, core values of the institution and social responsibility, but they do not adequately address information ethics issues. A course in information ethics therefore would assist in checking and addressing emergent moral decadence in LIS, foster future LIS professionals with the culture of responsibility and help bridge the legal gap. Besides this, as Kenya develops into a knowledge society, LIS students and professionals should know the rules and regulations governing the information superhighway for them to effectively and efficiently participate in development agendas.

LIS students had done a course in information ethics or covered related ethics topics in their training. Knowledge gained in IE courses was being applied in enhancing academic honesty and respect towards intellectual output. Most of these courses were taught in the first and fourth years of study in LIS curriculum. Several authors in literature seem to advocate for the integration of information ethics courses at the first year for the reason that it would cultivate ethical value among students early in their academic careers. Though some information ethics aspects were taught across the universities, the levels of IE content coverage differed from one university to the other depending on the autonomy of curriculum development in various universities. It was generally pointed out that content coverage of IE was inadequate and some IE aspects were not reflected in LIS curricula. The only exception was intellectual property which was being given more
emphasis in its coverage. The omission of some contemporary information aspects is an
indication of a missing link between theory and practice of the LIS profession.
Curriculum reviews would be most appropriate so as to address the inadequacy in content
coverage and also incorporate the omitted IE aspects.

Similarly, extent of information ethics integration in LIS curriculum was found to be
inadequate. Only a few fully fledged information ethics courses were offered in LIS
curriculum. Even then, coverage of information ethics content in these courses was found
to be unsatisfactory and most respondents agreed that additional topics should be
incorporated into the curriculum. The common practice observed in most LIS
departments was the integration of information ethics aspects in mainstream LIS courses.
However, areas in intellectual property, information availability, confidentiality and
information privacy were found to be adequately incorporated in LIS curriculum.
Moreover, the coverage of information ethics aspects in course outlines was considered
to be adequate, as well as assessment in examination, continuous assessments tests
(CATs) and class presentations. Despite the presence of information ethics violations in
LIS schools, IE was not covered in university regulatory guidelines, student’s handbook
nor university statutes. Nonetheless, aspects of information ethics were incorporated in
statements of corporate social responsibility, core values of the institution, research ethics
and examination rules and regulations. There is need for a national IE body that would
coordinate the teaching of information ethics in various training programmes and provide
forums for sharing ideas on the subject.
There were varied views regarding the pedagogy best suited for information ethics courses. Most lecturers have taken a liking for a few selected teaching methods including lectures and seminars, classroom discussions and case studies to deliver content in information ethics. These teaching methods were found to be adequate mainly because of the large size of classes and the limited time allocated to covering information ethics aspects in an integrated mode. Some teaching methods including inviting speakers, role play and online collaboration, were rarely used due to the requirements pegged to these methods in the curriculum. However, there were varying views regarding who should be involved in delivering IE. There were those who were of the opinion that information ethics should be taught from a multidisciplinary approach in collaboration with other departments that teach ethics including philosophy, sociology and law. Yet, others felt that IE should be taught by lecturers with an LIS background. A multidisciplinary approach should be embraced in teaching IE courses preferably by LIS professionals with a background in ethics. This is in line with the argument of Fallis (2007) that the lecturer should understand the ethical dilemmas facing information professionals and may have even faced these dilemmas. Instruction modules on IE should be organized for lecturers teaching information ethics courses in universities.

Majority of those who taught in this area had no previous formal training in IE. They drew their expertise from knowledge gained from independent reading, attending conferences and consulting experts in this area. Majority of them mainly relied on the internet and online journals for information related to information ethics. On the contrary, books and conference proceedings were rarely used because their coverage of
information ethics was very inadequate. Despite this wanting situation, there is considerable effort by African scholars to address the limitation of published literature on IE that relate to Africa. Particularly, through the support of African Network for Information Ethics (ANIE), LIS scholars and professionals have participated in conferences and publications on information ethics.

The study confirmed several assumptions provided at the beginning of this study. First, the study confirmed that information ethics aspects are not adequately integrated into LIS curriculum in public universities in Kenya. Most lecturers were of the view that more information ethics issues should be incorporated into LIS curriculum and even provided additional IE aspects that ought to be included. The second assumption postulated that the teaching of information ethics to LIS students will make them aware of and encourage them to adopt good practices which they will demonstrate in their academic pursuits and also in industry. This was found to be fairly true when students were asked about the relevance of teaching information ethics courses in LIS curriculum. Most students were positive concerning the importance of IE in LIS education and the application of knowledge gained from these courses. Although application differed from one student to another, majority of them pointed towards applying the knowledge in fostering academic honesty and respect towards intellectual output by fellow students; which one can therefore infer that teaching an information ethics course in LIS training will prepare and equip students to be present and future accountable information producers and users. Lastly, despite the presence of information ethics violations in LIS schools, lecturers and university administrators were not adequately equipped to address IE violations, and had
to rely on their independent discretion on measures to take when faced with such challenges. Consequently, lack of supporting policy presents challenges in dealing with and trying to curb the vices and information ethics violations that are emerging in universities. From the above arguments, there was therefore need to raise awareness among lecturers and students on these regulations.

Challenges in teaching information ethics in LIS curriculum were multiple and multifaceted. The major challenges faced in LIS departments included inadequate information resources, little awareness and poorly defined content. Others included limited research effort, short course duration, limited financial support, lack of a national network and absence of a framework for teaching information ethics in Kenya. To address these challenges, respondents suggested the need to encourage and support more research; offer a full fledged course; provide financial support, encourage publication of readers, encourage regular discussion forums, raise awareness, enhance availability and access to relevant literature, encourage collaboration and partnership, and facilitate training and mentorship.

On the whole, the findings established that IE has been marginally incorporated in LIS curriculum, with varying levels of content coverage from one university to another. However, there were varying opinions on whether it should be fully fledged or integrated in mainstream LIS courses. Given the findings of this study, it can be argued that the success of IE teaching in LIS curriculum depends on many interrelated issues. While the
efforts of some universities towards the integration of IE can be applauded, they were seemingly slow, therefore requiring concerted effort from many stakeholders.

6.4 Recommendations

Based on the discussions and conclusion, the following recommendations for improving the integration of information ethics in LIS curriculum in public universities in Kenya can be made:

6.4.1 Raise Awareness

The findings revealed that information ethics was an emerging area of debate in LIS education in public universities in Kenya, but was not yet well understood and appreciated. Little awareness was linked to failure to incorporate IE content in LIS curriculum and inadequate financial support for IE forums and resources. To mitigate these challenges, the study recommends creating awareness on the purpose of teaching IE in LIS curriculum. In particular, sensitization on IE education should be carried out to students, lecturers and administrators in LIS schools. These LIS schools should be at the forefront in carrying out awareness programmes in their respective universities. This can be implemented through an awareness day where activities are organized that relate to information ethics.

6.4.2 Plagiarism Policy

The study established that there was emergent information ethics violations reported in LIS departments. Respondents agreed that plagiarism was the most prevalent among LIS students, yet there were inadequate policies to address this vice. The presence of IE
violations points to several factors which have contributed to these vices. Some of these factors are within the control of individual students but others relate to poor research support systems within universities. Besides, HODs and lecturers were not well equipped to address the vices. To address these challenges, a plagiarism policy should be developed by a special committee comprising the university librarian, legal officer, university academics and research units and representatives from the teaching and student fraternity. The student’s handbook should be reviewed to include rules and regulations relating to information ethics. Research forums should be organized in Public universities to enlighten and sensitize staff and students on research units.

6.4.3 Offer a full fledged IE Course

Respondents had varying views on how to deliver IE courses: whether as fully fledged or integrated in mainstream LIS courses. Respondents overwhelmingly preferred a fully fledged course in order to give the course considerate emphasis on coverage of IE content that relate to LIS profession. It was felt that if IE aspects were integrated in other mainstream LIS courses, it was likely to be given less attention. This has also been backed by documentary evidence which showed that fully fledged courses are essential rather than having IE content dispersed and briefly mentioned in other courses (Limo 2010; Ocholla 2009; Buchanan 2004). Findings suggested that teaching a dedicated information ethics course as part of LIS training would better prepare and equip students with knowledge on ethics relevant in adapting to an information society and therefore the study proposes the use of fully fledged courses in IE courses. To address this, curriculum reviews are recommended to incorporate full fledged courses on information ethics.
6.4.4 Encourage Research and Publication

The study found out that there was limited literature on information ethics by African scholars and not much research has been done in this area in Kenya. There was heavy reliance on the internet and e-journals on literature on the information ethics as there were hardly any books in this subject available. Based on the above finding, the study recommends that scholars and academicians in LIS departments should encourage research and publication in IE. As much as possible, the literature should be made available through open access channels including open access journals and institutional repositories.

To foster research, regular discussions and seminars should be organized on thematic areas in information ethics for lecturers and students. Such forums would provide sharing of ideas in the teaching and learning of information, discussion on the standard content for IE courses, and critiquing of existing curricula in information ethics courses in LIS schools in the country.

6.4.5 Advocate for a National Network

The study found out that a national network on information ethics is lacking that would provide coordination of IE activities in Kenya. The absence of a coordinating body, scholars in this field have no forum for collaborations and partnerships in teaching information ethics. A national network would coordinate sharing of ideas, promote awareness and provide training in information ethics in the country. Since IE is a new academic discourse in Kenya, deliberate effort should be made to train and develop lecturers through facilitation to conferences and workshops. With the assistance of
ANIE, a Kenyan national chapter for ANIE needs to be established so as to bring together all ANIE participants in the country. A committee should be formed to manage the network and also bring together scholars and academicians interested in information ethics in the country. The network will be charged with the responsibility of organizing activities to raise awareness in information ethics and support design and development of IE courses.

6.4.6 Provide a Framework for IE Curriculum

Attempts have been made to integrate information ethics content in LIS courses but this was found to be inadequate and not well defined in LIS curriculum. The results also showed integration of information ethics courses in LIS curriculum was inadequate. Despite the support for a full fledged course, respondents agreed that they lacked sufficient knowledge to formulate a full fledged IE course. Moreover, a framework for an information ethics course that relates to Kenya was found to be lacking. It is proposed that the ANIE model curriculum should be adopted as a framework for information ethics course but customized to suite individual LIS departments. This, however, should be customized to the Kenyan context. Associations of librarians, archivists and other information professionals in the country should therefore work towards contextualizing the ANIE model to meet the Kenyan needs.

6.5 Framework for Information Ethics Course

A framework for information ethics course derived from Malan and Bester (2014) is presented in the next page in table 6.1. The proposed framework presented in table 6.1 can serve as a starting point for persons mandated to draft a fully fledge information ethics course in Kenya as proposed in the fourth recommendation of this study.
Table 6.1 Information Ethics Course

<table>
<thead>
<tr>
<th>Topic</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>1. Introduction and Orientation to Information Ethics</strong></td>
</tr>
</tbody>
</table>
| Defining information ethics | - Ethics, information and IE  
- Information types and sources  
- Evolution and value of IE as a field of study |
| Information ethics issue | - Impact of converging technologies on human conditions  
- Misuse of ICTs |
| Ethical reasoning | - IE as a value/moral imperative  
- Philosophical perspectives on morality  
- Ethical decision making |
| Information in context | - Contextual application of IE  
- IE, globalization and development I and K societies  
- IE and the law |
|       | **2. Information Ethics and Philosophy** |
| Philosophy past and present | - A mix of classical and modern philosophies relevant to IE issues |
| Philosophy and critical thinking | - Different perspectives/approaches to the enablement to critical thinking  
- Ethical reasoning as basis for decision making |
| Philosophy and information ethics | - Impact of technology on human behaviour  
- Violations in the use of information/ICT  
- The evolution of IE as a practice/field of study  
- Moral/philosophical principles and IE |
|       | **3. Information Ethics and Law** |
| IE and human rights | - Human rights declarations.  
- Information-related human rights. |
| Regulations of information and the media | - Information and media laws. |
| Information ethics, philosophy and law | - Correlation and conflict in legal and philosophical position on information-related matters. |
|       | **4. Information Ethics in Africa** |
| Information and knowledge societies | - Features/characteristics distinctive of I & K societies.  
- Evolution and purposes of I and K societies. |
| Africa as evolving macro-level information and knowledge society | - Current status of Africa/world as I and K societies.  
- Opportunities and challenges in the development of I and K societies in Africa. |
| IE in Africa | - The use and misuse of information networks & technology in Africa. |
|       | **5. Contextual Application of Information Ethics** |
| Practical application of IE in different context and situations | - Responsible use of information and ICT academic learning/career-related activities.  
- Knowledge of and critical reflections on the presence of IE in academic protocol and/or professional codes of conduct. |

*Source: Adapted from Malan and Bester (2014: 34, 40, 45-46, 51-52& 56)*
Table 6.1 presents a model framework for an information ethics course at the undergraduate level of LIS training. Malan and Bester (2014) notes that the course consists of five purpose-focused units, each addressing a different aspect of information ethics. They suggest that the first unit is primarily aimed at the first year university level, and could be offered as part of academic orientation to all first year students. Further, the other four units could be offered at any academic year level, so long as the depth and scope of content, and instruction methods reflect the standards prescribed for the particular academic year level.

The first topic is on Introduction and orientation to information ethics, which is aimed at providing learners with an overview of information ethics as a concept. According to Malan and Bester (2014), this unit is aimed at a) clarifying the concepts of information ethics, b) introducing students to notion of information ethics as a field of study, and c) providing students with a brief overview of the themes dealt with in subsequent units.

This is followed by the second unit on Information ethics and philosophy, which focuses on information ethics as an applied philosophy. The aim is to develop in students a critical understanding of the philosophical principles informing information ethics, and a willingness to use and manage information, ICT and social media in a responsible and morally accountable ways.

The third unit focuses on Information ethics and the law, which deals with the legal dimensions of information ethics. The unit focuses on developing the learners’
knowledge and understanding of media and information legislation in their own country. It also provide students with the opportunity to critically reflect on the need or not for such legislation in information and knowledge societies.

*Information ethics in Africa* is envisaged as the fourth unit, which aimed at contextualizing information ethics in Africa. It focuses explicitly on Africa and her needs; in particular the African context, value systems, challenges and opportunities in the field of information ethics. The unit enables students to reflect on the challenges that African countries face in their development towards becoming fully fledged information societies and the opportunities available for them to overcome these challenges.

The fifth and final unit, *Information ethics in practices*, gives learners the opportunity to apply their knowledge and understanding of information ethics issues and the information life cycle to different contexts and situations. The purpose of the unit is to develop students’ ability to practically apply their theoretical knowledge and understanding of information ethics as well as their ethical and legal reasoning skills in their own life, learning and work contexts.
6.6 Proposed Model for Integrating Information Ethics in LIS Curriculum

The study proposes a framework for improving the integration of information ethics in LIS curriculum. The proposed model is illustrated in Figure 6.1.

Figure 6.1 Proposed model for integrating information ethics in LIS Curriculum
Source: Author
6.5.1 Explanation of the Model

The explanation of the proposed model in figure 6.1 is presented below.

1. Society

Society has prescribed rules of behaviour passed on from one generation to another through education and informally through guarded cultural practices and beliefs. These rules prescribe the rights and wrong of a given society and determine whether or not certain behaviour is acceptable. Social systems have developed laws to protect society and support adherence to acceptable behaviour, as well as spell out sanctions for violations. Laws are drawn from the social cultural background of the citizen and philosophical underpinning of specific African cultures. This philosophical and social setup informs the moral development of LIS lecturers and students. Society influences the nature and scope of the information ethics course in that lecturers draw examples to support in teaching IE courses from the surrounding environments which are likely to be familiar to students. It also validates the teaching in universities by either accepting or rejecting the products of the curriculum based on how best the graduates measure up with their expectations. On the other hand, it influences the LIS practice by utilizing services provided by information centers. Their information needs determine the information services offered in these professionals.

2. LIS Practice

The university draws its students and staff from the surrounding environment. The same environment also consumes the products from the university. LIS practice expects the
university graduates to portray certain form of acceptable behaviour in line with the professional codes of ethics for information professionals. Therefore, LIS departments should cultivate ethical value among students in their academic careers. LIS departments could achieve this through the integration of information ethics courses in their curriculum. Besides, whenever a new curriculum is drafted, it is presented before a stakeholder’s forum in order to ensure that the intended course is tailor made to suit the demands of job market. Periodic curriculum reviews are carried out to cater for contemporary issues in LIS profession.

3. Ethical Behaviour

The desired ethical behaviour of LIS students is modeled by society, LIS practice and the curriculum offered in their department. The ethical decision making of lecturers and students is heavily influenced by their cultural, social and philosophical backgrounds. The value system of individuals is informed by their background, surrounding environment and social groups where they belong to. Besides, LIS practice prescribes codes of ethics for information professionals which students should learn and embrace later in industry when making ethical decisions. Moreover, the value systems which an individual identifies with, guide their decision making on what is right and wrong. ICTS have been embraced by both the university and society at individual and corporate level. The introduction of ICTs has presented positive and negative impacts on social systems in all spheres of life, with the emergence of new form of ethical behaviour.
Learning Outcomes

Desired ethical behaviour is mirrored in the learning outcomes of the information ethics course. The learning outcomes are the ultimate achievement of teaching the information ethics course. It acts as a link between theory and practice of the LIS profession. The purpose for teaching the course is to facilitate moral development among LIS students during their training and later at the workplace. It is hoped that at the end of the course, LIS students will appreciate the purpose for the course in facilitating their ethical development when learning and in future practices.

4. Curriculum

A curriculum indicates the objectives of the course, duration, assessment methods and methods of instructions recommended for the course. As earlier mentioned, the curriculum is influenced by the LIS practice and society. A curriculum contains the following information: expected learning outcomes, purpose of the course, course content, mode of delivery, and assessments methods recommended for the course, which are discussed below.

Necessity for Teaching Information Ethics

New ethical issues are arising that are not addressed in existing laws and societal rules. Existing ethical theories do not adequately address these emerging ethical issues since they were developed before the advent of ICTs. For example, new forms of digital divide are emerging between the information rich and information poor. This has led to a legal lapse on rules that adequately address ICT related issues. These emergent ethical
challenges have necessitated the need for information ethics education in institutions of higher learning. University administrators are handling cases of new forms of academic dishonesty that are not covered in the university rules and regulations. For example, plagiarism and other forms of examination malpractices using ICT gadgets are not adequately covered in the regulations governing examinations. Information ethics should be espoused in the curriculum so as to educate and empower LIS students, now and as future practitioners to make right ethical decisions consistent with the code of ethics for information professionals.

**IE Content**

The LIS curriculum carries the course description which contains the content of the information ethics course. This is where the content is described indicating area of focus for every course. The content should include and not limited to the following: definitions, concepts, and principles of IE, ethical theories and reasoning, IE philosophies and laws, IE in Africa and practice and contemporary issues in information ethics. Assessment is based on the course content.

**Teaching Methods**

The methods of instruction recommended for the course are indicated in the curriculum. The mode of delivery should enhance the learning outcomes and be in-line with prescribed assessment methods. The choice of the teaching method is determined by several factors including: the size of the class; resources to support learning and the lecturers’ mastery of the course content. This calls for the need to train lecturers teaching
IE courses through formal training programmes or even through short course on the content for information ethics.

**Assessment**

Assessment is a means for evaluating a course. It could be in the form of examinations, continuous assessment tests (CATs), discussions or assignments. Assessment is based on what is contained within the curriculum. It is therefore informed by the purpose for the course, course content, teaching method used and the learning objectives.

**6.7 Dissemination of Findings**

The findings of this study will be distributed through the National Commission for Science, Technology and Innovation (NACOSTI) as required. The researcher will also distribute the findings through publications in refereed and open access journals and presentations in conferences to reach the larger group who participated in the study or who may be interested in this study.

**6.8 Recommendations for Further Study**

The study investigated the teaching of information ethics in LIS departments in public universities in Kenya. The study proposed the following areas for further research:-

1. Respondents indicated that IE courses taught had an impact on their learning and training. However, there has not been any documented study to ascertain what impact IE has had on information professionals in Kenya. There is need
therefore to conduct a study to establish the impact of information ethics knowledge on their practice.

2. Studies have shown that information ethics violations are also prevalent at postgraduate level in LIS departments. This study confined itself to the teaching of information ethics at undergraduate level of LIS programmes. It is therefore proposed that a study be done to determine the need and forms of information ethics in postgraduate programmes in public universities in Kenya.
REFERENCES


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ANIE (2012). Programme of activities for the Africa Network for Information Ethics (ANIE) 3rd International Conference that will take place at the Kievits Kroon Conference Centre in Pretoria, South Africa 3rd -7th September 2012


Jackson, S.A. and Baltes, B. (2010). Online doctoral students’ understanding of information ethics issues: An exploratory study *The University of Fraser valley research review* Vol 3(2) spring, 26-38.


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LIST OF APPENDICES

APPENDIX 1: INTRODUCTORY LETTER

TO WHOM IT MAY CONCERN

Dear student,

I am a postgraduate student at the school of Information Sciences, Moi University. As part of my research, I am undertaking a survey for the purpose of obtaining data to enable me contribute to existing knowledge on information ethics. I am carrying out a research on “Teaching of Information Ethics in Information Science Schools in Public Universities in Kenya” and would wish to enlist your support by completing this questionnaire. Kindly provide answers to all questions as honest as possible. The information you provide and the findings of the study will be handled with utmost confidentiality and will only be used for the purpose of this study.

Maina, Jane C.
APPENDIX 2: QUESTIONNAIRE FOR STUDENTS

TEACHING OF INFORMATION ETHICS IN INFORMATION SCIENCE SCHOOLS IN PUBLIC UNIVERSITIES IN KENYA

Do not write your name anywhere on this questionnaire

Part 1: Personal information

Please tick (√) where appropriate

1. Institution of training:
   - Kisii University [ ]
   - Moi University [ ]
   - Kenyatta University [ ]
   - The Kenya polytechnic University [ ]

2. Please indicate your year of study.
   1st year [ ] 2nd year [ ] 3rd year [ ] 4th year [ ]

   If in 3rd and 4th year, your area of specialization/ option as follows:

   IT-Information Technology; LIS- Library Studies; PBT- Publishing and Book Trade; RAM- Records and Archives Management

<table>
<thead>
<tr>
<th>Specialization</th>
<th>IT</th>
<th>LIS</th>
<th>PBT</th>
<th>RAM</th>
<th>NONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4th</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

3. Gender
   a) Male [ ]
   b) Female [ ]
PART 2: COVERAGE OF INFORMATION ETHICS IN THE CURRICULUM

4. Have you done a course in information ethics? a) Yes [ ] b) No [ ]

If yes, indicate the courses you were taught and the year of study in the table below

<table>
<thead>
<tr>
<th>Course Title/Code (If you can recall)</th>
<th>Year of study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
</tbody>
</table>

5. For the courses indicated in question 5 above, please rank by relevance in the table below

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Very Relevant</th>
<th>Relevant</th>
<th>Irrelevant</th>
<th>Very Irrelevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Have you been able to apply the knowledge you acquired in information ethics to your studies? a) Yes [ ] b) No [ ] c) N/A [ ]

If your answer to question 7 is yes, state below how you have been able to apply the knowledge you acquired from the course(s)

a) __________________________________________________________

b) __________________________________________________________

c) __________________________________________________________

If your answer to question 7 is No, what do you think hindered you?

a) __________________________________________________________

b) __________________________________________________________

c) __________________________________________________________
7. Which of the following information ethics issues were taught during the course of your studies? Tick in the table below

<table>
<thead>
<tr>
<th>Information Ethics Issues</th>
<th>Taught</th>
<th>Not Taught</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual Property</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information Privacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information availability</td>
<td></td>
<td></td>
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<tr>
<td>Cultural diversity</td>
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<td></td>
</tr>
<tr>
<td>Equitable access</td>
<td></td>
<td></td>
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<tr>
<td>Service to clientele</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidentiality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair Use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronic Waste</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do no Harm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others, specify------------</td>
<td>--------</td>
<td>------------</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------</td>
<td>------------</td>
</tr>
</tbody>
</table>

8. Do you consider the information ethics issues mentioned in question 8 of importance to your level of training? 
   a) Yes [ ]  
   b) No [ ]

Part 3: Extent of Integration of Information Ethics in Information Science Teaching

9. Please comment in the table below on the adequacy of coverage of the information ethics issues mentioned in question 8 in your course(s).

<table>
<thead>
<tr>
<th>Information ethics issues</th>
<th>Very Adequate</th>
<th>Adequate</th>
<th>Neither</th>
<th>Inadequate</th>
<th>Very Inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual property</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information privacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information availability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural diversity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equitable access</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service to clientele</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Confidentiality

Fair Use

Electronic waste

Do no harm

Others, specify

<table>
<thead>
<tr>
<th>Area where information ethics issues were covered</th>
<th>Very adequate</th>
<th>Adequate</th>
<th>Neither</th>
<th>Inadequate</th>
<th>Very inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested in CATS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IE issues covered in course outline</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exam questions included IE issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Held class presentation on IE issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assignments given on IE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others, specify</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
13. Which information sources on information ethics did you use to support your learning?

- Books [ ]
- Journals [ ]
- Internet sources [ ]
- Websites [ ]
- Conference proceedings [ ]
- Others, Specify---------------------------

14. Comment on the availability of sources of information on information ethics in your university library?

<table>
<thead>
<tr>
<th>Coverage of content</th>
<th>Very Adequate</th>
<th>Adequate</th>
<th>Neither</th>
<th>Inadequate</th>
<th>Very Inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conference proceedings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. Did the lecturer introduce you to codes of ethics for information professionals?

a) Yes [ ]

b) No [ ]

**PART 4: INSTRUCTION METHODS FOR INFORMATION ETHICS**

16. Which of the following teaching methods were used by your lecturer during the information ethics lessons?
17. Do you consider it important for information ethics to be taught to your course?

   a) Yes [ ]  
   b) No [ ]

   If yes, please explain why you think it is important

   a) ________________________________________________________________
   b) ________________________________________________________________
   c) ________________________________________________________________

   If no, state why you think it is not important

   a) ________________________________________________________________
   b) ________________________________________________________________
   c) ________________________________________________________________

18. How useful is the information you gained from the course to your future career in information science?

   a) Very useful [ ]
19. Do you have an information ethics club/association or group in your university
   a) Yes [ ]     b) No [ ]     c) Don’t know [ ]
If yes, state the activities of the club/group
   a) _______________________________________________________________
   b) _______________________________________________________________
   c) _______________________________________________________________

PART 5: INFORMATION ETHICS VIOLATIONS

20. Which of the following information ethics violations were covered in within the course of your training?

<table>
<thead>
<tr>
<th>Information Ethics Violations</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of confidentiality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hacking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plagiarism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piracy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others, specify</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

21. Do information ethics violations exist in your school/faculty?
   a) Yes [ ]     b) No [ ]
If your answer is yes, which information ethics violations are common in information in your school/faculty?

<table>
<thead>
<tr>
<th>Information Ethics Violations</th>
<th>Common</th>
<th>Uncommon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of confidentiality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hacking</td>
<td></td>
<td></td>
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<tr>
<td>Plagiarism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piracy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others, specify</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
22. Have you personally observed incidences of these violations in your university?
   a) Yes [     ]  
   b) No [     ]

   If yes, please state the incidences that you have personally observed
   a) ____________________________________________________________
   b) ____________________________________________________________

23. Are you aware of the penalties instituted by the university on students found guilty of information ethics violations?
   a) Yes [     ]  
   b) No [     ]

24. What factors encourage information science students to engage in information ethics violations in your university?
   a) ____________________________________________________________
   b) ____________________________________________________________
   c) ____________________________________________________________

PART 6: CHALLENGES OF LEARNING INFORMATION ETHICS

26. Did you face any challenges when learning information ethics course(s)?
   a) Yes [     ]  
   b) No [     ]

   If your answer to question 26 is yes, please state some of the challenges that you faced?
   • Concepts hard to understand
   • Lecturer not well versed with the course
   • Not able to apply the issues learnt
   • Others, specify ---------------------------------------------
27. What do you think should be done to address the challenges you have mentioned?

----------------------------------------------------------------------------------------------------------------------------------
----------------------------------------------------------------------------------------------------------------------------------
----------------------------------------------------------------------------------------------------------------------------------

28. Any other comment?

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Thank You for Participating in this Study
APPENDIX 3 : QUESTIONNAIRE FOR LECTURERS

TEACHING OF INFORMATION ETHICS IN INFORMATION SCIENCE

SCHOOLS IN PUBLIC UNIVERSITIES IN KENYA

Do not write your name anywhere in this questionnaire

Part 1: Personal information

Please tick (√) where appropriate

1. Name of your institution

2. Please indicate your designation
   a) Professor [ ]
   b) Associate Professor [ ]
   c) Senior Lecturer [ ]
   d) Lecturer [ ]
   e) Assistant Lecturer [ ]
   f) Other, Specify----------------------

3. What is your area of specialization --------------------------

Part 2: Coverage of Information Ethics in Curriculum

4. Do you teach any course in information ethics?
   a) Yes [ ] No [ ]

If your answer to question four is yes, please list the courses you teach information ethics
   a) -------------------------------
   b) -------------------------------
   c) -------------------------------
5. At what level of study do you teach the course?

   a) 0-2 Years [ ]
   b) 3-5 Years [ ]
   c) 6-8 Years [ ]
   d) 9-11 Years [ ]
   e) Over 11 years [ ]

6. Have you received any induction/training in information ethics?

   a) Yes [ ]
   b) No [ ]

   If your answer is yes, please explain how your induction course/training was organized:

   a) _____________________________________________________________
   b) _____________________________________________________________
   c) _____________________________________________________________

   If No, what motivated you to teach information ethics?

   a) Have an interest in the subject [ ]
   b) Was asked to teach the course [ ]
   c) Other, Specify _______________________________________________
7. How adequate were the following information ethics issues covered in the course of your professional training?

<table>
<thead>
<tr>
<th>Information Ethics Issues</th>
<th>Very adequate</th>
<th>Adequate</th>
<th>Neither</th>
<th>Inadequate</th>
<th>Very inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual Property</td>
<td></td>
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<tr>
<td>Information Privacy</td>
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<tr>
<td>Information availability</td>
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<tr>
<td>Cultural diversity</td>
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<tr>
<td>Equitable access</td>
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<tr>
<td>Service to clientele</td>
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</tr>
<tr>
<td>Confidentiality</td>
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<tr>
<td>Fair Use</td>
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<tr>
<td>Electronic Waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do no Harm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others, specify---------------------------</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

8. Have you attended any conference or seminar in information ethics?

a) Yes [ ]

b) No [ ]

If yes, how many times have you attended such a conference?

a) 1 time [ ]

b) 2-3 times [ ]

c) 4-5 times [ ]

d) More than 5 times [ ]
If no, what factors hindered you from attending the conferences or seminars?

a)  

b)  

c)  

9. Has your university ever sponsored you to any conference or seminar or course on information ethics?

a) Yes [   ]

b) No [   ]

If no, why do you think the university has failed to sponsor you to conferences or seminars?

a)  

b)  

c)  

10. Which of the following do you use to update your knowledge in information ethics?

a) Independent reading [   ]

b) Contacting experts [   ]

c) Attending conferences/Workshops [   ]

d) Undertaking short courses [   ]

e) Others, specify  

11. In your view, is it relevant to teach information ethics course to information science students?

a) Yes [   ]

b) No [   ]
If yes, please state why you think it’s relevant

a)  

b)  

If no, what reasons would you give against an information ethics course?

a)  

b)  

12. Comment on the importance of information ethics course to an information science education and training?

a)  Very Important [  ]

b)  Important [  ]

c)  not Important [  ]

Part 3: Extent of Integration in Information Science Teaching

13. In your view, how would you want the course to be taught?

a)  As a separately course [  ]

b)  As part of another course [  ]

c)  Others, specify  

Please give reasons to support your view in question 13 above

a)  

b)  

c)  
14. In your view, how adequate has the curriculum covered the following information ethics aspects? Indicate your view by ticking in the table below.

<table>
<thead>
<tr>
<th>Information Ethics Issues</th>
<th>Very Adequate</th>
<th>Adequate</th>
<th>Not Adequate</th>
<th>Inadequate</th>
<th>Not Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copyright</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information Privacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information availability</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual freedom</td>
<td></td>
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<tr>
<td>Cultural diversity</td>
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<td>Equitable access</td>
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<tr>
<td>Service to clientele</td>
<td></td>
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<tr>
<td>Confidentiality</td>
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<tr>
<td>Fair Use</td>
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<tr>
<td>Electronic Waste</td>
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<tr>
<td>Do no Harm</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Others, specify --------</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
15. Which other aspects of information ethics would you recommend to be added to
the course and why?

a) ---------------------------------------------

b) ---------------------------------------------

c) ---------------------------------------------

16. How adequately did you test information ethics issues mentioned in question 14 the
in assessment methods indicated? Tick in table below.

<table>
<thead>
<tr>
<th>Area where information ethics issues were covered</th>
<th>Very adequate</th>
<th>Adequate</th>
<th>Neither</th>
<th>Inadequate</th>
<th>Very inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covered in CATS</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Indicated on the course outline</td>
<td></td>
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<tr>
<td>Tested on IE in the exams</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Held class presentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gave assignments to students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others, specify ------</td>
<td></td>
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</tr>
</tbody>
</table>
Part 4: Instruction Methods for Information Ethics

17. From your experience, comment on the adequacy of the following instruction methods when employed to teach information ethics? Tick in the table below.

<table>
<thead>
<tr>
<th>Teaching Method</th>
<th>Very adequate</th>
<th>adequate</th>
<th>Inadequate</th>
<th>Very Inadequate</th>
<th>Not used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures and seminars</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Role play</td>
<td></td>
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<td></td>
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<tr>
<td>Case studies</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Class presentation</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Group discussions</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Real life examples</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>On-line collaborations</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Inviting speakers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others, please specify</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. Do you have discussion sessions with your students on global best practices in information ethics teaching in information science schools in the world?
   a) Yes [ ] No [ ]

If yes, how important in your view are the discussions in teaching information ethics?
   a) Very Important [ ]
   b) Important [ ]
   c) not Important [ ]

19. In your teaching, do you introduce students to codes of ethics for information professionals?
   a) Yes [ ] b) No [ ]

If no, why don’t you teach them codes of ethics for information?
   a) -------------------------------------------------
20. In your view, which academic discipline should facilitate the teaching of the course?

a) Information Science [ ]
b) Philosophy [ ]
c) Arts [ ]
d) Sociology [ ]
e) Others, Specify---------------------------------------------

21. Comment on the level of development of information ethics teaching in Kenya

a) Very developed [ ]
b) Developed [ ]
c) Not sure [ ]
d) Not Developed [ ]

22. Are information ethical issues addressed in your university statutes?

Yes [ ]
No [ ]

If yes, please state how

a) ---------------------------------------------
b) ---------------------------------------------

23. Does your university support teaching interest in information ethics?

Yes [ ]
No [ ]

If yes, please explain how the support is provided.

a) ---------------------------------------------
b) ---------------------------------------------
24. How would you rate the coverage of content on information ethics by various sources of information in supporting your teaching?

<table>
<thead>
<tr>
<th>Coverage of content</th>
<th>Very Adequate</th>
<th>Adequate</th>
<th>Neither</th>
<th>Inadequate</th>
<th>Very Inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conference proceedings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

25. How relevant are the following information ethics aspects to information science education courses?

<table>
<thead>
<tr>
<th>Information Ethics Issues</th>
<th>Very Relevant</th>
<th>Relevant</th>
<th>Neither</th>
<th>Irrelevant</th>
<th>Very Irrelevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online discussion groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guest speakers</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Collaborations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Views from former graduates</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Workshops/Seminars</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Part 6: Information Ethics Violations**

26. Which information ethics violations did you cover in your course? Tick where appropriate in the table

<table>
<thead>
<tr>
<th>Information Ethics Violations</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of confidentiality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hacking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plagiarism</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
27. Does any of the information ethics violations mentioned above exist in your School/Faculty?
   a) Yes [ ]  b) No [ ]

Please explain your answer to question 27 above
   a) ----------------------------------------------------------------------------------------------------------------------------------
   b) ----------------------------------------------------------------------------------------------------------------------------------

28. Which information ethics violations mentioned in question 27 are common in your School/Faculty?

<table>
<thead>
<tr>
<th>Information Ethics Violations</th>
<th>Common</th>
<th>Uncommon</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of confidentiality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hacking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plagiarism</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piracy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others, specify</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

29. Which factor do you think encourage students to engage in information ethics violations?
   a) ----------------------------------------------------------------------------------------------------------------------------------
   b) ----------------------------------------------------------------------------------------------------------------------------------
30. Do you inform students in your class of the sanctions stipulated by the university on malpractices related to information ethics?

a) Yes [ ]

b) No [ ]

Please explain your answer to question 28 above

a) _____________________________________________________________

b) _____________________________________________________________

**Part 7: Challenges of Teaching Information Ethics**

31. Have you encountered any challenges in teaching the course?

a) Yes [ ]

b) No [ ]

If yes, what are some of the challenges that you have encountered?

a) _____________________________________________________________

b) _____________________________________________________________

c) _____________________________________________________________

If possible, clarify the nature of the challenge(s) you have identified.

a) _____________________________________________________________

b) _____________________________________________________________

c) _____________________________________________________________

32. What do you think should be done to address the challenges you have mentioned?

a) _____________________________________________________________

b) _____________________________________________________________
33. Any other comment

a) 

b) 

Thank You for Participating in this Study
APPENDIX 4: INTERVIEW SCHEDULE FOR HEADS OF DEPARTMENTS

1. Which courses does your department offer that covers information ethics issues?

2. What range of information ethics issues are covered in the curriculum?

3. What criteria do you use to identify the lecturers to teach the course?

4. Others, please specify

5. How does the department assist lecturers teaching the course to upgrade their knowledge in the subject?

6. Which sources of information are available to support teaching and learning information ethics?

7. What forums are available for discussions on information ethics issues by faculty, students and other information science stakeholders?

8. What measures have been put in place to ensure that students learn the various concepts of information ethics?

9. What methods of instructions have the department/faculty proposed for teaching information ethics?

10. Which best practices in the region or internationally do you benchmark with in information ethics teaching?

11. Have you handled any information ethics violation in your department?
   Yes [     ]
   No [     ]
If yes, which ones are common?

12. Are students aware of the sanctions put in place by the university
   Yes [ ]
   No [ ]
   If yes, please state avenues used by the university to educate students on these sanction

13. What factors do you think encourage students to engage in information ethics violations?

14. Which information ethics violation do lecturers discuss with students?

15. What challenges have been expressed by the lecturers and students concerning the course?

16. What in your view should be done in order to address the challenges indicated?

17. What in your view should be done in order to address the challenges indicated?

Thank You for Your Participation
APPENDIX 5: REQUEST FOR PRE-TESTING RESEARCH INSTRUMENTS

Dear respondent,

My name is Jane Cherono Maina. I am a doctoral student at the School of Information Sciences of Moi University. As part of my study, I am carrying out a research study entitled “Teaching Information Ethics in Information Sciences Schools in Public Universities in Kenya”. The study targets heads of department, lecturers and students of Library and Information Sciences (LIS) departments in selected public universities in Kenya.

The purpose of this letter is to seek your participation in the pilot study by completing the questionnaire herewith attached or providing responses to the questions presented in the interview schedule. The aim of this exercise is to pre-test the instrument to ensure that the data collection instruments assist to obtain relevant data intended by this research study. Kindly feel free to make any comments that you find necessary for this study. Please return the completed questionnaire to office of your head of department or mail it to the address below.

Thank you for your support and participation in this exercise.

Thank you
Jane C. Maina

Moi University, School of Information Sciences,
P.O. Box 3900, Eldoret.
APPENDIX 6: REQUEST FOR RESEARCH PERMIT

23rd February 2012

Secretary
National council of science and technology
P.O. Box 30623- 00100
Nairobi.

Dear Sir/ Madam,

My name is Jane Cherono Maina. I am a doctoral student at the School of Information Sciences, Moi University. As part of my study, I am carrying out a research study entitled “Teaching Information Ethics in Information Sciences Schools in Public Universities in Kenya”. The study targets heads of department, lecturers and students of Library and Information Sciences (LIS) departments in four public universities namely:-

1. Moi University
2. Kenyatta University
3. The Technical University of Kenya
4. Kisii University

The purpose of this letter is to request for research authorization to carry out research in the aforementioned universities.

Please find attached an introductory letter from Moi University, department of Library, Records Management and Information Studies.

Thank you.

Jane C. Maina

Moi University, School of Information Sciences,
P.O. Box 3900, Eldoret. Mobile 0724172268; E-mail janermaina@gmail.com