DEPARTMENT OF INFORMATION STUDIES

UNIVERSITY OF GHANA, LEGON

INFORMATION ETHICS IN SPECIAL LIBRARIES IN GHANA: CASE STUDY OF COCOA RESEARCH INSTITUTE OF GHANA

BY

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THIS DISSERTATION IS SUBMITTED TO THE DEPARTMENT OF INFORMATION STUDIES, UNIVERSITY OF GHANA, LEGON, IN PARTIAL FUFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE MASTER OF ARTS DEGREE IN INFORMATION STUDIES

JULY 2015

DECLARATION

I, Rose Lowor hereby declare that except for references to other people's work which have been duly acknowledged, this study is solely mine and has neither in whole or in part been submitted to any other university for another degree. I have also duly acknowledged all guidance and directions.

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Date…… Date……

DEDICATION

To Sammy, Yvonne and Koby.

ACKNOWLEDGEMENT

I thank the Almighty God for granting me the opportunity to complete another degree programme. My profound and sincere gratitude goes to my supervisor Mrs. Florence Entsua-Mensah for the patience, encouragement and support she gave me during this research work. My appreciation goes to all my lecturers and mates of 2014. I also wish to thank Mr. Edward Borteye who gave me some clarification concerning this work.

I acknowledge with thanks the support of Dr. F.M. Amoah, Mr. Randy Addai, my Head of Division and the immense contributions of the staff of Cocoa Research Institute of Ghana (CRIG) library, New Tafo for their immense contribution and the data collection for this study. I am also grateful to all the respondents and those who participated in this research work.

Finally, my deepest gratitude goes to Dr. Perpetua Dadzie under whose able counsel and criticism has led to the materialization of this work.

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List of Abbreviations

A.L.A	American Library Association
BOG	Bank of Ghana
CRIG	Cocoa Research Institute of Ghana
CRIN	Cocoa Research Institute of Nigeria
CSIR	Council for Scientific and Industrial Research
GCMB	Ghana Cocoa Marketing Board
IE	Information Ethics
IFLA	International Federation of Library Association
WACRI	West African Cocoa Research Institute
WIPO	World Intellectual Property Right

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ABSTRACT

Information Ethics (IE) has developed over the years as a discipline in library and information science, but the information ethics field has evolved and embraced other disciplines. Information Ethics (IE) concerns all human related activity to information, that is, our relationship with information, how we generate or what we do with information, the process and how to distribute it in the procedure of new technologies and modernizations, which comprise a lot of processed information. It therefore, prescribes the dos and don'ts in an information society and also as a relatively new area of study comprised of several distinct yet interrelated disciplines including applied ethics, intellectual property, privacy, free speech, and societal control of information. The study sets out to investigate the adherence of information ethics in Special Libraries in Ghana using Cocoa Research Institute of Ghana (CRIG) library as a case study. The survey method was employed using the entire population of 165 staff comprising research scientists, technical staff and library staff.

The findings of the study showed that, an individual should be able to decide what personal information to hold private, who is responsible for the accuracy and authenticity of information and what retribution is due to those injured by erroneous data and the right or authority to obtain information. Some recommendations such as more awareness creation of information ethics issues (e.g. privacy, accuracy of information, property and accessibility to information), enforcement of rules and regulations, punishment and rewards, involvement of library committee, and access control were all highlighted. However, some punishments for offenders may be difficult to implement especially in this environment.

The study recommended that there must be awareness creation through seminars, training, workshops etc., strict enforcement of rules and regulations and the control of access to the intellectual outputs of the institution by the library staff.

CHAPTER ONE

INTRODUCTION

1.1 Background

The word 'ethics', according to Sembok, (2003) is commonly used to refer to the whole domain of morality and moral philosophy. This domain essentially deals with values, practices, virtues and principles that distinguish what is right from what is wrong. It is a normative field because it describes what one should do or abstain from doing. As Wojtzak, (2002) and Sembok, (2004) rightly put it, ethics seems to primarily focus on the norms and standards of behavior of individuals or groups within a society based on normative conduct and moral judgment: principles of wrong and right; "moral consequences of human action" and responsibility and accountability.

The concept of information ethics (IE), developed in the 1980s, sought to address the issues of values and traditions, desired by a given society such as CRIG. It attempted to create standard for judging behavior of an individual or a member of the community and classifying them as moral or not concerned (Ahn, 2006). Information as a commodity or a resource plays a vital role in all aspects of life but the misuse of information causes infringement on the rights of those who produced or created these large volumes of information (Isiakpona, 2004).

According to Stahl (2008), if human beings are truly living in the early stages of what has been termed the information society, then clearly ethical concerns with regard to information are of central importance. Thus, there has been growing interest in issues that dealt with information ethics.

Information ethics according to Adam (2005) is the field that investigates the ethical issues arising from the development and application of information technologies. It provides a critical framework for considering moral issues concerning information privacy, moral agency, new environmental issues (especially how agents should behave in the infosphere), and problems arising from the life-cycle (creation, collection, recording, distribution, processing, and others) of information, especially ownership and copyright in view of the digital divide. Babik (2006) also pointed out that, information ethics concerns all human related activity to information, that is, our relationship with information, how we generate or what we do with information, the process and how to distribute it in the procedure of new technologies and modernizations, which comprise a lot of processed information.

Most researchers or information users want to receive credit for their contributions and do not want to have their ideas stolen or disclosed prematurely (Resnik, 2011). Information ethics can be interpreted as ethics in the using, accessing and disseminating the information. In this case, the information is used for the right things, the information accessed in the right way, and the information which is delivered correctly to the originator who has the rights (Ramadhan, Sensuse & Arymurthy, 2011).

Information professionals or the library staff plays an extremely vital role as participants in the information society, given that their mission includes gathering, processing, distributing and using information. This role is not different from what information professionals in special libraries have to play. According to Fallis (2003), information professionals in special libraries face ethical dilemmas with respect to copyright, patent and trade secrets etc. in carrying out their duties in an ethical manner.

1.1.1 Special Libraries

Special libraries are often restricted to certain user populations which are very often members of staff of that organization. According to Levine-Clark and Carter (2012), a special library is a library established, supported and administered by a business firm, private corporation, association, government agency, or other special interest group or agency to meet the information needs of its members or staff in pursuing the goals of the organization. The scope of the collections and services is limited to the subject interest of the host or parent organization. Examples of special libraries in Ghana are the Bank of Ghana Library, Council for Scientific and Industrial Research (CSIR) Library, Cocoa Research Institute of Ghana Library and others. Some specialized collections are open to the public; some are restricted to scholars while others are available only to the staff of the organization. Librarians in special libraries therefore walk in thin line between information access, serving specific users and preserving the information in their trust (Strife, 1994).

The main objectives of a special library are as follows:

1) It serves the information needs of its parent body;

2) It disseminates updated and significant information in the concerned field;

3) It gives pinpointed information promptly;

4) It provides desired information to its users on demand and mostly in anticipation;

5) The users also get new ideas and inspiration to initiate new projects.

In trying to fulfill these objectives, some information professionals in special libraries face ethical dilemmas with regards to the provision of relevant and quality information to their users, equity of service, conflict of interest, confidentiality, personal ethics and professional code of ethics.

1.1.2 Cocoa Research Institute of Ghana (CRIG)

It is one of the oldest research organizations in the country which was established at Tafo, Akim in 1938 as the Central Cocoa Research Station of the Gold Coast Department of Agriculture to investigate into the problems of diseases and pest, which had considerably reduced the production of cocoa in the Eastern Region. In 1944 it was changed to West African Cocoa Research Institute (WACRI) with a substation in Ibadan, Nigeria and some research activity in Sierra Leone and the Gambia. In 1962 after Ghana and Nigeria had attained independence, WACRI was dissolved and Cocoa Research Institute of Ghana (CRIG) and Cocoa Research Institute of Nigeria (CRIN) were formed as separate bodies.

CRIG was then placed under the administration of the National Research Council, Ghana Academy of Arts and Sciences (GAS) and later to the Council for Scientific and Industrial Research (CSIR). In 1973 it was brought under the management of Ghana Cocoa Marketing Board (GCMB), and to the Ministry of Cocoa Affairs in 1976. This Ministry was dissolved and reverted to be under the Ghana Cocoa Marketing Board (now Ghana Cocoa Board).

The mission of CRIG is to be a centre of excellence for developing sustainable, demand driven, commercially oriented, cost-effective, socially and environmentally acceptable technologies which will enable stakeholders to realize the overall vision of the cocoa industry and that of the other mandated crops such as coffee, shea, cola, and cashew (CRIG Handbook, 2011). CRIG library provides information resources in the areas of cocoa, coffee, shea, cola and cashew to its users. Researchers a lot of the time like to access information in their own time and space. It is therefore important for the librarian and the library staff generally to monitor and ensure that information is accessed and used ethically.

1.1.3 The CRIG Library

The Library started in 1938 with the collection of the mycological section of the Department of Agriculture at Aburi and the staff members were transferred to Tafo, when the then Gold Coast Government decided to establish the Central Cocoa Research Station on the advice of Sir Frank Stockdale in 1938 at Tafo. It was established to provide up to date information to support research activities of the Institute. The Library's mission is to build a comprehensive collection of recorded knowledge on cocoa, shea, coffee, cola and cashew and other mandated crops and make its resources available to scientists, other researchers and farmers. It also aims at ensuring that these resources are improved, sustained and preserved for posterity. The vision of the Library is to become an excellent repository for recorded knowledge on cocoa, coffee, shea, cola and cashew and to provide useful and timely information for effective research, teaching learning and farming practices.

The Library is currently housed at the top floor of the directorate block of the Institute. It has a book stock of 17,889 volumes and subscribes to 65 suggested journal titles for the various divisions of the Institute. It also has access to free online journals provided by AGORA, HINARI and TEEAL. The Library currently has a seating capacity of 40 and a router which users can use to access online resources. It has two information professionals and a clerk. The Library performs among others the following functions;

1. It selects and procures documents and other sources of information relevant to the research needs of clients
2. It provides reference services to the users via telephone or email

3. It gives current awareness service (CAS) regarding new arrivals and latest services to the users
4. It provides selective dissemination of information (SDI) and document delivery services to the users as per their subject areas and requirements,
5. It makes available to the users technical bulletins, Ghana Cocoa Newspaper, CRIG Newsletters and flyers to keep the users up to date with latest information,
6. It responds to the reference queries and makes retrospective search of literature as per users demand,
7. It compiles publications list, newspaper-clippings and accessions list to save the time of its users, and
8. It provides inter library loan facility to the users.

This study focuses on research scientists, technical staff and library staff because they are the main users of the library.

1.2 Statement of the problem

Information forms the intellectual capital from which human beings craft their lives and secure dignity. Mason (1986) in his PAPA model recognized that the unique challenges being faced in this age of information stem from the nature of information itself through which the mind expands and increases its capacity to achieve its goals, often as a result of an input from another mind.

Currently, with the complexities on issues of access, property, accuracy and privacy at CRIG there is the demand for critical ethical reflections and dialogue in the growing number of instances with these threats to the dignity of staff and the organization as a whole. However, the

building of intellectual capital is vulnerable in many ways. Information ethics which are sometimes ignored by professionals at CRIG would allow people's intellectual capital to be impaired whenever they lose their personal information without being compensated for it, when they are precluded access to information which is of value to them, when they have revealed information they hold intimate, or when they find out that the information upon which their living depends is in error. To ensure the social implication and the need to incorporate ethics within every computer use, development and application Williams (2005), provided a tool to identify the ethical implications of these consequences by posing four questions before making changes to a process as follows;

1. Who gains power?
2. Who loses power?
3. What are the intended consequences?
4. What are some possible unintended consequences?

The proactive consideration of these questions by some research scientists, technical staff and library staff can go a long way to avert serious, though unintended, disruptions that are ultimately ethically questionable at Cocoa Research Institute of Ghana.

1.3 Purpose of the study

The purpose of the study is to investigate the observance of information ethics in special libraries in Ghana using Cocoa Research Institute of Ghana (CRIG) Library as a case for this study.

1.4 Objective of the study

The study is guided by the following objectives aimed to; find the observance of ethics at CRIG

1. find out how privacy, accuracy, property and accessibility are observed by research scientists, technical staff and library staff at CRIG

2. find out the opinion of research scientists, technical staff and library staff on the privacy, accuracy, property and accessibility at CRIG
3. find out how ethical issues affect research activities of research scientists and technical staff at CRIG

4. identify some of the challenges of privacy, accuracy, property and accessibility of information in the CRIG library

5. recommend measures needed to prevent these ethical issues in CRIG

1.5 Research Questions

The study will be guided by the following research questions:

1. How privacy, accuracy, property and accessibility are observed by CRIG research scientists, technical staff and library staff?

2. What are the opinions of CRIG staff about privacy, accuracy property and accessibility?

3. How do these ethical issues affect activities of research scientist and technical staff of CRIG?

4. What are some of the issues affecting privacy, accuracy, property and accessibility of information in the CRIG library?

5. What are some of the measures needed to prevent these ethical issues at CRIG?

1.6 Scope and limitation of the Study

This study focuses on a cross section of the staff of CRIG (research scientist, technical staff and library staff). The study is limited to these categories of staff because they are the main users of scientific information.

1.7Theoretical Framework

According to Swanson (2013), theories are formulated to explain, predict, and understand phenomena and, in many cases, to challenge and extend existing knowledge, within the limits of the critical bounding assumptions. Theoretical framework is the structure that can hold or support a theory of a research study. It also introduces and describes the theory which explains why the research problem understudy exists. The framework adopted for this study is the Mason's 1986 PAPA Model. Mason introduced four broad categories of ethical issues for the information age that is, privacy, accuracy, property, and access, otherwise known as PAPA (Mason 1986).Today, in western societies more people are employed collecting, handling and distributing information than in any other occupation. Millions of computers inhabit the earth and many millions of miles of optical fiber, wire and air waves link people, their computers and the vast array of information handling devices together.

Mason's model is centered on the harm which could occur in the unethical use of information and information technology. More than twenty years later, those four issues are still timely and relevant in the use, development and application of ethical issues in IT. Mason in 1986 could never have predicted that the computer would become not only the tool, but also the object of such serious ethical transgressions as those that occur in today's networked world.

Mason's (1986) concern for *privacy* was that an individual should be able to decide what personal information to hold private, what information to share, and be confident that the shared information would be kept safe. Again, the issue of *accuracy* focused on discussions of who was responsible for the accuracy and authenticity of information and what retribution was due to those injured by erroneous data. His discussion of *property* addressed intellectual property rights, including those not necessarily protected by law and also made reference to physical property such as the "conduits through which information passes". Finally, the last issue of the PAPA framework, that is *access,* dealt with the right or authority to obtain information. The Mason's 1986 Model applies to this study in the sense that it provides a framework for analyzing a real-life practice, where individuals interact with each other and apply technology as well as intellectual content. It is related to the working environment of the Special Library involved in the study.

Clients and library staff are both expected to cause no harm and injury to the library materials. It has been an accepted fact that any copyrighted works which has been created or invented by an individual or a researcher or an artist belongs solely to that creator. Users and library staff must therefore abide by it since it is morally wrong for a user to incorporate an author or creators work into his/ her work without seeking permission and or acknowledging the source. Mason's 1986 PAPA Model further implies that, unfair copying of other peoples work without their consent and using a patented work without the due payment causes an injury to the creator or author.

In sum, the framework adopted will help investigate whether the library is serving the information needs of its parent body or the organization, and also ensuring that information is accessed and used ethically.

1.8 Significance of the Study

Significance conveys the importance of the problem for different groups that may profit from reading and using the study (Creswell, 2009).

This study would offer management of the Cocoa Research Institute of Ghana (CRIG) the opportunity to know about the state of information ethics in the Library. This would help management to provide the needed facilities to monitor the use of information in the Library.

In addition, the study would assist the Library to organize awareness programs to educate both staff and users about Information Ethics. Finally, the study would also contribute to the existing body of knowledge in the area of Information Ethics in special libraries.

1.9 Organization of the Study

This study is organized into five chapters:

Chapter one covers the introduction with a background to the study, statement of the problem, purpose statement, objectives of the study, research questions, scope and limitation, theoretical framework, significance of the study and the organization of the study. Chapter two reviews literature relevant on the topic and the chapter three deals with the methodology adopted for the study. This covers the research design, population, sample technique, instrumentation, mode of data collection and mode of data analysis and ethics of the research. Chapter four covers data analysis, result presentation and discussion of the findings. Finally, chapter five provides the summary of major findings, conclusion and recommendations.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature that relates generally to studies which have been carried out about Information Ethics (IE) in libraries. A literature review according to Gray (2009) "provides an up-to-date understanding of the subject, its significance and structure. It also helps to identify significant issues and themes that present themselves for further research particularly where there are gaps in the current knowledge". The literature reviewed would cover definition of information ethics, development of information ethics, challenges of information ethics with particular reference to censorship, confidentiality, plagiarism, piracy, intellectual property right and copyright in the world and in Africa in particular.

2.2 Definition of information ethics

Moore (2005) as cited in Kaddu, (2007) indicated that, "information ethics is the field that investigates the ethical issues arising from the development and application of information technologies and provides a critical framework for considering moral issues concerning information privacy, moral agency (example whether artificial agents may be moral), new environmental issues (especially how agents should behave in the info-sphere), problems arising from the life-cycle (creation, collection, recording, distribution and processing) of information, especially ownership and copyright in the environment of a digital divide".

Capurro (2010) further stated that, "information ethics allows critical reflection for all stakeholders on established moral norms and values; it provides the means for a social process,

and a space for retrieving the rich African cultural memory necessary to our field. This cultural memory permits to reshape African identities and contribute to the world's information and communication cultures and to make a valuable contribution to the current debate on international and intercultural information ethics". He continued that, "the function of cultural memory is not just to express what belongs to the collective memory of a community, but to engage the will of its members to connect them through the task of creating it. Cultural memory is connective and related to our myths and to our dreams".

According to Fallis (2007), information is concerned with the question of who should have access to information. He stated that the core issues of information ethics include intellectual freedom, equitable access to information, information privacy, and intellectual property.

Moore (2005) opined that, information deals with, among other things, the respect given to information when it is generated, processed, transferred, and most importantly, when it is used. He further indicated that information ethics is said to provide a critical framework for considering moral issues concerning information privacy, moral agency, and new environmental issues (particularly how users should behave in the infosphere, or problems arising from the life cycle, that is, creation, collection, recording, distribution, processing, etc – of information, especially ownership and copyright).

2.3 Development of Information Ethics

According to Ocholla (2011) Information ethics (IE) in the west as a field kicked off on its trajectory in the 1990s in the works of scholars such as Rafael Capurro, Luciano Floridi and Robert Hauptman and the development of IE education by the University of Pittsburg through the initiative of Toni Carbo and others. Froehlich (2004) says that the persons who first used the

phrase, *information ethics* included Robert Hauptman who started the *Journal of information ethics* in 1992 and Rafael Capurro who wrote an article in German in 1988 in "Information ethos und Informationsethik" [Information Ethos and Information Ethics]. Froehlich however, maintains that some of the issues in information ethics were raised as early as 1980 where Barbara J. Kostrewski and Charles Oppenheim wrote an article, "Ethics in Information Science" for the *Journal of information science* and discussed such issues as the confidentiality of information, bias in information provided to clients or consumers, the quality of data supplied by online vendors, the use of work facilities, etc.

Capurro (2012) traces the development of Information Ethics in Africa with "The First African Conference on Information Ethics which was held in Tshwane/Pretoria, South Africa, 5-7 February 2007, under the auspices of UNESCO, sponsored by the South African Government, Department of Communications and organized by the University of Wisconsin-Milwaukee, University of Pretoria, University of Pittsburgh, and the International Center of Information Ethics. Under the heading 'the joy of sharing knowledge' and the patronage of UNESCO it brought together some 80 policy makers and academic minds 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 specifically African perspective on the challenges involved - locally and globally".

Another high-level workshop on Ethics and e-Government took place on 23-26 February 2009 under the auspices of UNESCO. It was co-sponsored by the South Africa Government, Department of Communications and organized by the University of Pretoria, the University of

Wisconsin-Milwaukee, the University of Pittsburgh, and the International Center for Information Ethics. There were some 40 participants from the following countries: Burundi, Botswana, Chad, Comoros, Democratic Republic of Congo, Eritrea, India, Germany, Ghana, Lesotho, Malawi, Mozambique, Senegal, South Africa, Swaziland, USA, and Zambia. The following topics were addressed: Global perspectives on Information Ethics and e-Government, ethical reasoning, access and accessibility, intellectual property, freedom of expression and censorship, privacy/ public domain, transparency/secrecy, right/responsibility/accountability, education and training, role of trust, culture, law and participation (Capurro, 2012).

2.4 Issues in Information Ethics Observance

Information plays a vital role in every society and organization but there are ethical values in its creation, collection, recording, distribution, processing and accessing information. Information ethics investigates the ethical issues arising from the development and application of information technologies and it also allows critical reflection for all users on the established moral norms and values which provide the means for a social process, and a space for retrieving the essential information necessary to our field. Some of the issues involved in observing information ethics are censorship, confidentiality, plagiarism, piracy, intellectual property right and copyright.

2.4.1 Censorship

A challenge is an attempt to remove or restrict materials, based upon the objections of a person or group (ALA, 2012). Famous (2011) sees censorship as "the removal, suppression or restricted circulation of literary, artistic or educational materials on the grounds that they are morally or otherwise objectionable in the light of standards applied by the censor". According to him censorship and the ideology supporting it could be traced back to ancient times, and to the fact

that every society has customs, taboos, or laws by which speech, dress, religious observance, and sexual expression are regulated. Additionally, Lau (2009) stated that censorship can occur "anytime a book or other library material is removed from its intended audience". Mills (2012) asserts that all libraries have the mandate to support intellectual freedom but, librarians can often be tempted to censor by selection. Books can be rejected based on: budget, lack of demand, literary quality, limited shelf space, content, relevance to the community, fear of a challenge and poor reviews. Nevertheless, some libraries censored their resources due to official challenge policy which usually affects the collections of such libraries.

The purpose of censorship is varied, with some censors targeting materials deemed to be indecent or obscene; heretical or blasphemous; or seditious or treasonous. Thus, ideas have been suppressed under the guise of protecting three basic social institutions: the family, the church, and the Nigerian governments (Yaya, Achonna and Osisanwo, 2013). In order to avoid any embarrassment to a library and its parent institution in Nigeria, Yaya, Achonna and Osisanwo are further of the opinion that any book that has been censored by law should not be allowed to take its place in the open access). A typical example is the case of *Vizetelly vs Mudee's Select Library, Ltd.* The court found that the library which had given out the book on loan had been negligent by professing to be ignorant of any notice of the court's judgment relating to the libelous publication and this was considered a weak defense, because as a centre of information dissemination they should be up to date about current events in its environment. Ignorance is also not tenable in law concerning a case of a publication which contains defamatory matter, because librarians are sometimes expected to have read book reviews and abstracts relating to a publication before it is acquired. Secondly, the classifier, who is sometimes a subject specialist

may also be aware of any particular publication that is libelous and inform appropriate sections in the library without delay and what was expected to be done by the libraries was to withdraw such books from the open access and circulation (Courtney, 2007).

The concept of intellectual freedom as Yaya, Achonna and Osisanwo (2013) asserts involves the protection of the rights of all individuals to pursue the types of information they want and to read anything that interests them. Attempts therefore by a member of the community to remove materials from a library collection or to restrict access to them may be the most common challenge to intellectual freedom.

2.4.2 Confidentiality

According to Smith (2005) all the library organizations stress the importance of protecting the client's privacy. He further stated that, in special libraries this can be a tricky situation depending on who is determined as the client, the individual or the organization. Sometimes the head of the organization would want to know what the employees are researching. Blanchard (1988) suggests that in an instance like this the librarian will have to look at the policies and values of the organization and then ultimately make the right decision keeping in mind the consequences. It would be acceptable to reveal this information if the employees were aware of it, but the librarian should never make it a practice to share information with the employer without the consent of the employee.

The primary users in special libraries often are researching information for their own clients. Examples are lawyers researching for clients, doctors researching for patients and research scientists researching for farmers. These types of situation reemphasize the importance of

librarians maintaining the privacy of the clients because it extends beyond that one user in the library (Hauptman 1988). A good librarian according to Smith (2005) is therefore always trustworthy.

Rouse, (2013) indicated that, confidentiality prevents sensitive information from reaching the wrong people, while making sure that the right people can in fact get it. She further stated that integrity involves maintaining the consistency, accuracy, and trustworthiness of data over its entire life cycle. She maintains that data must not be changed in transit, and steps must be taken to ensure that data cannot be altered by unauthorized people (for example, in a breach of confidentiality). Concurring with Rouse (2013), Hoq (2012) asserts that in this increasingly networked world, the security of public and private data held in databases, web sites and other information repositories are always at risk. According to him people have become more worried about their privacy and libraries, as preservers and providers of sensitive information have to deal with this concern because some users abuse the use of these databases and other information repositories. For example, in some special libraries all users are automatically assigned an account logon for accessing their library information online and for security reasons users are required to authenticate themselves by setting up a pin prior to using any online library service. It is also noted that this library privileges are not transferable to other individuals, and the Library reserves the right to request secondary picture identification before allowing access to facilities or providing services.

2.4.3 Plagiarism

Plagiarism is defined as the reproduction of ideas and/or language from source materials without sufficient attribution to the source (Abasi, Akbari, & Graves, 2006; Pecorari, 2003). This process

involves not only reproducing and extending ideas, but also reflecting upon and reiterating their meanings. Plagiarism can also involve copying others' text and copying one's own publication (self-plagiarism) or the duplication of one's publication (Bretag & Carapiet, 2007).

Plagiarism has become a worldwide problem, and one of the most important contributing factors is the easy access to internet resources, where the majority of all scientific papers and reports are published today. There are additional reasons for this increasing problem, for instance a lack of ethical awareness and related lack of maturity to take into consideration the long-term consequences of the act (Colnerud & Rosander, 2009; Liddell, 2003; Sisti, 2007), insufficient language skills, a lack of skills for using information (e.g. citing, paraphrasing and referencing) (Hendricks & Quinn, 2000; Jackson, 2006; Ellery, 2008; Keck, 2006), unfamiliarity with Western scholarly traditions and pressure to achieve study results (Duff, Rogers, & Harris, 2006). Factors such as time constraints may lead to deliberate cheating. Yet the trend may also have arisen inadvertently, due to a lack of understanding of what plagiarism is (Yeo, 2007).

Some examples of real cases of plagiarism in South Africa and the world indicated that a journalist and author Darrel Bristow-Bovey was caught in 2003 plagiarising chunks of text from Bill Bryson and reported first in The Star and then the Mail & Guardian. In January 2005, Pamela Jooste, a multiple award-winning South African author, admitted to plagiarising paragraphs from an article by WITS academic Lindsay Bremner, published in the Lifestyle section of the Sunday Times (Stellenbosch University, 2014).

2.4.4 Piracy

According to The Economic Times (2014) piracy refers to the unauthorized duplication of copyrighted content that is sold at cheap or substantially lower prices in the 'grey' market. Book piracy is an illegal and illegitimate reproduction of other people's intellectual property for economic reasons without prior consent or authorization. Alemna, (2000) in a paper presented at a seminar, discussed among other things a form of piracy occurring among intellectuals in academic circles which he referred to as "intellectual piracy". He further stated that this issue involved unreasonable copying of other's work, wholly or in part without due acknowledgement. These are found in the areas of thesis or research articles and it is a disadvantage to authors and publishers. According to him unlike in the west where their counterparts have copyright regulations, most universities in Africa do not have such policies that regulate the amount of work that can be copied under fair use.

Alemna further indicated that there are laws which have been made to deal with the menace both locally and internationally. Laws for punishing piracy in developed countries are stringent and punitive in nature whiles in Asian countries and in India, it does not receive the attention at the national level due to more pressing issues at hand. However, the IT and music industry, has been taking active interest in stemming the rot. These organizations identify sources of music piracy and then conduct raids with the help of the police. However, convictions are few and the penalties not harsh enough to act as a deterrent (The Economic Times, 2014).

Nikko (2013) notes the dangers the trend could pose to qualitative education and scholarship in general and recommends cost reduction strategies, national book policy and commissioning of local authorship, awareness and enforcement of copyright laws, revitalization of libraries,

sanctions on countries showing complacency towards piracy, special algorithms to detect illegal downloads, security printing devices and moral persuasion as panacea to stemming the tide of the menace.

The huge consignments of suspected pirated books consisted of over 30 titles whose copyright belonged to foreign publishers such as Penguin and local publishers as Macmillan, Longman, Universal Press Limited (UPL) Oxford and Vanguard Press, among others and this was a result of the Commission's new drive for that emphasizes "zero tolerance to piracy" (Nigerian Copyright Commission, 2012).

2.4.5 Intellectual Property Right

According to World Intellectual Property Organization (WIPO) (2004) Intellectual property (IP) refers to the creations of the mind in the form of inventions, literary and artistic works, and symbols, names and images used in commerce. Raman (2004) sees it as any "original creative work manifested in a tangible form that can be legally protected". WIPO divides Intellectual property into two categories that is, Industrial Property and Copyright. The Industrial Property includes patents for inventions, trademarks, industrial designs and geographical indications whiles copyright covers literary works (such as novels, poems and plays), films, music, artistic works (e.g., drawings, paintings, photographs and sculptures) and architectural design. Rights which are related to copyright include those of performing artists in their performances, producers of phonograms in their recordings, and broadcasters in their radio and television programs.

Intellectual property rights like any other property right allows creators, or owners of patents, trademarks or copyrighted works to benefit from their own work or investment in a creation as outlined in Article 27 of the Universal Declaration of Human Rights, which provides for the right to benefit from the protection of moral and material interests resulting from authorship of scientific, literary or artistic productions. Raman, (2004) also points out that in today's electronic world an organization's intellectual property is sometimes its biggest asset. Much time and money can be saved and frustrations and litigation avoided if company policy dictates ownership and use of intellectual property. Raman further posits that one reason for Intellectual Property law is to allow IP creators to benefit from their work. If artists create paintings after months of labor, then they deserve credit for painting them and the income from selling or exhibiting them. If a business comes up with an attractive marketing logo, then no other businesses should be allowed to use that logo to promote their own products without permission.

There are three compelling reasons why IP should be promoted and protected. The first reason is the progress and well-being of humanity which rests on the capacity to create and invent new works in the areas of technology and culture. The second reason is that legal protection of new creations encourages the commitment of additional resources for further innovation and thirdly, the promotion and protection of intellectual property spurs economic growth, creates new jobs and industries, and enhances the quality and enjoyment of life. The intellectual property system helps strike a balance between the interests of innovators and the public interest, providing an environment in which creativity and invention can flourish, for the benefit of all. Protecting IP is also seen as a method of promoting creativity. If no one is allowed to copy another person's work without permission then creativity is encouraged for everybody (Raman, 2004).

WIPO (2004) maintains that without the rewards provided by the patent system, researchers and inventors would have little incentive to continue producing better and more efficient products for consumers and consumers would also have no means to confidently buy products or services without reliable, international trademark protection and enforcement mechanisms to discourage counterfeiting and piracy. Hoq (2012) asserts that with the advent of new technologies, reproduction of information materials through photocopying, scanning or otherwise has become much easier. According to him this ease of reproduction sometimes hampers the intellectual property rights of authors and publishers. According to him this may create 'a tension between the desire of information professionals to obtain information at the lowest cost possible and the interest of the owners of this information. For example, under certain conditions specified in the copyright law of the United States (Title 17, United States Code), libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the photocopy or reproduction is not to be "used for any purpose other than private study, scholarship or research". If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use", that user may be liable for copyright infringement. This institution reserves the right to refuse of copying order if, in its judgment, fulfillment of the order would involve violation of the copyright law (Library Copyright Alliance, 2011).

2.4.6 Copyright

Copyright laws according to WIPO (2004) grant authors, artists and other creators the protection for their literary and artistic creations, generally referred to as "works". Other related rights associated to copyright encompass rights similar or identical to those of copyright, although sometimes more limited and of shorter duration. These related rights includes, performers (such

as actors and musicians) in their performances, producers of phonograms (for example, compact discs) in their sound recordings, and broadcasting organizations in their radio and television programs. Works covered by copyright include, novels, poems, plays, reference works, newspapers, advertisements, computer programs, databases, films, musical compositions, choreography, paintings, drawings, photographs, sculpture, architecture, maps and technical drawings (WIPO, n.d.).

For example, UC San Diego (2007) states that by pressing the

> *"I Accept" button below, I acknowledge that I have read and understand the policies and regulations of the UC San Diego special collections and archives and agree to abide by their terms and conditions. I also understand that if I do not adhere to these policies, my privileges as a reader may be revoked.*

Also, in most copyrighted books it has been stated emphatically at the back of the title page that,

> *"All rights reserved. No part of this publication may be reproduced in any form or by any means, electronically, mechanically, by photocopying, recording or otherwise, without the prior permission of the copyright owners.*

Stephen (1983) as cited in Ajidun (1998) asserts that copyright hand is the right given by legislation to the author of a work which enables him to decide whether and how his work is to be published and prevent any injury or mutilation of his intellectual off-spring. The main drive of copyright is to make sure that authors receive adequate financial compensation and prestige from those who exploit their works. The concern of ensuring profit for the copyright owner however

must be balanced against the needs of the public, scholars and critics for access to use these works (Gasaway and Wiant, 1994).

The owner of the copyright has the exclusive right to reproduce a protected work; to prepare derivative works that only slightly change the protected work; to sell or lend copies of the protected work to the public; to perform protected works in public for profit; and to display copyrighted works publicly (Cornish, 2004). According to Samuelson and Glushiko (1991) copyright law is based on a relatively simple and straightforward model of author and reader behavior. Samuelson and Glushiko further intimated that authors are assumed to be motivated to produce interesting and valuable texts, and to make these works available to others by copyright's reassurance that authors can control the sale of copies of their works. Readers are motivated to purchase the texts, or to urge institutions, such as libraries, to purchase the texts, so that they can have access to the work. Authors have generally had little control over what uses readers make of the copies after the first sale of the work to the public, and U.S. copyright law has sometimes regarded this lack of control over uses as a virtue.

2.4.7 Information ethics and social media

Social media is a term used to describe social interaction through a suite of technology based tools, many of which are internet based. This includes, internet forums, networking sites such as Facebook, Twitter, LinkedIn and Google Plus, webcasts, and blogs.

Social media exhibits unique characteristics when compared to "traditional" media forms. Its speed and scope means that once content is published it is available instantaneously, to a potentially global audience. Social media tools tend to be free or available at a very low cost relative to other forms of media and do not require users to have much technical knowledge. This

allows larger numbers of individuals to access and publish material than with traditional media forms. It is usually interactive than traditional media, so users can comment on and edit published material, making it difficult to control content. The boundaries between personal and work life also become blurred as companies make use of social media originally designed for personal use for business purposes, and likewise employee's access personal sites while at work. A 2011 DLA Piper survey found social media is used for personal and work related activities by 95% of employees. These unique characteristics of social media pose ethical challenges for business, through employees' use of social media on behalf of the company, as well as their personal use (Institute of Business Ethics, 2011).

Some ethical challenges of social media include integrity risk which is seen as the main ethical challenge with regard to social media. When an employee uses social media in an irresponsible way, either on behalf of the company or through their personal social media account, it undermines the company's commitment to ethical practice and exposes it to integrity risk. Alternatively, employees might post negative comments about the company on their personal social media profile which makes it harder for companies to control.

To ensure that work related discussion amongst employees is internal to the organization, Serco Group, a large UK listed international services company, has developed an 'internal Facebook'. This is for staff to use to discuss work topics with colleagues rather than using public forums, as a way of dealing with integrity risk. Again, in advertising and marketing practices, the scope and speed of social media makes it an effective medium through which companies market themselves and their products/services and a duty to market responsibly. The interactive nature of social media provides companies with the ability to engage with customers more directly than other forms of media (Institute of Business Ethics, 2011).

A company's ability to meet fair competition guidelines can be jeopardized by employees using social media on behalf of the company, for example, if an employee, whilst representing the company, takes matters into their own hands and uses social media unethically, to discredit the reputation of their employer's competitors.

A 2011 survey of 800 recruiters and human resource professionals found that 64% make use of two or more social networks as part of their assessment practices when recruiting employees. There are also specialist organizations that provide social media employment screening services which raise ethical challenges for employers around employee's right to privacy and fairness. In some cases, the information may relate to past activities in a job candidate's personal life.

Where an employer does use social media in recruitment screening/assessment of potential employees, whether this is done directly or outsourced, the company should have a clear policy and be open about it. When personal opinions expressed through social media (either on a personal profile or an online forum) refer to a company, it raises an ethical challenge.

It is unclear what control, if any, the company has over comments communicated in this way and what action it can/should take. The blurring of personal and work life boundaries can make it difficult for companies to uphold their duty of care to employees. One in ten UK workers believes that workplace cyber-bullying is a problem and a fifth of employers have had to discipline staff for posting nasty comments about a colleague online. The same survey found bullying and harassment and discrimination were two of the top five risks of social media for the workplace (Institute of Business Ethics, 2011).

Companies which choose to monitor employee's personal use of social media need to communicate their policy to employees so that they are aware of the practice, what it means for employees, and why it is necessary. Clear guidance is needed to help regulate monitoring and set its boundaries to avoid potential abuses.

To address the ethical challenges that social media presents, companies need to fully assess the risks and be aware of the challenges presented by social media before using it. Through a social media policy, companies can provide guidance to employees on how to address the ethical challenges. The policy needs to be consistent with the company's ethics policy and overlap with other existing policies around communication.

The policy would provide guidance on two main areas, that is, employees' use of social media on behalf of the company, and employees' personal use of social media, including issues such as bullying and harassment, speaking up and employees' right to privacy. The guidance could also make clear that employees are not judged for personal activities or opinions as long as they are within the law, not offensive to others or the company, and do not refer to the company or work life. Companies may advise employees on security settings for personal social media accounts, and encourage them to apply high privacy settings. Alternatively, companies may prefer employees to disclose their employer, to facilitate company monitoring practices. As one company's policy states: "your responsibility to the Company doesn't end when you are off the clock."

The guidance on social media needs to be reviewed and be communicated more regularly due to rapid change and development in social media and its use. An effective social media policy is developed through engagement and dialogue between the employer and its employees. This helps to ensure guidance is reasonably fair, acceptable and understood by both parties. It is also important for companies to manage external stakeholder's expectations about their engagement with the company's social media profile. This can be done through the terms of use for example, stating whether the page is monitored or not, whether negative/racist comments will be removed, that views expressed are by fans and not endorsed by the company, and soon (Institute of Business Ethics, 2011).

2.4.8 Information ethics and research in Africa

Information ethics is a descriptive and emancipatory discipline dealing with the study of the changes in the relationship between people and the world due to information and communication technologies. Information ethics in Africa provides a unique platform to build an information and knowledge society driven by critical reflection on ethos and values with the African context. It addresses opportunities and challenges unique to the development of African societies.

The recent and ongoing construction of various submarine network cables, such as SEACOM, directly contributed to the expansion of the broadband capacity on the African continent, thereby making more information available to more people at greater speeds. The growth in communication and information management capacity contributed significantly to the development and management of e-skills, e-governance and information ethics, and the challenges related to these matters (Bester and Bothma, 2011).

In 2007, a group of international academics in the fields of information technology, philosophy and politics came together to form an academic network to do research on information ethics. This network was formalized, and is now known as the African Network on Information Ethics (ANIE).

Information ethics is a descriptive and emancipatory discipline dealing with the study of the changes in the relationship between people and the world due to information and communication technologies. Information ethics in Africa provides a unique platform to build an information and knowledge society driven by critical reflection on ethos and values within the African context. It addresses opportunities and challenges unique to the development of African societies. Information ethics, and therefore started organizing events to stimulate research on information ethics in Africa. Similarly, because it is a new field of research and study, it was found that students were not properly introduced to information ethics and did not fully understand the concept, purpose and practice of this field.

The result of these activities and international collaboration has led to a partnership with the South African national Department of Communications, the United Nations Education, Scientific and Culture Organization (UNESCO) and various universities across Africa. The Department of Information Science took the lead and formed an integral part of the conceptualization and negotiations between the parties. Finally, this collaboration contributed to the establishment of the ACEIE, and the Department now hosts the Centre.

The purpose of the ACEIE is to formally reflect on the activities and history of information ethics in Africa. Furthermore, this reflection should contribute to research on the topic and allow networking with other academics in the field. One of the main objectives of the Centre is to develop a curriculum to teach information ethics in Africa.

According to a formal Memorandum of Agreement between the University of Pretoria and the South African National Department of Communications as signed on the 15th of December 2011 the ACEIE was conceptualized to:

- Support the establishment of other Ethics Centers in Africa through the African Ethics Research Centre Network;
- Convene, coordinate and administrate Ethics Conferences and follow-up an implementation of conference resolutions;
- Facilitate the hosting of Ethics Awards Ceremonies in collaboration with other partners; and
- Focus on research and training in Information Ethics.

In addition, the ACEIE will:

- Develop short courses for governmental officials in the 9 provinces of South Africa;
- Encourage Information Ethics workshops where academics and practitioners can come together to enable the exchange of knowledge and enhance the practical dynamics of Information Ethics;
- Function as a center where research interests can come together to endorse key proposals concerning Information Ethics and its application in African societies, governments and institutions; and
- Maintain its collaborative relationships with UNESCO; the E-skills Hub hosted by the Department of Informatics; and its host, the Department of Information Science.

Towards achieving the above mentioned goals, the ACEIE also actively researches issues pertaining to Information Ethics (Bester and Bothma, 2011).

2.5 Conclusion

Information ethics has evolved over the years and have been stimulated by the convergence of many disciplines on issues associated with the Internet and technologies. In the past, there existed a clear distinction between ethical issues associated print media such as newspapers and the credibility of reference sources, as in the field of librarianship. With the advent of technologies such as the Internet and World Wide Web, publishing has become quick and easy and so issues of credibility that used to be different for journalists and librarians now have become a common concern in assessing and evaluating the trustworthiness of web sites, especially those that claim to provide information.

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CHAPTER THREE

METHODOLOGY

3.1 Introduction

Research methods, as indicated by Leedy and Ormrod (2005), is a systematic process of collecting, analyzing and interpreting information (data) in order to increase our understanding of the phenomenon we are interested in or investigating. The authors believe that research is when we intentionally set out to enhance our understanding of a phenomenon and expect to communicate what we discover to the greater scientific community. This chapter specifically covered the type of research design adopted, population, sample size, data collection instrument, data analysis and ethical consideration for this study.

3.2 Research Design

Payne and Payne (2004) view research design as the technical practices used to formulate research questions collect and analyze data, and present findings. They further observed that the choice of a research design depends on the type of research questions the study is trying to answer. The research design adopted for this study was the survey method.

A survey is a method of gathering information from a sample of individuals (Scheuren, 2004). Surveys have a wide variety of purposes, and can be conducted in many ways. This includes over the telephone, by mail, or in person. It also helps to compare results through a snapshot of the attitudes and behaviors, thoughts, opinions, and comments from the target population. The

valuable feedback from the target population forms a baseline to measure and establish a benchmark from which to compare results over time (Scheuren, 2004).

The main reason why researchers conduct surveys is to uncover the answers in a non-intimidating survey environment, learn about what motivates respondents and what is important to them, and gather meaningful opinions, comments, and feedback. A non-intimidating survey environment best suits the privacy needs of the respondent and they are more likely to provide open and honest feedback.

Advantages of surveys are as follows;

- The research produces data based on real-world observation
- The breadth of coverage of many people or events means that it is more likely than some other approaches to obtain data based on a representative sample, and can therefore be generalizable to a population
- Surveys can produce a large amount of data within a short time for a fairly low cost. Researchers can therefore set a finite time – span for a project, which can assist in planning and delivering end results.

However, there are some disadvantages which must be avoided. They are as follows;

- The significance of the data can become neglected if too much focus is placed on the range of coverage to the exclusion of the adequate account of the implications of those data for relevant issues, problem or theories.

- The data produced are likely to lack details or depth on the topic being investigated and a high response rate to a survey can be hard to control, particularly when it is carried out by post.
- It is also difficult when the survey is carried out face-to face or over the telephone (Kelley, Clark, Brown and Sitzia, 2003).

All surveys have certain characteristics in common. The information is collected by means of standardized procedures so that every individual is asked the same questions in more or less the same way. The survey's intention is not to describe the particular individual /respondent who by chance are part of the sample but to obtain the complex shape of the population. The respondents should never be identified in reporting the findings of the survey and also all the results of the survey should be presented in a completely anonymous summary such as statistical tables and charts (Scheuren, 2004).

The survey method is suitable for this study because it enabled the researcher to dig deeper into the survey, and look out for topics which are related to the survey within a broader point of view. Again the researcher was able to uncover the answers in a non-intimidating survey environment, and gather meaningful opinions, comments, and feedback.

3.3 Population

A population is a group of individual persons, objects, or items from which samples are taken for measurement. To obtain a sample, the target population must first be defined. The target population is the group or the individuals to whom the survey applies. In other words, the researcher must seek those groups or individuals who are in a position to answer the questions and to whom the results of the survey apply. Ideally, a target population should be represented as

a finite list of all its members (Kitchenham 2002). The population for the study involved all research, technical and library staff of CRIG. Data obtained from the human resource section of CRIG puts the total number of these three categories of staff at one hundred and sixty five (165).

The table below gives the breakdown of members of staff who constituted the population of this study.

Table 3.1: Category and no. of staff

Category of staff	**No. of staff**
Research scientist	48
Technical staff	114
Library staff	3
Total	**165**

Source: CRIG, 2011.

As the population was not too large, there was no sampling of respondents.

3.4 Data Collection Instruments

This study used questionnaire as the main data collection instrument to conduct the study. Questionnaire is mainly made up of a list of questions for collecting and recording information about a particular issue of interest, and it also included clear instructions and space for answers or administrative details. It is related to the objectives of the research, clear from how the findings will be used and respondents are also made aware of the purpose of the research.

Bless and Higson-Smith (2000) define questionnaire as a data collection instrument that consists of a series of questions relating to the research topic that must be answered in writing by the respondents. Likewise, Van Rensburg, Landman and Bodenstein (2002) also define questionnaire as a set of questions on the same topic that a selected group of individuals must answer. The purpose of a questionnaire is to gather data on the problem under investigation, enable the researcher to contact a large number of people quickly, easily and efficiently and also it is relatively quick and easy to create code and interpret closed questions. In addition, the respondent does the time-consuming part of completing the questionnaire.

The use of questionnaire in this study was to obtain valid and reliable information so that the research questions can be answered. It was also expected that consistent and uniform responses would be received from the respondents as they answer the same set of questions thereby aiding in data analysis and presentation.

A structured questionnaire consisting of closed and open-ended questions was used to solicit data. Closed-ended questions were adopted because they would provide greater uniformity of responses, easy to code and analyze. Closed questions require the respondent/participant to place a tick, make a mark or draw a line alongside one of several provided possible answers (Bechhofer and Paterson, 2000).The open-ended questions were used to enable the respondents clarify their responses and make additional comments and contributions to the study without being limited to predetermined set of responses.

The questionnaire was divided into four sections. The first section sought to know the respondents knowledge about information ethics. The second section wanted to know the effects

of ethical issues. The third section of the questionnaire asked respondents questions relating to the management of ethical challenges and the last required respondents to provide their demographic information for the study.

3.5 Procedure for Data Collection

The researcher used the offices of the research scientists and technical assistants where they were mostly found to collect the data in the morning from 10am in the morning to 12.30pm and in the afternoon from 2pm to 4.30pm after they have returned from the field to administer the questions.

3.6 Data Analysis

The results of the research were presented in the form of percentages and frequency tables, graphs and charts. Statistical Package for the Social Sciences (SPSS) was used for the analysis and descriptive statistics was adopted to summarize the data.

3.7 Ethical Considerations

The aim of ethics in research serves as the guide or set of moral principles to determine how a researcher should go about his/her work or how the research should be undertaken based on the rules that are set to guide the conduct of every research. The researcher obtained an introductory letter from the Department of Information Studies to seek permission from the participants and the management of Cocoa Research Institute of Ghana (CRIG) where the research would be undertaken with a student identity card which identified the researcher as a product of the Graduate School of the University of Ghana. The participants/respondents were informed about the procedures and any risks involved in the research. Any information provided by the

respondents/participants was treated with maximum confidentiality and not be used for any other purpose except the reason in which it was taken for. The data was not manipulated by the researcher and furthermore, the code of conduct of the University of Ghana code of conduct was adhered to and most importantly, all sources cited were appropriately acknowledged.

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CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter addressed analysis and presentation of data and the discussion of findings. In all, one hundred and sixty five (165) copies of questionnaire were sent out to solicit for data. One hundred and twenty five copies of questionnaire (125) were finally collected from the respondents after several follow ups. This constituted 76.6% response rate. The questionnaire sought information on the personal (demographic) information of the respondents, the respondent's knowledge of information ethics, the effects of ethical issues with regard to the use of information and the management of the challenges of information ethics, and these were some of the questions that the study aimed to answer.

4.2 Personal/ demographic information of respondents

Information sought from respondents covered the areas of age, gender, highest educational level, length of service with the institution and their current rank in the institution. From the results of the study, out of the 125 staff who took part in the study, 102 (81.6%) were males and 23 (18.4%) were females. Among the respondents, 49 (39.2%) were between the ages of 31 to 40, 33 (26.4%) were between the ages of 20 to 30. Twenty nine (29) representing 23.2% were in the age range of 41 to 50 and 14 (11.2%) in the age range of 51 to 60. One hundred and six (106) of the respondents representing 84.8% have graduated from the university with various degrees, with nineteen (19) respondents representing 15.2% having either a secondary, technical and vocational certificates. Forty eight (48) respondents representing 38.4% have worked for less than five years in the Institution, 34 (27.2%) have worked with the Institution between five to ten years, 25 (20%) have worked in the Institution for more than sixteen years and 18 (14.4%) have

worked between eleven to fifteen years in the Institution. Among the respondents 93 (74.4%) were technical staff, 29 (23.2%) were research scientist and 3 (2.4%) were library staff. The results are illustrated in Table 4.1 below

Table 4.1: Personal/ Demographic Information of Respondents

Gender	**Frequency**	**Percent**
Male	102	81.6
Female	23	18.4
Total	**125**	**100**
Age		
31-40yrs	49	39.2
20-30yrs	33	26.4
41-50yrs	29	23.2
51-60yrs	14	11.2
Total	**125**	**100**
Educational Level		
Tertiary	106	84.8
Sec./Tech./Voc.	19	15.2
Total	**125**	**100**
Work Duration		
Less than 5 years	48	38.4
5-10 years	34	27.2
Above 16 years	25	20

11-15 years	18	14.4
Total	**125**	**100**
Position/Rank		
Technical staff	93	74.4
Research scientist	29	23.2
Library staff	3	2.4

Source: Field work, 2014

4.3 Staff knowledge about information ethics

The staffs were asked about their knowledge of information ethics and their responses were grouped accordingly in the following subheadings.

4.3.1 Information an individual/ an organization should keep strictly to one's self

This question asked respondents to indicate which information they will keep strictly to themselves. This question was important as information ethics required that the privacy of people should always be respected. In effect not all information about a person could be divulged to a third party. Many of them 51 (40.8%) mentioned patented materials as the item they will strictly keep to themselves. Twenty seven (27) respondents representing 21.6% mentioned thesis, unpublished articles and certain special reports as the materials they will keep strictly to themselves. Eighteen (18) respondents representing 14.4% mentioned thesis only as the material they would keep strictly to themselves, 17 (13.6%) mentioned unpublished articles and 11 (8.8%) mentioned certain special reports as the materials they will not give out to people. There was a non-response rate of 0.8%.

Respondents were asked in a follow-up question to indicate the forces that threaten the privacy of information. As the results of the study showed 106 (84.8%) respondents mentioned the growth of information technology with its enhanced capacity for surveillance, communication, computation, storage, and retrieval as the force that threatened the privacy of information. Eight (8) respondents representing 6.4% mentioned the increased value of information in decision-making of policy makers as the force that threatened the privacy of information, 6 (4.8%) mentioned the growth of information technology with its enhanced capacity for surveillance, communication, computation, storage, and retrieval, the increased value of information in decision-making of policy makers and articles needed by researchers to attain higher levels as the forces that threatened the privacy of information. Four (4) respondents representing 3.2% mentioned that articles needed by researchers to attain higher levels are the force that threatened the privacy of information. The results of the study are illustrated in Tables 4.2 and 4.3 below.

Table 4.2: Information that one should keep strictly

	Frequency	**Percent**
Patented materials	51	40.8
Thesis, unpublished articles and certain special reports	27	21.6
Thesis	18	14.4
Unpublished articles	17	13.6
Certain special reports	11	8.8
	1	.8
Total	**125**	**100**

Source: Field work, 2014

Table 4.3: Forces that threatens the privacy of information

	Frequency	Percent
Growth of information technology with its enhanced capacity for surveillance, communication, computation, storage, and retrieval.	106	84.8
The increased value of information in decision-making of policy makers	8	6.4
The growth of information technology with its enhanced capacity for surveillance, communication, computation, storage, and retrieval, the increased value of information in decision-making of policy makers and articles needed by researchers to attain higher levels	6	4.8
Articles needed by researchers to attain higher levels	4	3.2
	1	.8
Total	**125**	**100**

Source: Field work, 2014

4.3.2 Viewing a researcher's confidential folder

This question asked respondents to indicate whether they would go through a researcher's confidential folder if they chanced upon it by accident. This question was intended to solicit more information from the respondents about their understanding and appreciation of the issue of

privacy. From the results of the study, 85 (68%) respondents indicated that they would not go through a confidential folder of a researcher if found by accident. Thirty nine (39) respondents constituting 31.2% on the contrary stated that they would go through a confidential folder of a researcher if they chanced upon it by accident. One (1) respondent declined to answer this question.

4.3.3 Type of information a person or an organization has a right/ a privilege to obtain

Respondents were asked to indicate the type of information that a person or organization could have a right or privilege to obtain. This was because not all information could be made available to people. There are some information which are private and therefore should be kept as such. When such information gets into the hands of wrong recipients it was very likely that these persons could use the information in such a way to cause some form of harm to the person or the organization concerned. Fifty five (55) respondents representing 44% as the result of the study indicated that seekers of information could have access to copyrighted materials, published articles, newsletters and flyers. Thirty three (33) respondents representing 26.4% mentioned that information seekers could have access to only copyrighted materials, 27 (21.6%) indicated that information seekers could have access to published materials, 9 (7.2%) mentioned newsletters as the only material that an information seeker has the right to obtain. Only 1(0.8%) respondent mentioned flyers as the only material that a person has the right to obtain. The results of the study are illustrated in Table 4.4.

Table 4.4: Information that one can obtain

	Frequency	Percent
Copyrighted materials, published articles, newsletters and flyers	55	44
Copyrighted materials	33	26.4
Published articles	27	21.6
Newsletters	9	7.2
Flyers	1	.8
Total	**125**	**100**

Source: Field work, 2014

4.4 Responsibility for the authenticity, fidelity and accuracy of information

This question sought to know from the respondents whose responsibility it is to provide accurate information. This is because the provision of accurate information would assist the recipients in taking the right decisions. As the results of the study showed 65 (52%) of the respondents indicated that it was the responsibility of the author of the material to provide accurate information to the users. Thirty four (34) of the respondents representing 27.2% rather mentioned that it was the responsibility of the writer of the information whilst 26 (20.8%) of the respondents indicated that the responsibility lies in the hands of the creator of the information.

4.5 Ownership of information

The respondents were asked to indicate who owns information since ownership of intellectual outputs could sometimes be very contentious. Eighty two (82) of the respondents representing 65.6% as the results of the showed mentioned that it was the author who owned the information,

23 (18.4%) mentioned the creator of the information as the owner. Eighteen (18) respondents representing 14.4% however mentioned the writer as the owner of the information.

In a follow up question, respondents were asked to indicate those who are responsible for the ownerships of channels through which information was transmitted to users. Fifty nine (59) respondents constituting 47.2% as the results showed mentioned that organizations are responsible for the ownership of channels that was used to transmit information to the users. Fifty five (55) respondents constituting 44% mentioned publishers as the people who own the channels that are used to transmit information to the users, 7 (5.6%) said that the channels for the transmission of information was owned by librarians and 4 (3.2%) also indicated that the channels are owned by researchers. The results are illustrated in Figure 4.1 below.

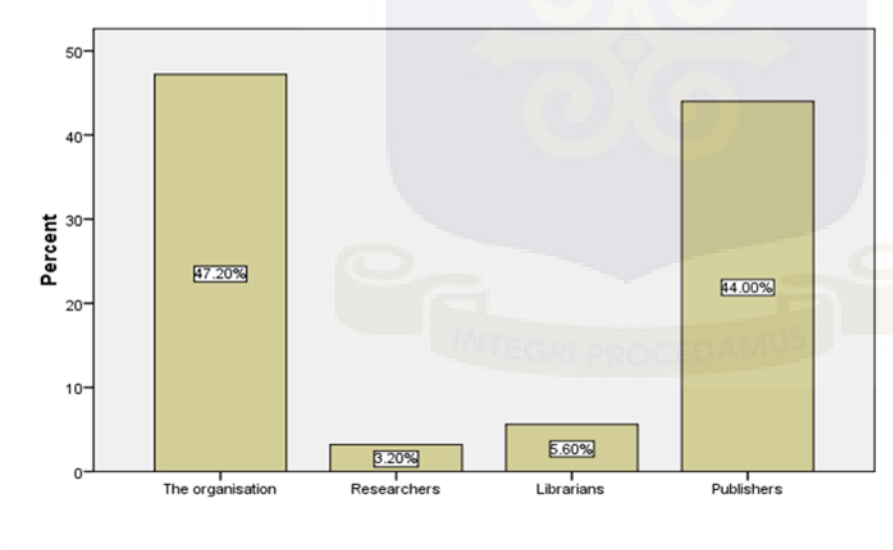

Figure 4.1: Ownership of channels of information transmission

Source: Field work, 2014

4.5.1 Consent to use a fellow researcher's creation

This question sought to know from the respondents whether they would seek the consent of a researcher before they use that researcher's creation. This was because it takes a long time and money before one could come out with an intellectual output. It would therefore be disingenuous on the part of other researchers to use another researcher's work without first of all seeking the consent of the researcher concerned. As the results showed 102 (81.6%) respondents stated that they would seek the consent of researchers before using their creations. Only 10 (8%) respondents indicated that they would not seek for approval before using a researcher's creation. Twelve (12) respondents constituting 9.6% were not sure whether they would seek for approval. One (1) respondent did not answer this question.

Respondents were further asked to indicate whether there was any harm at all in copying other people's articles. From the results of the study, one hundred and seven (107) respondents constituting 85.6% answered to the effect that there was harm in copying other people's articles. Only 18 (14.4%) respondents stated that there was no harm in copying other people's articles.

4.6 Accessibility to information

Accessibility to information for making decisions or any other activity was a right which was acknowledged locally and internationally. However not all information could be made available to people since some information could be very sensitive. In the light of this the respondents were asked to indicate whether they are able to access the information they need for the work they do. Overwhelmingly all the 125(100%) indicated that they were able to access the information they need to carry out their research activities.

Respondents were further asked to indicate whether their use of data could be acceptable as a result of the fact that information was free and accessible. Sixty three (63) respondents constituting 50.4% indicated that the fact that information was free and accessible does not make their use of data acceptable. On the contrary 61 (48.8%) respondents stated their use of data was acceptable. One (1) respondent declined to answer this question.

4.6.1 Regulation of access to intellectual property

This question sought to know from the respondents how access to intellectual property could be regulated. Regulation of access to intellectual property would help to streamline its use. This would also go a long way to help check abuses like plagiarism and theft. Sixty two (62) respondents constituting 49.6% indicated that intellectual property could be regulated by people who wish to use an author's material to seek permission first of all from the author. Thirty two (32) respondents constituting 25.6% indicated that access to intellectual property could be regulated through the use of codes. The rest of the respondents 31 (24.8%) mentioned that regulation of access to intellectual property could be done through the restriction of access.

The results are displayed in Figure 4.2 below.

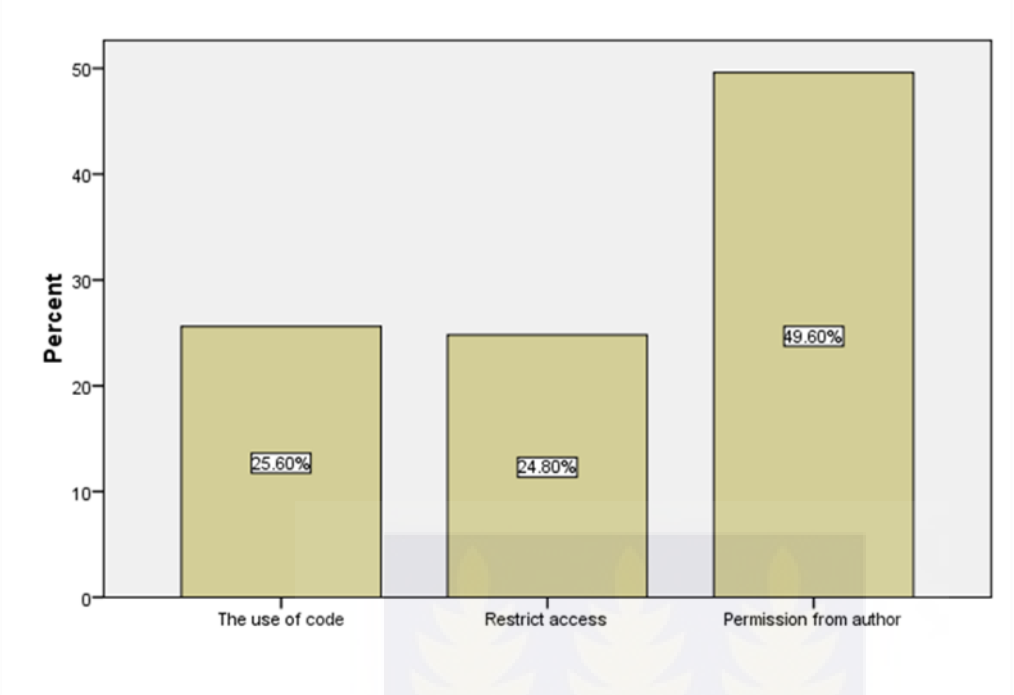

Figure 4.2: Access regulation to intellectual property

Source: Field work, 2014

4.6.2 Adherence to ethical issues

Respondents were asked to indicate whether they adhered to the ethical issues that have been mentioned such as privacy, accuracy, property and accessibility. One hundred and nine (109) respondents representing 87.2% responded positively to the effect that they have been adhering to these ethical issues mentioned. Twelve (12) respondents constituting 9.6% however indicated that they did not adhere to the ethical issues mentioned. Four (4) respondents did not answer this question.

4.7 Effects of the ethical issues on the search for information

This question sought to know from the respondents if these ethical issues affected their search for information in the library. Seventy seven (77) respondents constituting 61.6% indicated that

these ethical issues affected their search for information in the library. Forty six (46) respondents representing 36.8% respondent indicated that on the contrary these ethical issues did not affect their search for information in the library. Two (2) respondents did not answer this question.

Again respondents were asked to indicate how these ethical issues affected their use of library materials positively. As the result of the study,59 (47.2%) respondents indicated that these ethical issues enables search to be conducted confidently in the library. Thirty five (35) respondents constituting 28% stated that these ethical issues bring sanity in the use of the library materials and the library at large. Eleven (11) respondents representing 8.8% indicated that the ethical issues enable policies of the library to be adhered to. Twenty respondents did not respond to this question.

Responding further to the question of how these ethical issues affected the use of library materials, 67 (53.6%) respondents indicated that these ethical issues have contributed to the reduction in the use of library materials. Thirty two (32) respondents constituting 25.6% indicated that these ethical issues have led to the reduction of patronage of library materials. Nine (9) respondents representing 7.2% mentioned that these ethical issues have led to high rate of request of library materials through the use of phones. Three (3) respondents constituting 2.4% mentioned that these ethical issues have led to high rate of request of library materials by the use of phones, reduction in the use of library materials and reduction in the patronage of the library. Fourteen (14) respondents did not answer this question.

The results are illustrated in Table 4.5 below.

Table 4.5: Effects of ethical issues on the use of library materials

	Frequency	**Percent**
Reduction in the use of library materials	67	53.6
Reduction in patronage	32	25.6
High rate in request by phone	9	7.2
High rate in request by phone, reduction in the use of library materials and reduction in patronage	3	2.4
	14	11.2
Total	**125**	**100**

Source: Field work, 2014

4.8 Awareness of ethical issues at the library

Respondents were asked to indicate whether they were aware of any ethical issue in the library. The results of the study showed that 73 (58.4%) of the respondents were aware of some ethical issues in the library. Forty five (45) respondents representing 36% indicated that they were not aware of any ethical issue in the library. Seven (7) respondents representing 5.6% did not respond to this question.

Respondents were asked in a follow-up question to indicate how the issues could be reduced. Thirty seven (37) respondents representing 29.6% mentioned that the ethical issues in the library could be reduced through workshops, seminars, training programmes and explanation by library staff. Twenty nine (29) respondents representing 23.2% indicated that ethical issues in the library could be reduced through seminars, training programmes and explanation by library staff. Nineteen (19) respondents representing 15.2% mentioned that it could be reduced through

explanation by library staff, 14 (11.2%) indicated that it could be reduced through training programmes, 10 (8%) indicated that it could be reduced through workshops, 6 (4.8%) mentioned that it could be reduced through seminars, 3 (2.4%) indicated that it could be reduced through the posting of notices and 1 (0.8%) respondent mentioned conferences as the means through which the issues could be reduced. Six (6) respondents did not respond to this question. The results are displayed in Table 4.6

Table 4.6: Reduction of issues

	Frequency	**Percent**
Through workshops, seminars, training and explanation by library staff	37	29.6
Through seminars, training programmes and explanation by library staff	29	23.2
Through explanation by library staff	19	15.2
Through training programmes	14	11.2
Through workshops	10	8
Through seminars	6	4.8
Through notices	3	2.4
Through conferences	1	.8
	6	4.8
Total	**125**	**100**

Source: Field work, 2014

4.8.1 Minimization of the use of electronic devices in a special library

Respondents were asked to indicate how the use of electronic devices could be minimized in a special library. This was because these devices like mobile phones with very sophisticated

features and functions are now commonly used by many people. As the results shows 37 (29.6%) respondents indicated that notices should be posted against the use of these devices in the library, 28 (22.4%) respondents indicated that cameras should be installed to monitor the use of electronic devices in the library. Twenty three (23) respondents representing 18.4% indicated that users should be monitored and notices should be posted against the use of these devices in the library. Sixteen (16) respondents constituting 12.8% indicated that cameras should be installed, users should be monitored and notices should be posted against the use of these devices in the library. Twelve (12) respondents constituting 9.6% indicated that the users should be monitored in the library. Two (2) respondents constituting 1.6% stated that these devices should not be allowed at all into the library. Seven (7) did not respond to this question. The results are displayed in Table 4.7 below.

Table 4.7: Minimization of the use electronic devices

	Frequency	**Percent**
Post notices against the use of these devices	37	29.6
Install cameras	28	22.4
Monitor users and post notices against the use of these devices	23	18.4
Install cameras, monitor users and post notices against the use of these devices	16	12.8
Monitor users	12	9.6

These devices should not be allowed	2	1.6
	7	5.6
Total	**125**	**100**

Source: Field work, 2014

4.9 Discussion of Findings

The discussion of findings was based on the findings made in the study. It included staff knowledge about information ethics, effects of information ethics and management of the issues of information ethics.

4.9.1 Privacy of information

Not all information could be divulged to people because of the issue of privacy. Very sensitive information about an organization or an individual was private information and therefore should be kept as such. Such information if it was given out would likely cause an irreparable damage to the organization or the individual involved. The respondents 51 (40.8%) as the results showed mentioned that they would keep patented materials strictly to themselves. It should be expected and therefore not surprising that the respondents mentioned patented materials as the item they would keep to themselves. The reason was that because of their work as researchers most of them came out with new discoveries. They as a matter of course would always expect these discoveries to be properly protected.

Privacy of information could be threatened by several forces. One force that was very prominent today is technology. Privacy could be invaded intentionally and unintentionally today as a result

of technology. There are those who would go out intentionally with the use of technology to collect private information about people without the people concerned figuring out what was going on. According to Mason (1986) most invasions of privacy are not as dramatic or visible, rather they creep upon us slowly. Majority of the respondents as the results shows 106 (84.8%) mentioned the growth of information technology with its enhanced capacity for surveillance, communication, computation, storage, and retrieval as the greatest force that threatened the privacy of information. Today many people could use their smart phones to do many things. They could use it to copy materials, record or film events without those involved knowing what was going on. Majority of the respondents 85 (68%) stated that they would not go through a confidential folder of a researcher if found by accident. Even though this result was reassuring, the position of the other 39 (31.2%) who maintained that they would go through a confidential folder of a researcher if they chanced upon it by accident was worrying and so something should be done about it.

4.9.2 Accuracy of information

According to Mason (1986) misinformation had a way of fouling up people's lives, especially when the party with the inaccurate information had an advantage in power and authority. Mason further stated that a special burden was placed on the accuracy of information when people relied on it for matters of life and death, as we increasingly do. The results of the study showed that more than half of the respondents 65 (52%) indicated that the responsibility to provide accurate information to the users lied with the author of the material. Rightly so, the accuracy and authenticity of research materials lied perfectly in the hands of the author. Since they are the ones who put together their research findings and then made them available to the desired

audience, any misinformation, inaccurate information or errors found in a research material could therefore be attributed to the author.

4.9.3 Ownership of information

Ownership of intellectual outputs could sometimes be very contentious. As Mason (1986) puts it "one of the most complex issues we face as a society is the question of intellectual property rights". Many respondents 82 (65.6%), as the results of the showed, believed that it was the author of the information who owned the information. Information was also transmitted to the targeted audience through several channels. Ownership of these channels of transmission also could sometimes be confusing. One could not tell whether it was the librarian, for that matter the library, the researcher, the publisher or the institution in which the researcher worked. Results from the study showed that the opinion of the respondents to the question of who owned the channels through which information was transmitted was very much divided. Whereas 59 (47.2%) respondents as the results showed, indicated that the organizations were responsible for the ownership of channels that were used to transmit information to the users, 55 (44%) respondents on the other hand mentioned publishers as the people who owned the channels that are used to transmit information to the users.

4.9.4 Accessibility of information

Accessibility to information for making decisions or any other activity was a right which was acknowledged locally and internationally. As the results of the study showed, all the 125(100%) respondents were able to access the information they needed for their work without any hindrance. A little over half of the respondents 63 (50.4%) indicated that the fact that information was free and accessible did not make their use of data acceptable. These respondents

were more likely to be responsible users of information. There were 61 (48.8%) respondents who however indicated that their use of data was acceptable. This group of respondents would not be responsible users of information.

4.9.5 Regulation of access to intellectual property

Raman (2004) defined intellectual property as any "original creative work manifested in a tangible form that can be legally protected". There was the need to regulate access to intellectual property. This would help to check abuses such as theft and plagiarism which have been reported by Dadzie (2011); Sun (2009); Bull et al. (2001); Butakov & Scherbinin (2009) and Selwyn (2008). From the study close to half 62 (49.6%) respondents mentioned that regulating intellectual property could be done by people who wish to use an author's material to seek permission first of all from the author. More than a quarter 32 (25.6%) respondents stated that access to intellectual property could be regulated through the use of codes. The use of codes though very good would limit access to the intellectual property. It was only those who knew the codes that could gain access to it. Assuming the one keeping the codes had travelled then one would have to wait till the person comes back before that intellectual material could be accessed and used.

4.9.6 Adherence to ethical issues

Adherence or compliance to rules and regulations in any society ensures peace and harmony. Rancour sets in when people begin to do things that are contrary to what was supposed to be right in a given society. Adherence therefore to such ethical issues as privacy, accuracy, property and accessibility was very important to all in the institution. This would ensure the compliance of both the written and unwritten rules in an organization. It was very refreshing to see 109

(87.2%) respondents indicating positively to the effect that they do adhere to these ethical issues mentioned. The response of 12 (9.6%) other respondents was however very worrying. They responded to the effect that they did not adhere to the ethical issues mentioned. This group of respondents could create some problems for the institution.

4.9.7 Effects of the ethical issues on the search for information

Observing such ethical issues as privacy, accuracy, property and accessibility was likely to bring along with it some effects be it negative or positive. As the results of the study showed 77 (61.6%) stated that these ethical issues affected their search for information in the library. Since one would not be sure whether this effect was positive or negative, the respondents were asked to indicate the nature of the effect. As the results showed 59 (47.2%) respondents indicated that they were able to search confidently in the library. Thirty five (35) of them constituting 28% also indicated that the ethical issues brought sanity in the use of the library materials and the library. It means therefore that to a large extent the ethical issues have contributed largely to the positive use of the library and its resources.

4.9.8 Awareness and management of ethical issues at the library

Awareness of a situation was very important in determining how one would react to a given situation. The results of the study showed that more than half 73 (58.4%) of the respondents were aware of some ethical issues in the library. Managing or addressing the issues identified was very essential. Thirty seven (37) respondents representing 29.6% as the results showed mentioned that through workshops, seminars, training programmes and explanation by library staff the ethical issues in the library could be reduced. These are generally the avenues institutions used to

address problems and informed members about things happening or about to happen in the institution.

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CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes revelations made in the study, concludes and finally makes recommendations based on the findings. The study was to investigate information ethics in special libraries in Ghana using the Cocoa Research Institute of Ghana library as a case study with the following objectives: to find out how privacy, accuracy, property and accessibility of information is observed at CRIG, to find out their opinion of privacy, accuracy, property and accessibility of information at CRIG, to find out how ethical issues affect research activities at CRIG, to identify some of the ethical issues at CRIG and to recommend measures needed to prevent breach of these ethical issues in CRIG.

5.2 Summary of Findings

This section summarizes the findings of the study.

5.2.1Privacy of information

Responding to the question of what they will keep to themselves, many respondents as the results show indicated that they would keep patented materials strictly to themselves, less than a quarter of the respondents stated that they would keep thesis, unpublished articles and certain special reports strictly to themselves. Very few respondents indicated that they will keep thesis and unpublished articles strictly to themselves. Again on the question of what forces threaten the privacy of information; many respondents indicated that they felt threatened by the growth of information technology with its enhanced capacity for surveillance, communication, computation, storage, and retrieval. Very few respondents stated that the forces that threaten the

privacy of information are the increased value of information in decision-making of policy makers and articles needed by researchers to attain higher levels. More than half of the respondents indicated that they will not go through a confidential folder of a researcher if found by accident. More than a quarter of the respondents on the contrary indicated that they will go through a confidential folder of a researcher if they chance upon it by accident. Less than half of the respondents stated those seeking for information can access copyrighted materials, published articles, newsletters and flyers. A little over a quarter of them stated that information seekers can have access to only copyrighted materials and less than a quarter said information seekers can have access published materials.

5.2.2 Accuracy of information

A little over half of the respondents stated that the author of the material is responsible to provide accurate information to the users. More than a quarter indicated that the responsibility lies with the writer of the information whilst a small number stated that the responsibility lies in the hands of the creator of the information.

5.2.3 Ownership of information

Many respondents indicated that ownership of information lies in the hands of the author. Less than a quarter stated that it is the creator of the information who owns the information. A small number of respondents also indicated that the writer is the owner of information. With the question on the ownerships of the channels of transmission, about a half of the respondents stated that the channels are owned by organizations and publishers respectively. Very few respondents mentioned librarians and researchers as the owners of the channels that transmit information.

5.2.4 Accessibility of information

All the respondents were able to access the information they need to carry out their research activities. More than half of the respondents indicated that the fact that information is free and accessible does not make their use of data acceptable. About a half of the respondents on the contrary indicated that their use of data was acceptable.

5.2.5 Regulation of access to intellectual property

About a half of the respondents stated that intellectual property can be regulated by seeking permission from the author. A quarter of the respondents stated that intellectual property could be regulated through the use of codes whilst less than a quarter of the respondents also stated that regulation of access to intellectual property can be done through the restriction of access.

5.2.6 Adherence to ethical issues

More than half of the respondents indicated that they have been adhering to the ethical issues. A few respondents however stated that they do not adhere to the ethical issues mentioned.

5.2.7 Effects of the ethical issues on the search for information

Many respondents indicated that these ethical issues affected their search for information in the library. Less than half of the respondents stated that ethical issues did not affect their search for information in the library. About half of respondents indicated that ethical issues enabled them to search for information confidently in the library. Less than half of the respondents stated the ethical issues help to bring sanity in the use of the library materials and the library at large.

5.2.8 Awareness and management of ethical issues/challenges at the library

More than half of the respondents were aware of some ethical challenges in the library. Less than half of the respondents were not aware of any ethical challenge in the library. About half of the

respondents stated that through workshops, seminars, training programmes and explanation by library staff the ethical challenges in the library can reduced.

5.2.9Minimization of the use electronic devices in a special library

Less than half of the respondents indicated that notices should be posted against the use of these devices in the library. Less than a quarter of the respondents indicated that cameras should be installed to monitor the use of electronic devices in the library. A few of the respondents stated that users should be monitored and notices should be posted against the use of these devices in the library.

5.3 Conclusion

Information ethics as has been pointed out already concerns all human related activities to information, that is, our relationship with information, how we generate or what we do with information, the process and how to distribute it in the procedure of new technologies and modernizations. Information ethics is therefore the professional standard of conduct which includes both legal and moral issues. This study investigated information ethics in special libraries in Ghana using the Cocoa Research Institute of Ghana (CRIG) library as a case study. The study revealed that many respondents indicated that they will keep patented materials strictly to themselves, many respondents felt threatened by the growth of information technology, many said they will not go through someone's confidential folder, many said the author is both responsible for the provision of accurate information to the users as well as owner of the information, many adhered to information ethics issues in the library, many were aware of ethical issues in the library. They mentioned workshops, seminars, training programmes and explanation by library staff as the means through which the ethical challenges in the library can

be addressed. It can therefore be concluded from the foregoing that the awareness level of the staff of CRIG about information ethics is very high and encouraging.

5.4 Recommendations

The study revealed some pertinent issues regarding information ethics in special libraries in Ghana. The following recommendations are therefore being made in the light of the revelations.

5.4.1 Awareness Creation

There is the need for more awareness to be created about information ethics most especially about privacy, accuracy, property and accessibility to information among the staff members in the Institute. This requires the involvement of all staff members especially librarians providing the expertise and top management providing logistics for the programme. Librarians and for that matter the library can also help by sensitizing the staff members through orientations, seminars, workshops and the distribution of flyers and notices all over the Institute.

5.4.2 Enforcement of Rules and Regulations

The library's rules and regulations must be strictly enforced and adhered to without fear or favour. This is being recommended in the light of the revelation made in the study about the respondents who indicated that they do not adhere to information ethics. Strict enforcement of the rules and regulations will help to check any person who would attempt to abuse the rules. Top management should not interfere but they should rather give the library staff all the latitudes they need to enforce the library's rules and regulations.

5.4.3 Punishments and Rewards

People who abuse the rules and regulations of the library should not be allowed to use the resources of the library for a period to serve as a deterrent. Where the abuse is serious like the

exposure or sale of patents to companies without the authorization of top management, the library should recommend the expulsion of the culprit from the Institution. Those who abide by these rules should be assisted by the library with all their information needs.

5.4.4 Involvement of the Library in Committees

The library should be included in any committee set up on matters concerning materials produced by the Institute. This will help the librarians to know which material to make available to users and which ones to keep out of reach of users.

5.4.5 Access control

The library should regulate access to the intellectual outputs of the institution. Users should be made to understand that not all information created for special libraries can be given out easily without any form of control.

5.4.6 Further Studies

Further research needs to be conducted about information ethics in other special libraries since this study seems to be the first delving into this area in Ghana at the moment.

APPENDIX A

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APPENDIX B

QUESTIONNAIRE

A QUESTIONNAIRE ON INFORMATION ETHICS IN SPECIAL LIBRARIES IN GHANA: THE CASE OF COCOA RESEARCH INSTITUTE OF GHANA (CRIG)

Dear Sir/Madam,

*I am a postgraduate student of the University of Ghana offering Master of Art, Information Studies. I am undertaking a research on the "**information ethics in special libraries in Ghana: the case of Cocoa Research Institute of Ghana (CRIG)".** Information ethics is a field that investigates the ethical issues arising from the development and application of information technologies. I will therefore be grateful if you could take time off your busy schedules to answer the following questions to enable me have a fair view on the topic. I promise to protect your privacy as you assist me to undertake this study. Please tick the most appropriate option(s).*

Thank you.

INSTRUCTION: Please tick the right option or provide the requested information in the spaces provided where applicable.

SECTION A: STAFF KNOWLEDGE ABOUT INFORMATION ETHICS

Privacy

1. What information should an individual/organization keep strictly to oneself? (*Please tick relevant ones)*
   a. Patented materials
   b. Thesis
   c. Unpublished articles
   d. Certain reports
   e. Coded materials
   f. Personal documents
   g. Other specify……

2. What forces threaten privacy of information?
   a. Growth of information technology with its enhanced capacity for surveillance, communication, computation, storage, and retrieval. [ ]
   b. The increased value of information in decision-making of policy makers [ ]
   c. Articles needed by researchers to attain higher levels [ ]
   d. Other (specify)……

3. What information does a person or an organization have a right/ a privilege to obtain?

(*Please tick relevant ones)*

a. Copyrighted materials

b. Published articles

c. Newsletters

d. Flyers

e. Other (specify) ……

Accuracy

4. Who is responsible for the authenticity, fidelity and accuracy of information?

   a. The writer

   b. Creator

   c. Author

   d. Other (specify) …….

5. Who is accountable for any errors in information provided? (*please tick relevant ones*)

   a. Author

   b. Creator

   c. The writer

   d. Publisher

   e. Librarian

Property

6. Who owns information?
   a. Creator
   b. Author
   c. The writer
   d. Other (specify) ……..

7. Who owns the channels especially the airways, through which information is transmitted?
   a. The organization [ ]
   b. Researchers [ ]
   c. Librarians [ ]
   d. Publishers [ ]

8. Do you need the consent of a fellow researcher to use his/her creation?
   a. Yes [ ]
   b. No [ ]
   c. Not sure [ ]
   d. Other (please specify)……

9. Is there any harm in copying articles of other peoples?
   a. Yes [ ] b. No [ ]

Accessibility

10. Are you able to access the information you need for your work?

    a. Yes [ ] b. No [ ]

11. Does the fact that information is free and accessible make your use of data acceptable?

    a. Yes [ ] b. No [ ]

12. Will you look or go through a researcher's confidential folder if by accident you have access to it?

    a. Yes [ ] b. No [ ]

13. How should access to intellectual property be regulated?

    a. The use of code [ ]

    b. Restrict access [ ]

    c. Permission from author [ ]

    d. Other (please specify)……

14. Do you adhere to any of the above mentioned ethical issues?

    a. Yes [ ] b. No [ ]

    a. If no, why? ……..

SECTION B: EFFECTS OF ETHICAL ISSUES

15. Do the above mentioned ethical issues affect your search for information in the library?

a. Yes [ ] b. No [ ]

16. How does it affect your search/use of materials positively in the library?

a. It enables search to be done confidently in the library [ ]

b. Policies of the library is adhered to [ ]

c. It brings sanity in the use of the library and the materials [ ]

d. None of the above [ ]

17. How do these ethical issues affect the use of library materials? (*Please tick relevant ones)*

a. High rate in request by phone [ ]

b. Reduction in the use of library materials [ ]

c. Reduction in patronage [ ]

d. None of the above [ ]

18. What are some of the effects of ethical issues? (*Please tick relevant ones)*

a. Fabrication in research [ ]

b. Plagiarism [ ]

c. Privacy [ ]

d. Poor research records [ ]

e. Copy right abuse [ ]

f. Other (specify) ……..

19. Does the above challenge affect the retrieval of information?

a. Yes [ ] b. No [ ]

SECTION C: MANAGEMENT OF INFORMATION ETHICS CHALLENGES

20. Are you aware of the any ethical issues/challenges at the library?

Yes [ ] No [ ]

21. How can these challenges be reduced? (*Please tick relevant ones)*

a. Through workshops [ ]

b. Seminars [ ]

c. Conferences [ ]

d. Training programmes [ ]

e. Explanation by library staff [ ]

f. Notices [ ]

22. How should the use of these electronic devices be minimized in a special library?

(*Please tick relevant ones)*

a. Install Cameras [ ]

b. Monitor users [ ]

c. Post notices against the use of these devices [ ]

d. These devices should not be allowed [ ]

SECTION D: DEMOGRAPHIC DATA

Age of respondent

a. 20 – 30 [ ]

b. 31 – 40 [ ]

c. 41 – 50 [ ]

d. 51 – 60 [ ]

23. Gender

a. Male [ ] b. Female [ ]

24. Marital Status

a. Married [ ] c. Divorced [ ]

b. Single [ ] d. Widowed [ ]

25. Highest educational level

a. No formal education [ ]

b. Primary [ ]

c. Secondary/Technical/Vocational [ ]

d. Tertiary [ ]

26. How long have you worked with the Institute?

a. Less than 5 years [ ]

b. 5 – 10 years [ ]

c. 11 – 15 years [ ]

d. Above 16 years [ ]

27. What is your current position/ Level/ Rank with the Institute

……