

**APPLICATION OF PLAGIARISM DETECTION SOFTWARE TO
ENHANCE RESEARCH: A CASE OF UNIVERSITY OF NAIROBI POST
GRADUATE STUDENTS AND LECTURERS**

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DECLARATION

This research report is my original work and has not been submitted for examination to any other university.

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DEDICATION

This research is dedicated to my supervisors, parents, friends and staff of the University of Nairobi Library for the support they have given me during the process.

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ABSTRACT

The aim of this study was to assess the application of plagiarism detection Software to enhance research by postgraduate students and lecturers at the University of Nairobi's Faculty of Arts. The study objectives were to assess the level of Turnitin awareness amongst students and lecturers, to assess the level of usage of Turnitin anti-plagiarism software at the university, to examine the perception of students and lectures towards Turnitin plagiarism detection software, to identify the factors affecting the uptake of plagiarism detection software at the university and Propose appropriate measures to be undertaken to improve Turnitin up-take. The study adopted descriptive survey design because it provides an account of the characteristics, for example, behavior, abilities, beliefs, and knowledge of particular individuals. Technology Acceptance Model (TAM) was adopted as the theoretical framework supporting this study. The target population of this study was 453 people, who constituted postgraduate students and lecturers from the Faculty of Arts. Stratified and purposive sampling methods were used to select the sample and a sample size of 205 was determined using the Morgan table. Questionnaires and interviews were used to collect data from the respondents. Data were analyzed using qualitative and quantitative techniques by use of SPSS software as per the software requirements. Qualitative data was presented in the form of descriptive notes and quantitative data was presented in the form of tables and graphs. Major findings revealed that the awareness about plagiarism and Turnitin was high and its usage was notably low. From the data collected, the study concludes that the main reason for low usage is negative perception and limited Turnitin licenses. The study recommends that the University should purchase more licenses and initiate advocacy forums geared towards changing the existing mindset and perception of students and lecturers.

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ACRONYMS/ABBREVIATION OF TERMS

ARIBO	-	African Regional Intellectual Property Organization
AD	-	Ann Domino
CUEA	-	Catholic University of Eastern Africa
DOI	-	Diffusion of Innovation
ETDs	-	Electronic Theses and Dissertations
KECOBO	-	Kenya Copyright Board
TAM	-	Technology Acceptance Model
UTAUT	-	Unified Theory of Acceptance and Use of Technology
UB	-	University of Botswana
UoN	-	University of Nairobi
US	-	United States
WIPO	-	World Intellectual Property Organization

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter constitutes a discussion on the background of plagiarism, plagiarism cases, context of study, problem statement, research questions and objectives. In addition the chapter gives the rationale, scope and limitations of the study. It also presents the definition of operational terms.

1.2 Background to the Study

The wealth and aggressiveness of a nation stands in the quality of its education system. Academic dishonesty undermines the integrity of education and it has negative influence to the future decision makers of a country (Miranda & Freire, 2011:2). Plagiarism is an academic integrity issue amounting to theft of intellectual property and an offense as significant as cheating in an exam (Baker, Thornton, & Adams, 2011:2). Plagiarism has been used to address a wide range of acts of academic misconduct, ranging from the copying and pasting of other's work to failing to accord with accepted academic practice and codes (Stuhmcke, Booth, & Wangmann, 2015:2). The oxford dictionary defines plagiarism as the practice of taking someone else's work or ideas and passing them off as one's own (Oxford Dictionary, n.d.).

Plagiarism has been a growing problem in research for a long time though it has not been of much attention in the past; the emergence of internet has however made this problem more prominent. In many countries, this problem has emerged as a matter of discussion, and research institutions have been forced to review their policies on academic integrity (Eret & Ok, 2014:1002). "Plagiarism has almost certainly been with us since the dawn of artwork and written language. It's history dates back to the first century AD where a Roman Martial who lived from 40 AD to somewhere between 102 and 104 AD found that his work was being copied and recited elsewhere by other poets without attribution" (Bailey, 2011:1). This study views that many people either plagiarize intentionally or

unintentionally, others are not aware of the consequences. Many students are also interested with the university award (Bachelors, Master or Doctorate) and subsequent promotion in their workplaces rather than the quality of their research output and generation of new knowledge.

The world intellectual property organization (WIPO) has identified plagiarism as a serious copyright issue which can occur in several levels from a student to a scientist to an author, WIPO goes ahead to term the paradigms of plagiarism as difficult to identify (WIPO, 2011). According to (Sengupta, 2015:22), plagiarism is an ethical issue which can only amount to copyright infringement if proven. Through WIPO, the United Nations has made a significant effort in protecting intellectual property and promoting creativity in the world. WIPO is an international convention formed by the United Nations with 188 member countries where Kenya joined the convention in 1971. WIPO formulates policies and services towards balanced international Intellectual Property (IP) rules and provides capacity building to enable nations to use IP for socio-economic development.

Apart from WIPO, there are other regional and national initiatives geared towards protecting Intellectual Property. African Regional Intellectual Property Organization (ARIPO) brings together 19 African countries including Kenya to foster collaboration in dealing with intellectual property issue (ARIPO, n.d.). However, this study has not identified much contribution from ARIPO on copyright and plagiarism. Kenya has established several organizations to deal with copyright and related issues with one organization being the Kenya Copyright Board (KECOBO) which is a State Corporation that was established under Section 3 of the Copyright Act, Cap 130 of the Laws of Kenya to administer and enforce copyright and related rights in Kenya. This study views IP organizations as partners in the fight against plagiarism which is a copyright infringement if proven.

1.2.1 Plagiarism Cases

Many plagiarism cases have been reported and prominent people have fallen victims, begging the question of whether the act was done intentionally or unintentionally. The

President of the United States, Donald Trump has been accused of plagiarism. “Trump allegedly copied a piece from a former republican contender Ben Carson which expressed his views on improving quality and fairness of Americans living in territories and commonwealths” (Bailey, 2016:1).

In November 10th 1990 as reported in the New York Times, Martin Luther King’s doctorate dissertation was reportedly plagiarized. Dr. Martin Luther King Jr., acknowledged that substantial part of his father’s doctoral dissertation and other academic papers had been plagiarized. The officials at Boston University where the doctorate was awarded in 1955 set a committee of four scholars to investigate the dissertation. However, considering the fact that neither Dr. King nor his dissertation supervisors was alive, the PhD degree could not be revoked even if plagiarism was proven (PALMA, 1990) .

In March 2011, German Defense Minister Karl-Theodor zu Guttenberg had to step down after he was found to have plagiarized large parts of his 2006 University doctorate thesis. A Bremen University law professor began reviewing his 2006 thesis with the aid of the internet and found a passage from a newspaper article that featured word for word, and then of a paragraph from the US embassy website being used without attribution (News & Berlin, 2011).

The researcher notes that plagiarism cases which happened in the past are now being exposed because of internet. The growth of internet has become a double edged sword with respect to plagiarism where on one hand there exists a multitude of easy to copy online information including journals, term papers, Electronic Thesis and Dissertations (ETDs). On the other hand, internet provides tools that help identify plagiarism. The researcher suggests that researchers and research institutions should test, detect and avoid plagiarism at each level of the research process from the beginning to the end thus avoiding embarrassment and bridge of copyright.

1.2.2 Context of the Study

The University of Nairobi (UoN) was established under the Universities Act 2012 of the laws of Kenya and the University of Nairobi Charter. The inception of the University can be traced back to 1956 with the establishment of the Royal Technical College which was upgraded to the second university college in East Africa on 25th June 1961 under the name Royal College Nairobi. On 20th May 1964, the Royal College Nairobi was renamed University College Nairobi as a constituent College of Inter-Territorial Federal University of East Africa. In 1970, the University College Nairobi transformed into the first National University in Kenya and was renamed University of Nairobi. The University has had continuous growth over the years. Currently UoN, has a population of 84,000 students spread over its six colleges; College of Agriculture & Veterinary Sciences situated at Upper Kabete Campus, College of Architecture & Engineering situated at the Main Campus, College of Biological & Physical Sciences situated at Chiromo Campus, College of Education & External Studies situated at Kikuyu Campus, College of Health Sciences situated at the Kenyatta National Hospital and the College of Humanities and Social Sciences situated at the Main Campus. It has different Faculties which are: Faculty of Arts; Parklands, Faculty of Law; Lower Kabete Campus, Faculty of Commerce; in Nairobi, Kisumu and Mombasa. The University's research kitty stands at 4 billion Kenya shillings (University of Nairobi, 2016).

1.3 Statement of the Problem

A case was filed by a Maseno University student against a University of Nairobi student who was due for graduation after successful completion of her project. The case which was filed at Bungoma high court in September 2010 was the first of its kind in Kenya. Anne Nang'unda Kukali (Applicant) alleged that Mary A. Ogola (1st Respondent) had plagiarized from her thesis titled "An Evaluation of the Implementation of Safety Policy in Girls Boarding Secondary Schools in Bungoma East District" presented to Maseno University for the degree of Master of Education in 2008. In her application, Ms. Kukali sought for an injunction restricting the University of Nairobi from including Ms. Anne Ogola's name in the graduation ceremony that was to be held on September 24 2010 and any other future graduations. After comparative analysis, the Applicant's

work and that of the 1st Respondent the court was convinced that the 1st Respondent had plagiarized substantially, the court therefore granted the orders sought accordingly (Esther Nyaiyaki, 2011).

With the growth of technologies and specifically the internet, new forms of academic malpractices such as plagiarism, double submission, ghost authorship and others, have emerged (Ellahi, Mushtaq, & Bashir, 2013:647). Academic cheating has become easier in the digital age because students can easily copy information from the Internet and paste it into their own assignments as if it were their own (Ananou, 2014:174). Universities are turning to plagiarism detection software programs to address the problem. This software has the ability to flag similar contents indexed over the web (Bruton & Childers, 2016:316).

At the University of Nairobi, various measures have been put in place to address the challenge of plagiarism. The University has developed a plagiarism policy which is a product of thorough review of international policies drawn from regional practices. The policy strives to strengthen innovativeness and creativity which are among the University's core values (UoN, 2013). As part of the policy implementation, the University recently acquired anti-plagiarism software called turn-it-in to enhance originality and reduce plagiarism among the University research community. This study assessed the adoption and application of turn-it-in plagiarism detection software to enhance research among students and lecturers at the University of Nairobi.

1.4 Objectives of the Study

1.4.1 General Objective

The aim of this study was to assess the adoption and application of turn-it-in plagiarism detection software and suggest possible strategies to be adopted to increase uptake and enhance research originality.

1.4.2 Specific Objectives

The Objectives of this study are to:

- a) Examine the level of plagiarism and turnitin awareness amongst postgraduate students and lecturers.
- b) Assess the level of usage of turnitin anti-plagiarism software at university of Nairobi.
- c) Examine the perception of students and lecturers towards turnitin plagiarism detection software.
- d) Identify the factors affecting the uptake of plagiarism detection software at the University of Nairobi.
- e) Propose appropriate measures to be undertaken to improve turnitin up-take

1.5 Research Questions

- a) What is the level of awareness of turnitin software amongst postgraduate students and lecturers?
- b) How effective is turnitin in enhancing the quality of research at the University of Nairobi?
- c) What are the perceptions of students and lecturers towards turnitin software?
- d) What are the factors affecting the up-take of plagiarism detection software at the University of Nairobi?
- e) What measures should the University adopt in order to enhance turnitin up take?

1.6 Scope of the Study

The study was a descriptive survey to assess the application of turnitin at UoN to enhance research which was carried out among the lecturers, and postgraduate students who are currently the main users of turnitin at University of Nairobi. The study was conducted within a period of six months.

1.7 Significance of Study

This study will assist in promoting academic integrity at the university of Nairobi community. The study will also be beneficial to Students and lecturers in promoting originality in research by providing an easier way of testing, detecting and avoiding plagiarism through the use of turnitin anti-plagiarism software to analyze content similarity. By ensuring plagiarism free works, the students, lecturers and the University will be assured of Academic integrity and competitive advantage. This research recommends strategies on how to enhance up-take of turnitin software.

The study will also be helpful to the society at large considering the fact that quality and original research plays an important role in building capacity and contributing to socio-economic development by providing solutions to prevailing challenges facing the society.

1.8 Assumption of Study

The study assumes that the University has acquired enough turnitin licenses for all lecturers and postgraduate students.

1.9 Limitation of the Study

The study was conducted for postgraduate students based in the faculty of arts only due to limited number of turnitin software licenses acquired by the university, findings may not necessarily reflect on the other colleges.

1.10 Operational Definitions

Originality Report

This is the final report generated by turnitin showing the similarity in percentage and highlighting similar area with their sources.

Scanning

This is the process of checking for similar content over the internet through turnitin.

Similarity

This is a term used to describe the level of originality of a document submitted to turnitin for scanning, it is expressed in percentage.

Turnitin

This is an online commercial text matching system that compares texts against a database of sources over the internet; the system has been acquired by the UoN to check for originality of works.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed literature related to academic integrity and the three objectives of this study which are usage of turnitin, user perceptions and factors affecting plagiarism detection software take-up.

2.2 Academic Integrity

Previous studies have depicted the issue of academic dishonesty as a matter of great interest in Higher Education. For the last few decades, it has become severe at graduate and undergraduate levels due to availability of technology and connectivity and it has been noted that students continue to exercise the malpractices at their workplace (Akbulut et al., 2008:4). Ellahi, Mushtaq, & Bashir Khan, (2013: 648) explained eight types of academic dishonesty namely: fabrication, falsification, finagling, plagiarism, and duplication, least publishable units, neglecting support and misusing credit. He points out that academic dishonesty is the opposite side of academic integrity and is defined as any fraudulent actions or attempts by a student to use unauthorized means in connection with a formal academic activity. It involves cheating, plagiarism, deception, fabrication of data and facilitating academic dishonesty (Abdelfatah & Tabsh, 2010:1).

2.3. Types of Plagiarism

According to Eisa, Salim, & Alzahrani, (2015:383) there are five types of plagiarism: exact copy plagiarism: lifting a sentence or a substantial phrase from a source without using quotation marks to reference the source; modified plagiarism: taking a sentence from a source and changing the order of a few words; style plagiarism: copying an author's reasoning style or concept even when the texts are fully paraphrased; metaphor plagiarism: copying someone else's metaphors in describing a particular subject; and idea plagiarism: articulating another person's novel idea or solution as though it is ones' own.

University of Bowdoin (University of Bowdoin, n.d.) identifies four main types of plagiarism: Direct plagiarism: word-for-word transcription without attribution and without quotation marks; Self-plagiarism : a student submits whole or part of his or her own previous work; Mosaic Plagiarism: a student borrows phrases from a source without using quotation marks, or finds synonyms for the author's language while keeping to the same general structure and meaning of the original; Accidental plagiarism: occurs when a person neglects to cite their sources, or misquotes their sources, or unintentionally paraphrases a source by using similar words.

2.4 Initiatives to Curb Academic Dishonesty

Given the prevalence of Academic dishonesty, Analysis of Literature show different institutions have established initiatives to avoid academic misconduct. The University of Waterloo, Canada has established an academic integrity office which strives to promote integrity across the campus, the office has developed policies and initiatives focusing on students, staff and faculty, it also does training of students, the students are encouraged to be integrity ambassadors, and they also represent the office in promotional activities ('Integrity initiatives,' 2013).

The University of Manitoba has developed Academic policies and procedures to address AD, The policies are geared towards enhancing an academic integrity culture in the institution, it outlines responsibilities for students, staff and Faculty with regard to AD as prevention, detection and response ("University of Manitoba - Student Affairs," n.d.). A further analysis of universities shows that honor codes have been established to govern the academic community on the ideals that constitute academic integrity. The adoption of plagiarism detection software is also on the rise with turnitin reporting a customer population of over 15,000 institutions and 30 million students, in Kenya several institutions have subscribed to turnitin, among them; Kenyatta University, University of Nairobi, United States Internationals University, among others.

2.5 Plagiarism Detection

Plagiarism detection ordinarily involves an examination of two or more records to determine their levels of similarity; a numeric value called similarity score is then assigned (Lukashenko, Graudina, & Grundspenkis, 2007:2). According to Asim et al (2011:163) plagiarism detection can be done either manually or electronically. Manual detection is done by human and is suitable for small volumes of documents and it is also time consuming. On the other hand, electronic or automatic detection employs text matching software e.g. turnitin, Plagware, Plagirism detection.org and more. Ledwith & Rísquez (2008:372) observed that text matching software analyzes the level of originality of student work by comparing it with a database of online materials and gives a similarity index in terms of percentage. The system indicates possible plagiarism by flagging similar texts. The judgment as to if the similar text amounts to plagiarism can only be done by the instructors or supervisors. Bahadori, Izadi, & Hoseinpoufard, (2012:7) suggests four methods for detecting plagiarism; general sight overview involving assessment of sentence structure, grammar and idioms, search of online bookstores to assess if students have provided right references, search of key words in search engines and use of plagiarism detection software. While introducing technologies for detecting plagiarism is important, Jeremy, (2005) observes that it just serves as a reactionary approach that cannot yield lasting solution and argues that the source of plagiarism is systemic and the focus should be on the strategies to prevent rather than to detect. Depending on the point of use and perception, this study views that plagiarism software can be adopted either as a preventive measure or a reactive measure. When the software is used as a guide from the starting point of research, the researcher or student will be able to prevent plagiarism but when it is applied at the end of the research it can serve as a punishment to the student and its long term benefits cannot be realized.

A study done by Lukashenko et al., (2007:4)revealed that turnitin is the overall best among several plagiarism platforms, a comparative analysis was done based on two main plagiarism attributes: type of text; where the software can either operate on text only or code and type of corpus tool; where the software can operate intracorpally, extracorpally or both as shown in the table below.

Table 1: Plagiarism Software Evaluation

Attributes	Detection tools							
	Specific tools							Alternative tools
	Turnitin	Eve2	CopyCathGold	WordCheck	Glatt	Moss	Jplag	Google Yahoo AltaVista
<i>Type of text tool operates on</i>								
Checks source code?	-	-	-	-	-	Y	Y	-
Checks free text?	Y	Y	Y	Y	Y	-	-	Y
<i>Type of corpus tool operates on</i>								
Operates intra-corpally?	Y	-	Y	Y	-	Y	Y	-
Operates extra-corpally?	Y	Y	-	-	-	-	-	Y
<i>Other attributes</i>								
Designed for use by students?	Y	-	-	-	-	-	-	Y
Designed for use by teachers?	Y	Y	Y	Y	Y	Y	Y	Y
Instant response?	-	Y	-	Y	-	-	-	Y
Free?	-	-	-	-	-	Y	Y	Y

(Lukashenko et al., 2007:4)

2.6 Turnitin Software

Turnitin is an internet based commercial plagiarism detection service by paradigm. Institutions buy licenses in order to access the service and the licenses are passed to the users (students, researchers and faculty) who become the license holders. The License holders can submit their documents to the turnitin website which checks for unoriginal content by comparing the submitted paper to several online databases, turnitin then issues the originality report with similarity index highlighting areas where similar content has been flagged. The software by default saves the submitted document in its database but if the author doesn't want his/her work to be saved in turnitin database, he/she can select 'submit to no repository' under assignment settings, if the already submitted work gets submitted for the second time, users have the option to exclude the previous source from the report.

2.7 Turnitin at University of Nairobi

University of Nairobi has purchased one thousand turnitin software licenses for the entire institution and all Libraries of respective colleges are responsible for training and issuing

licenses to the Faculty. The Faculty members are encouraged to use the service with their students to check for unoriginal content in their articles before publishing and submitting theses for graduation.

2.8 Limitations of Turnitin

Even though there are positive reports on the use of Turnitin in identifying plagiarism, the software also has its limitations (Batane, 2010:3). Noynaert (as cited in Batane, 2010:3) reveals that the software has a tendency to identify the material as plagiarized, even if it is not. Savage (as cited in Batane, 2010:3) argues that there are incidents of coincidental research where students may innocently use similar words or resources used previously in other research, especially in commonly researched areas. Therefore, it is important for instructors to carefully scrutinize originality reports to make the final judgment as to whether the material has been plagiarized or not. Turnitin is also limited in that it is not capable of checking everything on the net, for example, images and some computer programs.

2.9 Usage and Effectiveness of Turnitin Software

Several studies have been done to analyze the effectiveness of turnitin, University of Botswana (UB) conducted a pilot project to determine its effectiveness. Student papers were first scanned for plagiarism using the software without student's knowledge and the results recorded an average of 20% similarity. A similar process was done again after sensitizing and warning the same students that their papers would be scanned, the result showed a 4.3% decrease in similarity (Batane, 2010:1).

In another study at University of Western Australia, turnitin appeared to be a very effective tool for guiding students on citation and proper paraphrasing and as a consequence decreasing the plagiarism level. The manufacturers of Turnitin did a study on effectiveness of turnitin among 1000 colleges and Universities in the United States (US) in the year 2011 and found that the plagiarism rate had reduced by 39% over a period of five years of use (Turnitin, n.d.). Dodicgvic (2013) observes that turnitin can be used as a leaning aid.

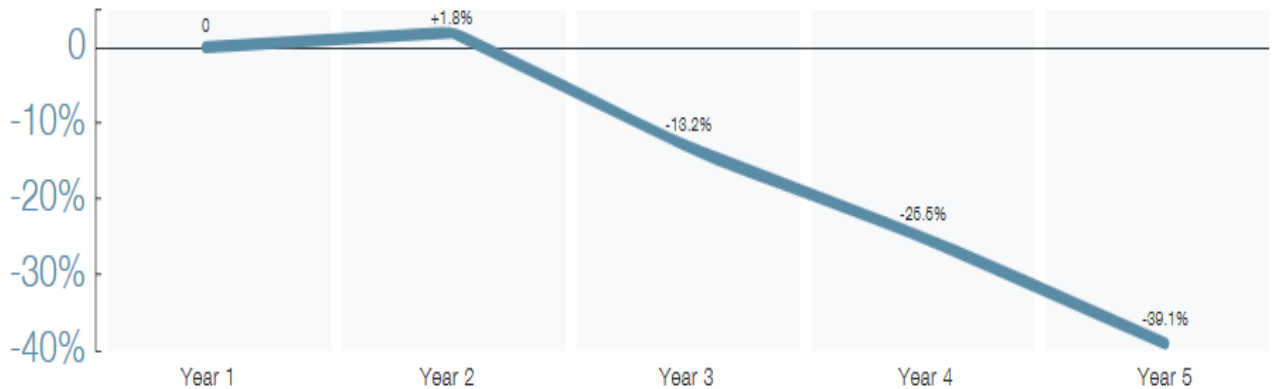


Figure 1: Levels of Unoriginal Content (Batane, 2010a)

2.10 Turnitin awareness

Awareness refers to the cognitive ability of a person to judge a given phenomenon. The word also refers to the knowledge about an event, the competences or skills as well as the methods of operation; it has to do with the background information about an object, event or any other phenomenon (Reinhardt, Mletzko, Sloep, & Drachsler, 2013:20), it has to do with background knowledge about the object, event or any other phenomenon. According to Pai & Parmar, (2015:3) information experts have a strong role to play in dealing with plagiarism issues and have a fair chance of creating the awareness about information and its ethical use. They should share the educational responsibility of students. Ali, Ismail, & Cheat, (2012:610) notes that, a misunderstood concept of plagiarism may lead to difficulty in eradicating plagiarism acts. To punish individuals who are not aware of indulging in plagiarism is not justified. Thus, instilling the understanding of plagiarism is a better task that must be implemented in a more serious manner. Students' level of understanding of plagiarism must be monitored from time to time through either a quantitative or qualitative survey or both.

According to Idiegbeyan-Ose, Nkiko, & Osinulu, (2016a) plagiarism undoubtedly constitutes a seemingly imperceptible threat to the growth of genuine global scholarship

and understanding of various perspectives of the phenomenon is critical to finding a lasting solution and one of this is user awareness.

Empirical studies have shown that awareness is a major factor in the fight against plagiarism, Badge & Scott, (2009) points that if students are not educated/informed about the penalties, consequences and possibility of detecting plagiarism, nothing will deter them from practicing the vice. At the University of Botswana, student papers were first subjected to turnitin scan without student's knowledge and resulted to average of 20% similarity, a similar process was done after creating awareness and warning the students that their papers would be subjected to turnitin scan and the findings thereafter showed a 4.3% decrease in similarity (Batane, 2010b). A similar study was also conducted at University of Hertfordshir, where Students began by taking a research methods course in which they wrote summary essays, the essays were then submitted for originality checking to Turnitin and 26 out of 182 essays recorded more that 15% unoriginal content. After conducting trainings and allowing students to submit their essays to turnitin and view their reports, only 3% of the essays came back with 15% or more unoriginal text (Barrett & Malcolm, 2006:40). From the existing literature, the researcher concludes that in all situations awareness has had a great impact in reducing plagiarism. When students and lecturers become aware of the plagiarism policy, consequences and penalties, they take caution and in the process avoid the practices leading to plagiarism.

According to Nkiko, & Osinulu, (2016:4), people engage in plagiarism because of ignorance, lack of skills and academic pressure of publish or perish. A study conducted on Nigerian students on post-graduate programme in United Kingdom (UK), revealed that most of the post-graduate students did not have any knowledge about plagiarism before coming to UK universities. Some plagiarism acts such as collusion is undoubtedly deliberate and un-ethical, whereas, some other could be accidental or unintentional. Onuoha & Ikonne, (2013:102) observed that although students may sometimes engage in the acts of plagiarism intentionally, some students unknowingly plagiarize because they are unclear of what constitutes a quotation or paraphrase and they are not equipped with knowledge on how to cite properly.

In study carried out by Ryan et al, (2009:1) to assess undergraduate and postgraduate Pharmacy students' perceptions of plagiarism and academic honesty, finding revealed that there is lack of knowledge on plagiarism across all years of under-graduate and post-graduate Pharmacy students in University of Sydney, Australia. In the same way, (Chukwuemeka, Gbenga, Nduka, & Ndidiamaka, 2013) investigated academic dishonesty among Nigerian Pharmacy students in comparison to their United Kingdom counterparts and found that the perception of Nigerian students as regards academic dishonesty in the universities investigated was poor, and the students' involvement in cheating was much higher than what was reported in UK schools. A research that was conducted in University of Florida in 1987 (as cited in Bukar, Maina, & Jauro, 2014:226), revealed that 68.1% of the students engaged in plagiarism and other forms of academic misconducts

2.11 User Perception of Turnitin

A study conducted by Nunez (2011) on perceptions of Saint Leo University on anti-plagiarism programs revealed that students accept the use of turnitin, the study involved a hands on experiment where the students were first allowed to copy and paste material from internet before subjecting their papers to turnitin for scanning. After the process they were asked if they could accept the software and they responded positively at 100%, most of them gave positive comments about the system. The students however noted some flaws; one student had copied and pasted 100% of the work but turnitin reported 71% similarity. It was also noted that some of the content flagged as similar by turnitin did not amount to plagiarism and therefore the lecturers should not exclusively rely on it.

In another study conducted by (Kokkinaki, Demoliou, & Iakovidou, 2015:10) on the perception of students on plagiarism and relevant policies in Cyprus, it was noted that most students lacked a clear understanding on plagiarism. Some of them did not know the definition of plagiarism and many institutions also lacked clear educational principles on plagiarism. There was little of awareness on plagiarism and no formal training on good research practice for avoiding it like proper paraphrasing, referencing and acknowledging sources.

2.12 Factors Affecting Anti-plagiarism Software Adoption

According to Handayani, Abdullah, Abdulgani, & Dahlan (2010:2) many factors contribute to success or failure of ICT Projects but none is more to blame than leadership. Antlova (2010:156) suggests that people, information technology and processes in organizations are the main factors affecting implementation. A total of 11 critical success factors for system implementation were identified by Wong, (2005:267 - 274); top management support is needed throughout the implementation. The project must receive approval from top management and should align with strategic goals of the organization. Another very critical factor is change management program and culture. An organizational culture where the employees share common values and goals and are receptive to change is most likely to succeed in project implementation. Furthermore, user training, education and support should be available and highly encouraged. Change agents should also play a major role in the implementation to facilitate change and communication and to leverage the corporate culture. Other critical factors include top management support, business plan and vision, BPR and minimum customization, effective communication, project management, software development, testing and troubleshooting, monitoring and evaluation of performance, project champion and appropriate business and IT legacy systems. The author argues that, the success of turnitin is greatly affected by the level of management support, communication, training and organizational culture.

2.13 Theoretical Framework

This study adopted the Technology Acceptance Model (TAM) to explain the factors affecting the acceptance, adoption and application of turnitin at the University of Nairobi. The Technology Acceptance Model (TAM) explains how a new technology and the various aspects of it are received and used by the user. Many theories have been proposed to explain the technology acceptance and adoption, but TAM has been widely acclaimed and used; Diffusion of Innovation (DOI) which explains the communication and adoption of new ideas in a social system, Unified Theory of Acceptance and Use of Technology (UTAUT) and Theory of planned behavior (TPB) which predicts an individual intention to engage in a given behavior at a given time and place are some of

the theories used in the context of technology adoption (Alharbi & Drew, 2014:115). This study holds the view that in order to effectively apply turnitin, it is important to understand its usefulness, ease of use and perceptions of users.

According to (Park, 2009:151), the Technology Acceptance Model was designed by Davis (1989) and it assists to predict and explain the factors that influence the up-take of technology. According to this theory, the user acceptance of a technology depends on their perceptions on the usefulness and ease of use of that technology. TAM was originally designed for information systems in organizational context, the perception of technology means the degree to which a person believes that using a technology would enhance his/her performance and ease of use means the degree to which a person believes that using a particular technology or system would require less effort. TAM provides a basis with which one can analyze how external variables influence belief, attitude and intention to use given technology (Park 2009:151).

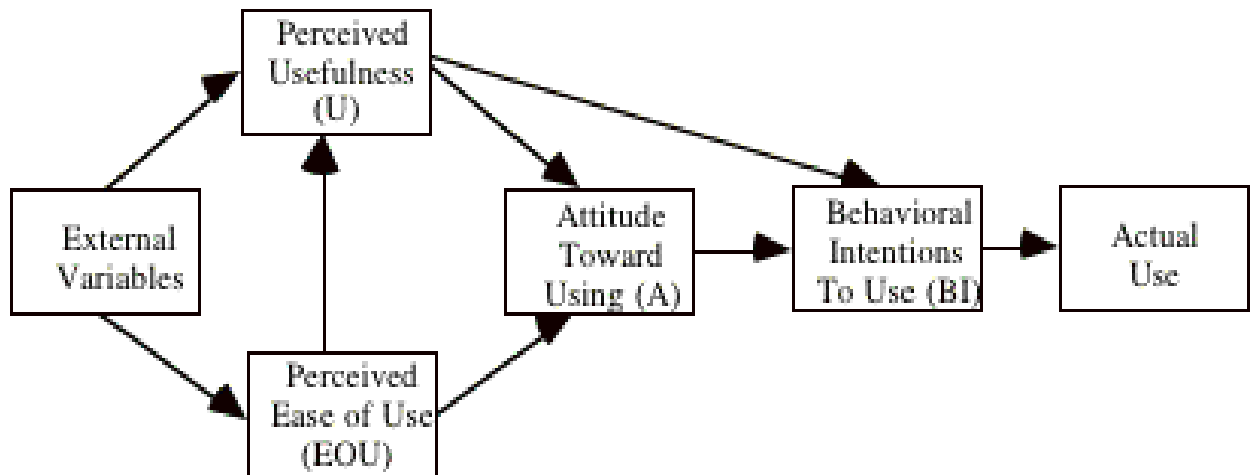


Figure 2: Technology Acceptance Model (Davis F.D., 1989)

2.14 Conceptual Framework

The conceptual framework in this study is composed of dependent and independent variables. The dependent variables are the issues to be addressed in order to promote turnitin in enhancing research and they include user awareness, usage and effectiveness, perception of users and the factors affecting acceptance and integration of the software. The plagiarism policy which guides the entire process is the intervening variable.

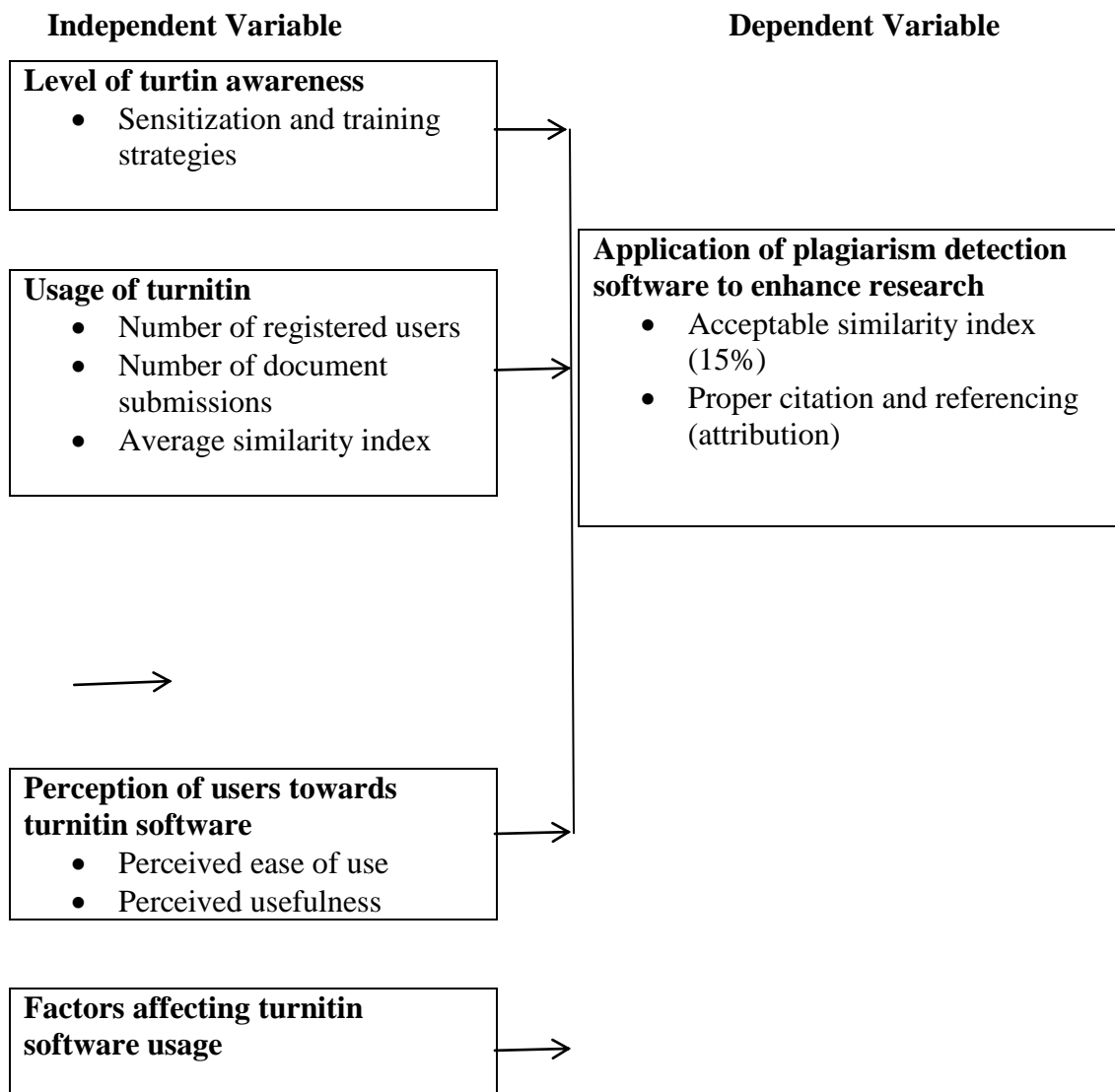


Figure 3: Conceptual Framework

Researcher: (2016)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter illustrates the main methods that were used in conducting the study. According to Mugenda (2003), methodology section of a research describes the procedures, techniques and steps that were involved in conducting a study. The key areas covered in this chapter include the research design, target population, sampling and sampling techniques, methods of collecting, analyzing and presenting data and ethical considerations in the research study. This chapter forms an important part of the study since it provides the basis on which the information was collected from the respondents.

3.2 Research Design

A research design is a procedural plan, structure or strategy of investigation in order to obtain answers to the research questions or problem (Kumar, 2012:94). The research design used in this study was a descriptive survey. The study aimed at collecting information from respondents about their opinions on the effectiveness, usage, perceptions and level of awareness of turnitin anti-plagiarism software. According to (Habib, Pathik, & Maryam, 2014:7), descriptive research is used to obtain the characteristics of a particular problem. For example, in this study the researcher assessed and analyzed the characteristics of the factors affecting application of plagiarism detection software. A descriptive survey was selected because it provides a portrayal or account of the characteristics for example behavior, opinions, abilities, beliefs and knowledge of a particular individual. In the study, the research design particularly enabled the researcher to determine the knowledge and abilities of the respondents in relation to awareness and usage of turnitin and plagiarism. The descriptive survey also made it possible to determine the opinions of the respondents regarding their perception.

A mixed methods approach which constitutes both qualitative and quantitative methods was employed in this study. According to Creswell (2010:203), mixed methods research is popular because it takes advantage of the strengths and overcome the shortcomings of both qualitative

and quantitative research and enables the researcher to gain more insight than using either of the two independently. O’Leary (2010:130) Points out that mixed methods approach allow for the use of both inductive and deductive reasoning and build a broader picture by adding insights to numbers through inclusion of dialogue and narratives. This research used qualitative methods to gather people’s opinions, beliefs, attitudes and other information related to interaction of plagiarism detection software through questionnaires and interview schedules. Quantitative data was collected by use of closed ended questions which was administered to students and Faculty through questionnaires. The researcher used likert scales to quantitatively rate the levels of the three main components of this study that include awareness, usage and perception. Respondents were required to rate on the likert scales their level of awareness of different aspects of turnitin and plagiarism, frequency of usage of different facilities provided by turnitin and level of agreement with several issues regarding perception. The data collected was then analyzed using SPSS. Presentation of results was guided by the study objectives as illustrated in the table below.

Table 2: Objectives and Mode of Measurement

NO.	OBJECTIVE	INDEPENDENT VARIABLE	DEPENDENT VARIABLE	MEASUREMENT
1	Assess the level of awareness of turnitin anti-plagiarism software at university of Nairobi	Level of awareness	Application of turnitin in plagiarism detection software	Questionnaire (Both open ended and closed questions)
	Assess the level of usage of turnitin anti-plagiarism software	Number of turnitin users	Application of turnit in plagiarism detection software	Questionnaire (Both open ended and closed questions)
2	Evaluate the perception of students and lecturers towards turnitin plagiarism detection software	User perception	Application of turnitin in plagiarism detection software	Questionnaire(Both open ended and closed questions)

3	Identify the factors affecting the up-take of plagiarism detection software at the University of Nairobi	Training, Marketing and promotion	Application of turnitin plagiarism detection software	Questionnaire (Both open ended and closed questions)
4	Identify the factors affecting the take-up of plagiarism detection software at the University of Nairobi		Application of turnit in plagiarism detection software	Questionnaire,

Researcher (2016)

3.3 Study Area

The study was conducted at the University of Nairobi, which is the largest and oldest University in Kenya comprising of six colleges. The study only focused on post graduate students and lecturers from the Faculty of Arts. This specific Faculty was selected because the researcher noted from Turnitin software reports that it had a high enrolment of instructors. The Faculty is composed of ten major departments namely; Library and Information Science, Psychology and Religious studies, Sociology, Political Science, Literature, French, Kiswahili, Linguistics, Geography and Environmental studies, Philosophy and Religious Studies. Each department is either pure social sciences, humanities or a blend of the two.

3.4 Target Population

Mugenda and Mugenda (2003) refer target population as all the elements that attain certain set standards of inclusion in any research. According to Mugenda (2008), a researcher must define the target and the accessible population. A sampling frame was used to define the target population. Sekaran and Bougie, (2010) defines a sampling frame as a representation of all the elements in a population from which a sample is drawn, this can include lists and non-lists. The sampling frame used in this study was lists from the University Student's Management Information System (SMIS) and the Human Resource Management Information System (HRMIS). The target population included the entire group of people in the Faculty of Arts. This group included both lecturers and students at masters and PhD levels.

Accessible population is that part of the target population that a researcher can practically reach to select a representative sample (Mugenda, 2008:283). Given the large size of the target population, it is impractical for the researcher to survey the whole population in terms of time and financial requirements. This study's accessible population was therefore a selection from the large number of people within the Faculty's ten departments. A representative sample was selected from the identified population from each department.

3.5 Sampling Technique and Sample Size

Sampling involves taking a representative selection of the population and using the data collected as research information (Bobbie, 2007) The main advantage of sampling is to reduce cost, accelerate speed and give accuracy and quality of the data (Adèr, 2008). The study used multilevel sampling technique involving three types of sampling techniques; stratified random sampling method which divides target population into groups based on specific characteristics seen as good to the research systematic random sampling, which is a probability technique that gives an equal chance of selecting each unit from within the population and purposive sampling which is a non-probability sampling technique. The sampling strata for the study was divided as shown in table 3.3 below:

Table 3: Faculty Departments

Strata (Thematic area)	Pure social science (Stratum 1)	Pure humanities (Stratum 2)	Both social science and humanities (Stratum 3)
Departments	<ol style="list-style-type: none"> 1. Library and Information Science 2. Psychology and Religious studies 3. Sociology 4. Political Science 	<ol style="list-style-type: none"> 1. Literature 2. French 	<ol style="list-style-type: none"> 1. Kiswahili 2. Linguistics 3. Geography and Environmental studies 4. Philosophy and Religious Studies

Researcher (2017)

The researcher purposively selected one department with the highest number students from each stratum in order to achieve high representation. The three departments which were selected were sociology, Philosophy and Religious Studies and department of Literature.

Table 4: Target Populations

Target group	Department	Target population	Percentage
Students	Literature	79	17.4
	Philosophy and Religious studies	98	21.7
	Sociology	196	43.3
Lectures	Literature	18	4
	Philosophy and Religious studies	32	7.1
	Sociology	30	6.1
Total		453	100

3.5.1 Sample Size

As per Hyndman, (2008) a sample is that part of the target population. Marczk, De Matteo & Festinger (2005) referred to a sample as that part of the population to be studied, should be a correct representation of the entire population for the study. According to (O’Leary, 2010:62), a good sample is one that ensures both adequate and broad representation. An optimum sample is one which fulfills the requirements of efficiency, representativeness, reliability and flexibility.(Kothari, 2004:56).

The sample selected was representative of the whole population as per the sample frame which constitutes students and lecturers from all departments in the faculty of arts.

3.5.2 Calculation of Sampling Fraction

This study used both probability and non-probability sampling procedures. In the case of students simple random sampling was used, while purposive sampling was used in the case of lecturers. The sample size was obtained using Krejcie & Morgan (1970) table for determining sample size of known population. KENPRO (2012) postulates that, there is no need of using a sampling formula since the table have all provisions required to arrive at the required sample size. Based on Krejcie & Morgan table, a representative sample 453 is 205, which was arrived at

by obtaining a representative size for each department independently from the table. For example, according to the table, the department of literature which has a target population of 79 has a representative sample of 36 as shown in table 3.3 below; (Krejcie & Morgan, 1970). The 205 respondents were selected randomly from the population with an exception of the heads of departments who were purposively selected and interviewed by the researcher.

Table 5: Sampling Distribution

Target group	Department	Sample	Percentage
Students	Literature	36	17.4
	Philosophy and Religious studies	45	21.7
	Sociology	90	43.3
Lectures	Literature	8	4
	Philosophy and Religious studies	14	7.1
	Sociology	12	6.1
Total		205	100

3.6. Data Collection Methods and Approaches

The data for this study was collected from primary sources by using questionnaires and interview schedules and the data collection process was guided by the study objectives.

3.6.1 Questionnaires

The study adopted the use of questionnaire in primary data collection. The questionnaire was administered personally by the researcher after acquiring a permit from the Deputy Vice Chancellor in charge of research (DVC RPE). The questionnaire contained both open ended and closed ended questions that enabled the researcher to collect both qualitative and quantitative data. Closed ended questions made use of a five point Likert Scale to standardize the responses. The unstructured questions were used to encourage the respondents to give an in depth response where close ended questions were limiting. The questionnaire was designed for respondents who are lecturers and students. The questions were guided by the research objectives. A brief introductory letter (Appendix 1) explaining to the respondents the nature and importance of the study accompanied the questionnaire. The quantitative data collected was analyzed using

spreadsheets and SPSS and the results were then generalized to the larger population. The qualitative data on the other hand was presented by use of verbatim narrative.

The questionnaire was divided into six sections; A, B, C D, E and F. Section A addressed the general information about the respondents, section B addressed the level of turnitin awareness to enhance research in universities, section C addressed the level of usage of turnitin anti-plagiarism software to enhance research in universities and section D addressed the perception of students/lecturers towards turnitin plagiarism detection software in enhancing research in universities. Section E addressed the factors affecting the take up of plagiarism detection software in enhancing research in universities, while section F addressed the status of enhancing research in universities. The questionnaire adopted a five point likert scale where: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly disagree.

3.6.2 Interview Schedules

This study employed the use of interviews to probe lecturers who were purposively selected by the researcher. The interviewees first notified the researcher of the intent and sought appointment. Interviews involved oral administration of research questions according to the interview schedule (Appendix IV). The qualitative data collected was coded and presented by use of verbatim narrative by quoting the respondents voices.

3.7 Validity and Reliability of the Study

This section presented a discussion on the validity and reliability tests that was carried out by the researcher in order to achieve the study's objective. The study objective was to assess the application of plagiarism detection software to enhance research in universities.

According to Joppe, 2000 (as cited in Golafshani, 2003) Validity determines whether the research truly measures that which it is intended to measure or how truthful the research results are. Validity is high if the study contains what one wants to study and nothing else. It takes four forms: face, construct, internal and external. Construct validity refers to data collection, internal validity is a link between theory and empirical research and external validity refers to the domain to which the findings can be generalized. Construct validity was addressed by administering the questionnaires to the institution which possess similar characteristics to the population which

was studied. Internal validity was addressed by considering existing theories and external validity was addressed by studying all the Universities in the Kenya.

Reliability demonstrates that the study can be repeated with the same outcome. Joppe (2000) defines reliability as the extent to which results are consistent over time and an accurate representation of the total population under study. If the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable. The researcher used clear and well defined questionnaire as a method of data collection. Questions by the respondents were clarified. This could easily be applicable to another sample to test the reliability of the results.

3.7.1 Pilot Study

Before the actual data collection, a pilot study was conducted to determine whether the study was successful under similar circumstances and environment. To ensure the questionnaires are valid, a pre-test was done. The area of study was The Catholic University of Eastern Africa situated at Karen in Nairobi. The population for the pre-test was identified using stratified random sampling where the population was divided in to University management, lecturers and students. A total of 4 managers, 5 lecturers and 10 students were selected. A cover letter requesting CUEA to allow and participate in the pre-test was done and addressed to the Vice chancellor.

3.8 Ethical Considerations

According to Kombo & Tromp (2006), researchers whose subjects are people must consider to conduct research by giving attention to ethical issues associated to the research. (Creswell, 2010:105) also observes that it is important to observe research ethics to be able to protect participants against psychological, social and financial harm. In this particular study, the researcher undertook to maintain confidentiality by not requiring identification details on the questionnaires administered. The consent of the respondents was obtained from any subject used. Moreover, the researcher undertook the responsibility of any issue emanating from the conduct of the study and the researcher also sought an authorization letter from the DVC (RPE) to allow access to information and data within the University.

3.9 Data Presentation and analysis

This study generated both quantitative and qualitative data through the questionnaires and interviews. Quantitative data was analyzed using measures of central tendency and dispersion such as mean, mode frequency distribution and percentages. Immediately after data collection, data editing, coding and cleaning commenced. The data was coded using Microsoft excel and analyzed using the statistical Package for Social Scientists (SPSS) and the analysis process was guided by the research objectives.

3.10 Summary

In this chapter the researcher discussed the approach used in conducting the study. The key methodology issues which have been addressed include the research design, population sampling and sampling techniques and data collection methods and procedures. The researcher also outlined the procedure used in data analysis and presentation of results. This chapter, therefore guided the next chapters that dealt with research findings and analysis.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

This section presents the results of the study; it presents data analysis, interpretation and the discussions. The findings are focused on the research questions that the study intended to accomplish. Data was analyzed using SPSS version 20 software. The study used Likert scale in collecting and analyzing the quantitative data on multiple response questions whereby the scale of points was used in computing the means and percentages. The results were then presented in tables and charts as appropriate with explanations given in prose. Open ended questions, interviews and participant observation were used to collect qualitative data which was analyzed and presented in prose.

4.2 Response Rate

The sampled respondents for the study were 171 students and 34 Lecturers, giving a sample size of 205 participants. However, 141 (82%) students and 31 (91%) lectures responded. The response rate was considered adequate for reporting as it was greater than the general accepted threshold of 50% (Mugenda & Mugenda, 2003). Also according to Babbie (2010), a response rate of 50% is believed to be adequate for analysis and reporting, whereas 60% is considered good while above 70% is deemed very good.

4.3 Demographic Profiles of the Respondents

4.3.1 Gender of Respondents

The diagram below shows the distribution of the gender of the respondents. The respondents of the study were asked to state their gender.

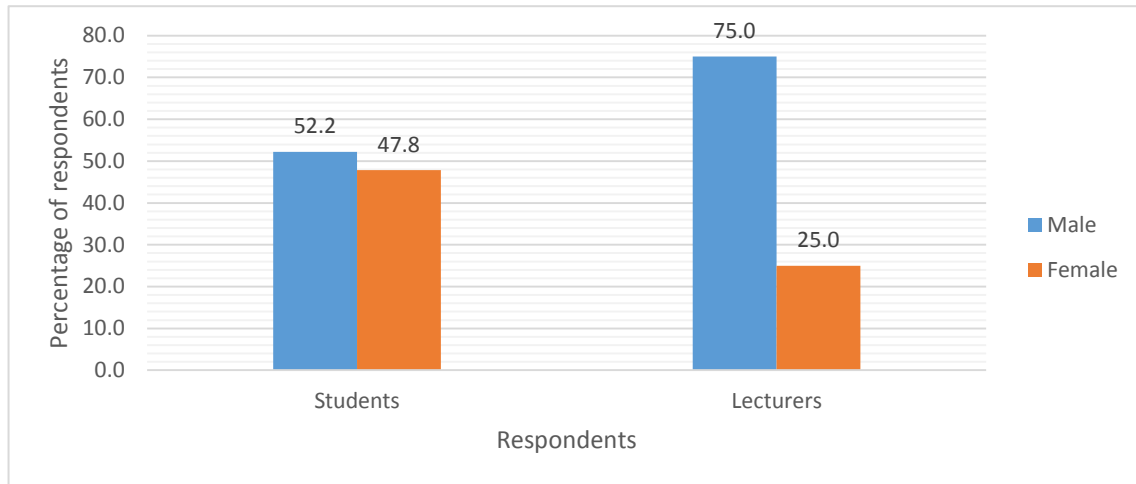


Figure 4: Gender of Respondents

Among the students who responded, 52.2% were males and 47.8% females. On the other hand majority of the lecturers were male (75%) compared to 25% female as shown in figure 1 above.

4.3.2 Level of Study of Students

The figure below represents the distribution of the level of study of student respondents. The respondents for the study were asked to state their level of study.

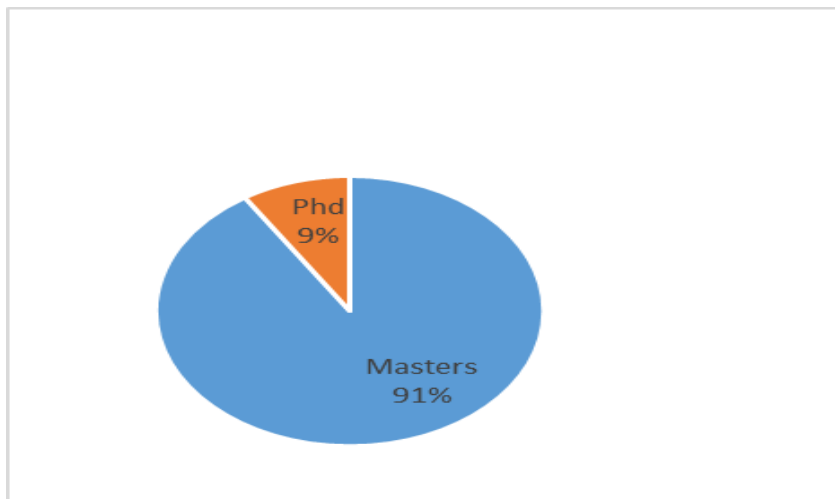


Figure 5: Students level of Study

Data collected indicated that, the majority of the students were at masters' level (91%) while (9%) were at PhD level as shown in figure 2 above.

4.4 Level of Awareness

The objective was to determine the level of awareness of plagiarism and plagiarism detection software among students and lecturers. The level of awareness was determined by asking various questions that included; the awareness of plagiarism and academic malpractices, source of information about plagiarism, awareness of University plagiarism Policy, awareness of the adoption of turnitin by the university, advantages of turnitin, and originality reports.

4.4.1 Awareness of plagiarism and academic malpractices

The research sought to establish the respondents' level of awareness of plagiarism and academic malpractices. The respondent's level of awareness on academic malpractices was considered significant for the study as it would help to establish the literacy levels of the respondents that would influence usage of anti-plagiarism software. Respondents were asked to state whether they were aware of plagiarism and academic malpractices leading to it.

The findings showed that all the 31 lecturers (91%) and 141 students (92%) were aware of the plagiarism and the academic practices leading to it. Generally, it can be concluded that the respondents were aware of the plagiarism and the academic malpractices leading to it. From the Literature, Ali, Ismail, & Cheat, (2012:610) noted that a misunderstood concept of plagiarism may lead to difficulty in eradicating plagiarism acts. To punish individuals who are not aware of indulging in plagiarism is not justified. Thus, instilling the understanding of plagiarism is a better task that must be implemented in a more serious manner. Students' level of understanding plagiarism must be monitored from time to time through either a quantitative or qualitative survey or both. According to the researcher, the fight against plagiarism should start with sensitization about what plagiarism is, why people plagiarize and how to fight plagiarism. This forms the basis of fighting the vice.

4.4.2 Students source of Information

The study sought to establish the main source of information from which the respondents learnt about plagiarism and academic malpractices. This question was considered significant since it would indicate the most effective way of creating awareness of plagiarism and academic malpractices amongst students.

Table 6: Students' Source of Information

Source	Frequency	Percentage
Institutional website	31	22
Training/Orientations	83	58.5
Handbooks	10	7.3
Others	17	12.2
Total	141	100

From the findings 58.5 % cited the trainings and orientations as their source of information and skills. 22% indicated that they learnt from the website, 12% indicated handbooks and 7.3% learnt from other sources. This implied that the training conducted by the library was effective.

4.4.3 Awareness of UoN Plagiarism Policy

The respondents were asked to indicate if they were aware of the University of Nairobi plagiarism policy. The respondents' awareness of the policy was considered significant for the study as it provides regulations on how to deal with plagiarism, it also stipulates turnitin usage rules including similarity threshold. The findings showed that nearly all the lecturers (91.7%) and 78.3% of the students were aware of the plagiarism policy.

4.4.4. Level of Knowledge of the Content and Advantages of the Plagiarism Policy in Enhancing Research

The tables below show the response on the knowledge and advantages of plagiarism policy in enhancing research. The respondents (both students and Lectures) were asked to rate their knowledge of the content in the policy and its advantages in supporting research activities in the University.

Table 7: Students Level of Knowledge of The Content and Advantages of The Plagiarism Policy in Enhancing Research

	Frequency	Percentage
Average	49	35.1
High	34	24.3
Very high	46	32.5
Low	8	5.4
Very low	4	2.7
Total	141	100

Table 8: Lecturers Level of Knowledge of the Content and Advantages of the Plagiarism Policy in Enhancing Research

	Frequency	Percentage
Average	6	18.2
High	17	54.5
Very high	8	27.3
Low	0	0.0
Very low	0	0.0
Total	31	91

The tables above show that majority of the students (35.1%) rated average, while majority lecturers (54.5%) rated high. None of the lecturers rated either low or very low while 5.4% and 2.7% of the students rated low and very low respectively. Generally, the respondents had knowledge on the content and advantages of the policy in enhancing research

4.4.5 Students Level of Awareness of Turnitin Software

The study sought to establish the level of awareness of students on some basic processes about turnitin. The researcher considered the selected processes since they form the basic knowledge of how to use turnitin software.

Table 9: Students Level of Awareness of Turnitin Software

Rate	Not at all 1	Low 2	Average 3	High 4	Very High 5	Total n=141	Mean	Median	STD
I am aware of the advantages of turnitin in enhancing research	4.5	13.6	18.2	20.5	43.2	100.0	3.84	4.00	1.256
I am aware of the procedure for acquiring turnitin account	25.0	15.9	18.2	22.7	18.2	100.0	2.93	3.00	1.469
I am aware that I should submit an originality report of my research	6.7	2.2	17.8	17.8	55.6	100.0	4.13	5.00	1.198

On the question of awareness of the advantages of turnitin in enhancing research the mean score was 3.84 which when rounded to a whole number falls at scale point 4 which represents ‘High’. This meant that, most students were aware of the advantages of turnitin. On the question of awareness of the procedure for acquiring turnitin account the mean score was 2.93 which when rounded to a whole number falls at 3 representing ‘Average’ which means that about half of the respondents didn’t know how to acquire a turnitin account. Concerning the question on whether students were aware that they were supposed to submit an originality report of their research the mean score was 4.13 which when rounded falls at 4 which represents ‘High’ meaning that nearly all the respondents were aware that they are supposed to submit their originality report of their research on submission of their theses and research articles.

From the literature, it was noted that awareness is a major factor in the fight against plagiarism. Badge & Scott (2009) confirmed that if students are not educated or informed about the

penalties, consequences and possibility of detecting plagiarism, nothing will deter them from practicing the vice. This is affirmed by a study which was done a University of Botswana where student papers were first submitted for plagiarism test without students' knowledge and resulted to an average of 20 % similarity. Thereafter, a similar process was undertaken after warning the students that their papers would be subjected for plagiarism check, of which findings showed that the average similarity dropped by 4.3%. Based on the data collected, the researcher believed that the University was doing well when it comes to creation of awareness which can be attributed to information Literacy sessions conducted by the Library Department.

4.4.6 Lecturers level of Awareness of Turnitin Software

The study sought to establish the level of awareness of Lectures on some basic processes about turnitin. The researcher considered the selected processes since they form the basic instructor knowledge of how to use turnitin software.

Table 10: Lectures Awareness of Turnitin Software

	Not at all	Low	Average	High	Very High	Total n=31	Mean	Median	STD
Rate	1	2	3	4	5				
I am aware of the advantages of turnitin in enhancing research	0.0	0.0	0.0	25.0	75.0	100.0	4.8	5.0	0.452
I am aware of the procedure for acquiring turnitin account	6.5	0.0	8.3	12.9	71.0	100.0	4.4	5.0	1.240
I am aware of the procedure for submitting student works to turnitin for plagiarism check	6.4	8.3	8.3	25.7	51.3	100.0	4.0	4.5	1.348
I am aware that the library provides continuous training for lecturers on turnitin	3.2	0.0	9.7	12.9	74.2	100.0	4.4	5.0	1.240
I am aware of the acceptable similarity set by the university index for any work	3.2	0.0	6.5	12.9	77.4	100.0	4.4	5.0	1.240
I am aware of the procedure for recruiting students to turnitin class	16.7	25.0	16.7	16.7	25.0	100.0	3.1	3.0	1.505

Concerning the lecturers, the question on the awareness of advantages of turnitin had a mean score of 4.8 which when rounded off to a whole number falls at 5 which represents ‘Very High’ which means that nearly all the lectures appreciated the advantages of the software. The second question about the awareness of the procedure for acquiring a turnitin account had a mean score of 4.4 which rounds off to 4 representing ‘High’ meaning that most lecturers were aware of the procedure for submitting student works to turnitin for plagiarism check. The question on lecturers awareness of the procedure for submitting student works to turnitin had a mean score of 4.0 which translates to ‘High’ meaning that lecturers were well conversant with the said procedure. Lecturers were also asked if they were aware of the continuous training offered by the Library department and this question had a mean score of 4.4 which when rounded to a whole number falls at 4 representing ‘High’ which means that most lecturer knew that continuous training was being offered by the Library Department. Most Lecturers were also aware of the 15% acceptable similarity index which had been set by the University. It could be noted that the question on awareness of the procedure for recruiting students to turnitin class had a mean of 3 which represents ‘Average’ meaning that many lecturers did not know how to recruit students to turnitin account.

4.5 Level of Usage and Effectiveness of Turnitin Anti-plagiarism Software

The objective was to determine the level of usage of Turnitin software among students and Lecturers. This respondent’s level of usage was considered significant for the study as it would help establish the effectiveness of the software. At University of Western Australia, turnitin appeared to be a very effective tool for guiding students on citation and proper paraphrasing and as a consequence, decreasing the plagiarism level. The manufacturers of Turnitin did a study on effectiveness of turnitin among 1000 Colleges and Universities in the United States (US) in the year 2011 and found that the plagiarism rate had reduced by 39% over a period of five years of use.

4.5.1 Students Usage of Turnitin Software

The level of usage among students was determined by asking the students to indicate whether they had been enrolled to a turnitin class by their instructors, the frequency at which they had

performed selected turnitin activities like submitting assignments, accessing originality reports and resubmitting assignments after correction.

Table 11: Level of Students Usage of Turnitin Software

	Not at all	Low	Average	High	Very High	Total n=141	Mean	Median	STD
Usage	1	2	3	4	5				
Submitting assignments to turnitin	28.8	9.5	23.6	19.1	19.1	100.0	2.0	3.0	1.450
Accessing assignment originality reports	25.0	5.0	30.0	25.0	15.0	100.0	2.0	3.0	1.410
Resubmitting assignments after correction	25.0	5.0	30.0	15.0	25.0	100.0	2.1	3.0	1.520

On the question of students submitting assignments to turnitin, the mean score was 2 which represents ‘Low’, this means that a few of the student respondents were submitting items to turnitin, the next two questions on resubmitting assignments and accessing originality reports also had a mean score of 2 representing ‘Low’. It can be concluded that majority of the respondents were not using turnitin.

4.5.2 Lecturers Usage on Turnitin Software

The level of usage among Lectures was determined by asking them to indicate the frequency, at which they create classes, submit assignments and enroll their students and access originality reports.

Table 12: Level of Lectures Usage of Turnitin Software

	Not at all	Low	Average	High	Very High	Total n=31	Mean	Median	STD
Usage	1	2	3	4	5				
Creating classes and assignments	27.3	27.3	18.2	27.3	0.0	100.0	2.5	2.0	1.210
Submitting assignments	16.7	25.0	16.7	41.7	0.0	100.0	2.8	3.0	1.190
Enrolling students to turnitin	25.0	33.3	16.7	16.7	8.3	100.0	2.5	2.0	1.310
Accessing originality reports	30.0	30.0	20.0	10.0	10.0	100.0	2.4	2.0	1.350
Training students	45.2	25.8	6.5	12.9	9.7	100.0	2.1	2.0	1.380

On the question of creating classes, the mean score was 2.5 which represent ‘Low’ meaning that a few lectures had created classes in turnitin. It can also be observed that the other three questions on usage had a mean score of 2.8, 2.5, 2.4 and 2.1, meaning that all scored ‘Low’. From the findings it can be concluded that turnitin usage amongst Lecturers was low.

4.6 Perception of Students and Lecturers towards Turnitin Plagiarism Detection Software

The objective was to determine perception of students and lecturers towards turnitin plagiarism detection software. A study conducted by Nunez (2011) on perceptions of Saint Leo University on anti-plagiarism programs revealed that students accept the use of turnitin. The study involved a hands on experiment where the students were first allowed to copy and paste material from internet before subjecting their papers to turnitin for scanning. After the process they were asked if they could accept the software and they responded positively at 100% as most of them gave positive comments about the system. In this study the perception of the respondents was determined by asking the students to indicate their level of agreement on whether turnitin had been fully accepted as a way of enhancing research in the University, whether turnitin reduces

lecturers and students' workload, whether turnitin improves students' citation and referencing skills and whether turnitin was user friendly.

4.6.1 Perception of Turnitin Plagiarism Detection Services

Figure 6 below shows the response on the level of satisfaction of the respondents on the turnitin services provided by the University. The respondents were asked to indicate how they perceive the turnitin services provided by the University if either satisfactory or not satisfactory.

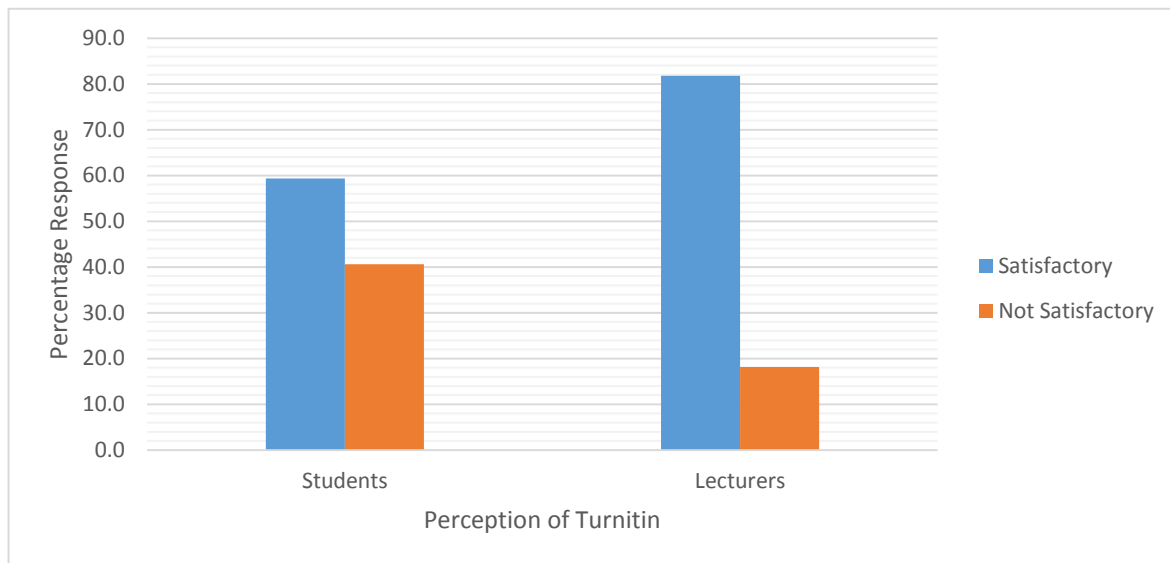


Figure 6: Perception of turnitin plagiarism detection services

Findings showed that about 82% of the lecturers were satisfied on the detection services of the plagiarism software compared to 59% of the students. It can be concluded that most students were still not satisfied with plagiarism detection services.

4.6.2 Perception of Students and Lectures towards Turnitin plagiarism software

The objective was to examine the perception of students and lecturers towards turnitin plagiarism detection software. The respondent's perception was determined by asking them to indicate their level of agreement with statements considered by the researcher as key in rating user perception. These statements covered acceptance of turnitin, workload, citation and referencing skills and user friendliness. The respondents were asked to indicate their level of agreements as to; if

turnitin had been fully accepted in the University, if turnitin increases students, and lectures' workload, if turnitin improves students' citation and referencing skills and if turnitin is user friendly.

Table 13: Level Perception of Students and Lectures towards Turnitin plagiarism software

	Strongly disagreed	Disagree	Undecided	Agree	Strongly agree	Total n=172	Mean	Median	STD
	1	2	3	4	5				
Turnitin has been fully accepted by UoN	0.0	7.5	35.0	32.5	25.0	100.0	3.75	4.00	.927
Turnitin increases lecturers and student workload	12.5	7.5	20.0	35.0	25.0	100.0	3.53	4.00	1.301
Turnitin improves students citation and referencing skills	0.0	0.0	20.0	37.5	42.5	100.0	4.23	4.00	.768
Turnitin adoption is the best way for the University to deal plagiarism	2.5	2.5	12.5	27.5	55.0	100.0	4.30	5.00	.966
Turnitin is user friendly	5.4	13.5	32.4	21.6	27.0	100.0	3.51	3.00	1.193

The issue on turnitin full acceptance by students and lecturers had a mean score of 3.7 which when rounded to a whole number falls at 4 which represents 'Agree' which means that most lecturers and students agreed that turnitin had been fully accepted. With a mean of 3.53 which represents 'strongly Agree' the respondents also affirmed that turnitin reduces students' and lecturer's workload. The findings also showed that the respondents agreed that turnitin improves students' citation and referencing skills and that turnitin was user friendly.

4.9 Source of information and skills on use of turnitin

Figure 4 shows that the main source of information on the use of turnitin software was formal for lecturers (63.6%) and informal for students (43.8%). Most lecturers got the information from seminars and workshops organized by Library compared to students. According to Pai & Parmar, (2015:3) information experts have a strong role to play in dealing with plagiarism issues. They have a fair chance of creating the awareness about information and its ethical use. Based on the data collected the researcher argued that students seemed not to have received enough training services from the information experts and students learned on their own (self-instructions).

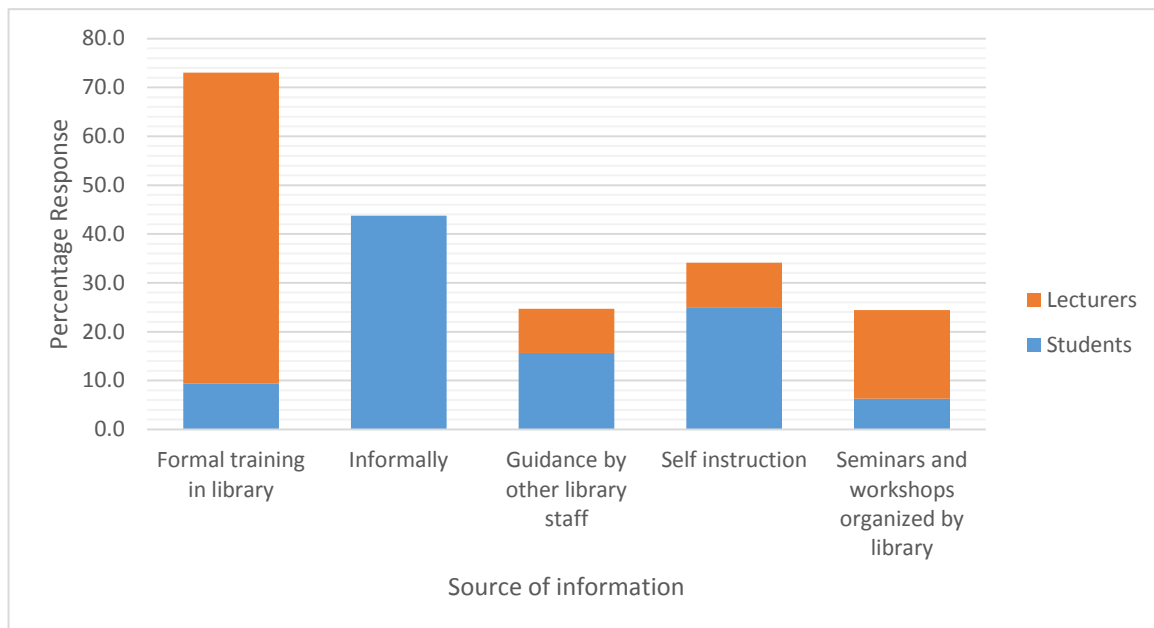


Figure 7: Source of information and skills on use of turnitin

4.10 Factors Affecting the Uptake of Plagiarism Detection

The objective was to determine the factors affecting turnitin up-take amongst the students and lecturers. The factors were determined by asking the respondents to indicate on a likert scale the extent to which the University had invested or acquired relevant tools which had been identified as key in the implementation and promotion of any software. The respondents were asked to give their opinion concerning the level of investment put in to hardware, software, education and training, promotion and marketing and policy.

Table 14: Factors Affecting the Take-up of plagiarism detection

	Not at all	To low extend	Not sure	To great extend	To very great extend	Total n=172	Mean	Median	STD
Factors	1	2	3	4	5				
Adequate computer hardware	13.67	5.92	4.09	64.27	12.05	100.00	3.31	3.50	.965
Adequate computer software	9.33	9.33	26.60	39.83	14.91	100.00	3.34	4.00	1.096
Education and training	16.79	16.79	17.01	38.93	10.49	100.00	3.03	3.00	1.311
Promotion and marketing	13.05	20.75	32.18	24.93	9.09	100.00	2.94	3.00	1.144
Policy and guidelines	10.26	11.80	31.79	30.26	15.90	100.00	3.24	3.00	1.226

Concerning the question on whether the university had acquired sufficient relevant computer hardware, findings had a mean of 3.31 which when rounded gives 3 representing ‘Not Sure’. This means that the respondents had no information about acquisition of relevant hardware. The same applied to Computer software which had a mean of 3.34. Education and training, promotion and marketing and policy guidelines also had a mean of 3 representing ‘Not Sure’. Generally, according to the findings, most respondents were not sure about any investment the university has put in to promotion of turnitin.

4.11 Challenges of Turnitin Software

The study sought to establish the challenges faced by students and lectures in applying turnitin and the respondents were asked to enumerate some of the major challenges. Most respondents cited difficulty in access to the software as one of the major challenges in adoption of turnitin at the University. Some of those respondents had the following comments;

“Turnitin is good but the fact that I have to go through my supervisor in order to have my work checked makes it difficult to apply”

“I was not informed about the software until I completed my project, that is when I realized that I had more than 15% similarity and had to redo my work, I wish I was able to access the software earlier”

“My supervisor does not have a turnitin account and has referred me to the Library where I couldn't get any help”

Others indicated lack of awareness, knowledge and skills. Some respondents also cited lack of customized standards for the university and a few argued that there was lack of enough training. One responded had the following comment;

“The students should be educated about the software from the time they begin their studies, most students at undergraduate level are not aware.”

Most lecturers suggested that the library was in a better position to handle turnitin services; one of them had the following comment.

“The Library should employ staff to assist us check for similarity and send us a report, Lecturers are too busy and they should be spared workload”

4.12 Summary

In this chapter, the results of the data analyzed have been presented and the results about awareness, perception and usage of turnitin software have been discussed and the interactions between the variables have been analyzed. This information is used to discuss the findings and inform the summary, conclusion and recommendations that are presented in the next chapter.

CHAPTER FIVE:

SUMMARY OF THE FINDINGS CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter highlights the summary of findings and discussions including conclusions and recommendations. The study makes recommendations based on the three main aspects affecting actual usage of technology as per the Technology Acceptance Model (TAM) which was adopted by the researcher as the theoretical framework underpinning this study. These aspects are; awareness (perceived ease of use) Usage (Perceived usefulness) and Perception (Attitude towards the software). The researcher also suggests areas for further study in this chapter.

5.2 Summary of Findings

5.2.1 Awareness of plagiarism and UoN plagiarism policy

The findings showed that all the 31 lecturers (100%) and about 91% of the students were aware of the plagiarism and the academic practices leading to it. 58.5 % of the students cited the trainings and orientations as their source of information and skills, 22% indicated that they learnt from the website, 12.% indicated handbooks and 7.3% learnt from other sources.

On level awareness of UoN plagiarism policy majority of the students (35.1%) rated average, while majority lecturers (54.5%) rated high. None of the lecturers rated either low or very low while 5.4% and 2.7% of the students rated low and very low respectively.

5.2.2 Level of Turnitin Awareness

Objective number one sought to find out the level of turnitin awareness amongst postgraduate students and lecturers. On the question of awareness of the advantages of turnitin in enhancing research the mean score was 3.84 which when rounded to a whole number falls at scale point 4 which represents 'High' which means that most students were aware of the advantages of turnitin. On the question of awareness of the procedure for acquiring turnitin account the mean score was 2.93 which when rounded to a whole number falls at 3 representing 'Average' which means that about half of the respondents did not know how to acquire a turnitin account.

Concerning the question on whether students were aware that they were supposed to submit an originality report of their research the mean score was 4.13 which when rounded falls at 4 which represents 'High' meaning that nearly all the respondents were aware that they are supposed to submit their originality report of their research on submission of their theses and research articles.

Concerning the lecturers, the question on the awareness of advantages of turnitin had a mean score of 4.8 which when rounded off to a whole number falls at 5 which represents 'Very High' which means that nearly all the lectures appreciated the advantages of the software. The second question about the awareness of the procedure for acquiring a turnitin account had a mean score of 4.4 which rounds off to 4 representing 'High' meaning that most lecturers were aware of the procedure for submitting student works to turnitin for plagiarism check. The question on lecturers' awareness of the procedure for submitting student works to turnitin had a mean score of 4.0 which translates to 'High' meaning that lecturers were well conversant with the said procedure. Lecturers were also asked if they were aware of the continuous training offered by the Library department and this question had a mean score of 4.4 which when rounded to a whole number falls at 4 representing 'High' which means that most lecturers know that continuous training is being offered by the Library Department. Most Lecturers were also aware of the 15% acceptable similarity index which has been set by the University. It can be noted that the question on awareness of the procedure for recruiting students to turnitin class had a mean of 3 which represents 'Average' meaning that many lecturers did not know how to recruit students to turnitin account.

5.2.3 Level of Usage of Turnitin

Objective number 2 sought to establish the level of usage of turnitin anti-plagiarism software at university of Nairobi. On the question of students submitting assignments to turnitin the mean score was 2 which represents 'Low'. This meant that a few of the student respondents were submitting items to turnitin, the next two questions on resubmitting assignments and accessing originality reports also had a mean score of 2 representing 'Low', concluding that majority of the respondents were not using turnitin. On the question of creating classes the mean score was 2.5 which represent 'Low' meaning that a few lectures had created classes in turnitin. It could also be observed that the other three questions on usage had a mean score of 2.8, 2.5, 2.4 and 2.1, meaning that all scored 'Low', indicating that turnitin usage amongst lecturers is low.

5.2.4 Perception of Turnitin

The objective was to determine perception of students and lecturers towards turnitin plagiarism detection software. The perception was determined by asking the students to indicate their level of agreement on whether turnitin had been fully accepted as a way of enhancing research in the University, whether turnitin increases lecturers' and students' workload, whether turnitin improves students' citation and referencing skills and whether turnitin was user friendly. The issue on turnitin full acceptance by students and lecturers had a mean score of 3.7 which when rounded to a whole number falls at 4 which represents 'Agree' which means that most lecturers and students agree that turnitin had been fully accepted. With a mean of 3.53 which represents 'strongly Agree' the respondents also affirm that turnitin increases students' and lecturer's workload. The findings also showed that the respondents agreed that turnitin improved students' citation and referencing skills and that turnitin was user friendly.

5.2.5 Factors Affecting Turnitin Uptake

The objective was to determine the factors affecting turnitin uptake amongst the students and lecturers. The factors were determined by asking the respondents to indicate on a likert scale the extent to which the University has invested or acquired relevant tools which had been identified as key in the implementation and promotion of any software. Concerning the question on whether the university had acquired sufficient relevant computer hardware, findings had a mean of 3.31 which when rounded gives 3 representing 'Not Sure'. This meant that the respondents had no information about acquisition of relevant hardware. The same applied to Computer software which had a mean of 3.34. Education and training, promotion and marketing and policy guidelines also had a mean of 3 representing 'Not Sure'. Generally, according to the findings, most respondents were not sure about any investment the university had put in to promotion of turnitin.

5.2.6 Challenges of Turnitin Software

Most respondents cited difficulty in access to software as one of the major challenges in adoption of turnitin at the University while others indicated lack of awareness, knowledge and skills. Some respondents also cited lack of customized standards for the university and a few argued that there was lack of enough training. Most lecturers suggested that the Library was in a better position to handle turnitin services.

5.3. Conclusion

Based on the findings and discussions presented above sections, this study makes the following conclusions;

The awareness of plagiarism, UoN plagiarism policy and academic malpractices was very high among the lecturers and Students. This can be attributed to the Sensitization initiatives involving training and Orientations conducted by the Library Department. There exists an information gap which has had a negative effect on the perceived ease of use of turnitin software. The fact that majority of the respondents indicated that turnitin increases lecturer's and students' workload raises concerns on whether the University had created enough sensitization on how apply turnitin.

The Perceived usefulness of turnitin software was positive as many respondents agreed that turnitin improves student citation and referencing skills and they also affirm that it is the best way to deal with plagiarism. This has however not translated to high Actual Usage as expected due to negative attitude towards the software. Students found it difficult to access the software due to lack of Licenses.

The University management had not done proper marketing and promotions of turnitin software since respondents were not aware of any initiative hence impacting negatively on perception and usage.

5.4 Recommendations

Given the Findings of this study, the researcher recommends that:

5.4.1 Awareness

The training and orientations conducted by the library should be attuned to translate to usage. Findings revealed that the awareness levels were high but this did not translate to actual usage. According to the researcher, this could mean that the content being delivered by the library was not well packaged and simplified.

5.4.2 Usage

The study recommends that The University should acquire enough turnitin licenses to enable all students to have turnitin accounts. Findings indicate that many respondents had difficulty accessing the software.

5.4.3 Perception

The study further recommends that while creating awareness, the University should consider demystifying the negative perceptions held by many. Findings revealed that nearly all respondents indicated that turnitin increases workload. The Library should adopt a simplified training approach so as to equip the University community with enough knowledge about turnitin.

5.11 Suggestion for further Research

The Researcher suggests the following for further studies.

A study should be carried out on plagiarism policies and software adopted by different Universities in Kenya. This study should be aimed at harmonizing plagiarism standards in Kenya.

Another study should be carried out on comparative analysis of different plagiarism detection software. This study should be aimed at identifying the best and affordable software in the market for Kenyan Universities. The researcher notes the high cost of turnitin as a barrier in the fight against plagiarism.

Last but not least, the researcher suggests a comparative study on how Kenyan Universities treat plagiarism. This study should be aimed at identifying discrepancies and suggesting standards for all Universities.

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APPENDIX I: INTRODUCTION LETTER

Felix Kibet Rop
Masters of Library and Information Science
University of Nairobi
PO Box 30197 - 00100

Dear respondent

INTRODUCTION LETTER FOR RESEARCH

I am a Master of Library and Information Science student at the University of Nairobi, Faculty of Arts and as part of the partial fulfillment of the course; I am conducting a study titled; *Assessing the adoption of anti-plagiarism software to enhance research: Case of University of Nairobi postgraduate students*. The objectives of this study are to:

- a) Examine the level of plagiarism and turnitin awareness amongst postgraduate students and lecturers.
- b) Assess the level of usage of turnitin anti-plagiarism software at university of Nairobi.
- c) Examine the perception of students and lecturers towards turnitin plagiarism detection software.
- d) Identify the factors affecting the take-up of plagiarism detection software at the University of Nairobi.

You have been selected to participate in this study; the information and opinions you provide will be purely for academic use and shall remain strictly confidential

Thank you in advance.

Yours Faithfully

Felix K Rop
C54/79859/2015

APPENDIX II: AUTHORITY LETTER



UNIVERSITY OF NAIROBI
OFFICE OF THE DEPUTY VICE - CHANCELLOR
(Research, Production & Extension)
Prof. Lucy W. Irungu B.Sc., M.Sc., Ph.D.

P.O. Box 30197-GPO.
00100, Nairobi-Kenya
Telephone: +254-20-2315416 (DI), 318262

Fax: 0202317251
Email: dvcrpe@uonbi.ac.ke

Our Ref: UON/RPE/3/5

September 20, 2016

Felix Kibet Rop
University of Nairobi,
Library Department
P.O. box 30197 – 00100
NAIROBI

Dear Rop,

PERMISSION TO CONDUCT RESEARCH AT THE UNIVERSITY OF NAIROBI

I refer to your request dated September 16, 2016 to conduct research at the University of Nairobi for the award of a Masters Degree in Library and Information Science entitled: **“Assessing the Application of Plagiarism Detection Software: Case study of University of Nairobi Postgraduate Students”**.

I write to inform you that your request has been approved.

You are however required to share the findings of your study with the University of Nairobi by depositing a copy of your research findings with the Director, Library & Information Services on completion of your study.


LUCY W. IRUNGU
DEPUTY VICE-CHANCELLOR
(RESEARCH, PRODUCTION AND EXTENSION)
&
PROFESSOR OF ENTOMOLOGY

c.c. Vice-Chancellor
DVC, A&F
DVC, AA
DVC, SA
Director, Library & Information Services

L.WI/no



ISO 9001:2008 CERTIFIED

The University of Nairobi

APPENDIX III: KREJCIE AND MORGAN TABLE

Table 3.1									
<i>Table for Determining Sample Size of a Known Population</i>									
N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384
<i>Note: N is Population Size; S is Sample Size</i>					<i>Source: Krejcie & Morgan, 1970</i>				

APPENDIX IV: QUESTIONNAIRE FOR STUDENTS

SECTION A: GENERAL INFORMATION

Please use a tick [] within the space provided to respond to the following information.

1. Gender Male [] Female []
2. Level of study Masters [] Phd []
3. Year of study []

SECTION B: LEVEL OF TURNITIN AWARENESS

4. Are you aware of plagiarism and the academic malpractices leading to it?
Yes [] No []
5. If yes (in 4), select from the following the source of information that led to your awareness
 - a) Institutional website []
 - b) Training/orientations []
 - c) Handbook []
 - d) Other (please specify).....
6. Are you aware of the University of Nairobi Plagiarism Policy? Yes [] No []
7. If yes (in 6), rate your level of knowledge/understanding of the content and advantages of the policy in enhancing research
Very high [] High [] Average [] Low [] Very Low []
8. Are you aware that the University has adopted turnitin plagiarism detection software?
Yes [] No []
9. Indicate your level of awareness on the following by putting a tick [] to the level you require. Use a scale of 5 to 1, where 5= Very high (H) 4 = High, 3= Average 2= Low and 1= Not at all,

NO.	Item	Level of awareness				
		5	4	3	2	1
1	I am aware of the advantages of turnitin in enhancing research					
2	I am aware of the procedure for acquiring turnitin account					
3	I am aware that I should submit an originality report of my research before it is accepted					

SECTION C: LEVEL OF USAGE OF TURNITIN ANTI-PLAGIARISM SOFTWARE

In order for students to use turnitin, they are suppose to be enrolled to a class by their instructors/lecturers so that they can individually submit their assignments for scanning; based on this statement answer the following questions

10. Have you been enrolled to a turnitin class by your instructor/lecturer? Yes [] No []

11. If yes (in 11), indicate by ticking the frequency at which you have been performing the following activities

NO.	Activity	Frequency				
		Very High	High	Average	Low	Not at all
		5	4	3	2	1
1	Submitting assignments to turnitin					
2	Accessing assignment originality reports					
3	Resubmitting assignments after correction					

12. What is your general comment on the level of usage of turnitin anti-plagiarism Software among students and lecturers?

.....

13. How would you rate the level of usage of turnitin software in the University among the students

Very high [] High [] Average [] Low [] Very Low []

SECTION D: THE PERCEPTION OF STUDENTS AND LECTURERS TOWARDS TURNITIN PLAGIARISM DETECTION SOFTWARE

14. Indicate your level of agreement with the following statement about the perception of students and lecturers towards turnitin plagiarism detection software in the university by putting a tick [√] to the level you require. Use a scale of 5 to 1, where 5 corresponds to strongly agree (SA), 4 corresponds to agree (A), 3 corresponds to undecided (U), 2 corresponds to disagree (D) and 1 corresponds to strongly disagree (SD).

	Statement	Level of agreement with statement				
		SA	A	U	D	SD
		5	4	3	2	1
1	Turnitin has been fully accepted by UoN students and lecturers as a way of enhancing research					
2	Turnitin increases lecturers and student workload					
3	Turnitin improves students citation and referencing skills					
4	Turnitin adoption is the best way for the University to deal with plagiarism					
5	Turnitin is user friendly					

15. What is your general comment on the perception of students and lecturers towards turnitin plagiarism detection software in your department?

.....
.....

SECTION E: FACTORS AFFECTING THE TAKE-UP OF PLAGIARISM DETECTION SOFTWARE

16. How did you gain information and skills on the use of the turnitin?

- a) Formal training in the library []
- b) Seminars and workshops organized by the library []
- c) Guidance by other library staff []
- d) Informally []
- e) Self instruction []

17. How do you perceive the turnitin plagiarism detection services provided by the university management?

- a) Satisfactory []
- b) Not satisfactory []

18. Give a reason for your answer (in 17) above

.....
.....

19. In your opinion, to what extent has the University management supported the turnitin application in terms of the following facilities and services? Use the scale; 5= to a very great extent 4= To a great extent 3= Not sure, 2= To a low extent and 1= Not at all

No	Facilities & service	5	4	3	2	1
1	Adequate computer hardware					
2	Adequate computer software					
3	Education and training of students and lecturers					
4	Promotion and marketing					
5	Policy and guidelines					

Challenges of application and use of plagiarism detection software

20. Kindly enumerate the major challenges you encounter regarding the application and use of Turnitin in the university

.....
.....

21. Please suggest possible solutions to the identified problems

.....
.....

THANK YOU

APPENDIX V: QUESTIONNAIRE FOR LECTURERS

SECTION A: GENERAL INFORMATION

Please use a tick [] within the space provided to respond to the following information.

22. Gender Male [] Female []
23. Years of service []
24. Year of study []

SECTION B: LEVEL OF TURNITIN AWARENESS

25. Are you aware of plagiarism and the academic malpractices leading to it?

Yes [] No []

26. Are you aware of the University of Nairobi Plagiarism Policy? Yes [] No []

27. If yes (in 6), rate your level of knowledge/understanding of the content and advantages of the policy in enhancing research

Very high [] High [] Average [] Low [] Very Low []

28. Are you aware that the University has adopted turnitin plagiarism detection software?

Yes [] No []

29. Indicate your level of awareness on the following by putting a tick [] to the level you require. Use a scale of 5 to 1, where 5= Very high (H) 4 = High, 3= Average 2= Low and 1= Not at all,

NO.	Item	Level of awareness				
		5	4	3	2	1
1	I am aware of the advantages of turnitin in enhancing research					
2	I am aware of the procedure for acquiring turnitin account					
3	I am aware of the procedure for submitting student works to turnitin for plagiarism check					
4	I am aware that the library provides continuous					

	training for lecturers on turnitin					
5	I am aware of the acceptable similarity set by the university index for any work					
6	I am aware of the procedure for recruiting students to turnitin class					

SECTION C: LEVEL OF USAGE OF TURNITIN ANTI-PLAGIARISM SOFTWARE

In order for students to use turnitin, they are suppose to be enrolled to a class by their instructors/lecturers so that they can individually submit their assignments for scanning; based on this statement answer the following questions

30. Have you enrolled students to a turnitin class? Yes No

31. Indicate by ticking the frequency at which you have been performing the following activities

NO.	Activity	Frequency				
		Very High	High	Average	Low	Not at all
		5	4	3	2	1
1	Creating classes and assignments in turnitin					
2	Submitting assignments to turnitin for scanning					
4	Enrolling students to turnitin					
5	Accessing assignment originality reports and					
6	Training students on how to use turnitin					

32. How would you rate the level of usage of turnitin software in the University among the students

Very high High Average Low Very Low

**SECTION D: THE PERCEPTION OF STUDENTS AND LECTURERS TOWARDS
TURNITIN PLAGIARISM DETECTION SOFTWARE**

33. Indicate your level of agreement with the following statement about the perception of students and lecturers towards turnitin plagiarism detection software in the university by putting a tick [√] to the level you require. Use a scale of 5 to 1, where 5 corresponds to strongly agree (SA), 4 corresponds to agree (A), 3 corresponds to undecided (U), 2 corresponds to disagree (D) and 1 corresponds to strongly disagree (SD).

	Statement	Level of agreement with statement				
		SA	A	U	D	SD
		5	4	3	2	1
1	Turnitin has been fully accepted by UoN students and lecturers as a way of enhancing research					
2	Turnitin reduces lecturers and student workload					
3	Turnitin improves students citation and referencing skills					
4	Turnitin adoption is the best way for the University to deal with plagiarism					
5	Turnitin is user friendly					

34. What is your general comment on the perception of students and lecturers towards turnitin plagiarism detection software in your department?

.....

**SECTION E: FACTORS AFFECTING THE TAKE-UP OF PLAGIARISM DETECTION
SOFTWARE**

35. How did you gain information and skills on the use of the turnitin?

- f) Formal training in the Library []
- g) Seminars and workshops organized by the library []
- h) Guidance by other library staff []
- i) Informally []
- j) Self-instruction []

36. How do you perceive the turnitin plagiarism detection services provided by the university management?

- c) Satisfactory []
- d) Not satisfactory []

37. Give a reason for your answer (in 17) above

.....
.....

38. In your opinion, to what extent has the University management supported the turnitin application in terms of the following facilities and services? Use the scale; 5= to a very great extent 4= To a great extent 3= Not sure, 2= To a low extent and 1= Not at all

No	Facilities & service	5	4	3	2	1
1	Adequate computer hardware					
2	Adequate computer software					
3	Education and training of students and lecturers					
4	Promotion and marketing					
5	Policy and guidelines					

Challenges of application and use of plagiarism detection software

39. Kindly enumerate the major challenges you encounter regarding the application and use of turnitin in the university

.....
.....

40. Please suggest possible solutions to the identified problems

.....
.....

APPENDIX VI: INTERVIEW SCHEDULE

SECTION A: LEVEL OF AWARENESS

1. In your opinion how do you rate the level of awareness of plagiarism in the university?
2. Do you think the university has carried out enough awareness to its faculty and students about plagiarism?
3. The University of Nairobi has a plagiarism policy, are you well conversant with its content and its role in the enhancement of research
4. Are you aware that the University has adopted turnitin plagiarism detection software
5. In your opinion do you think the University has created enough awareness on turnitin?

SECTION B: USAGE

6. Have you been trained and given an account for logging in and using turnitin?
7. Have you enrolled students to turnitin class?
8. How often do you use turnitin and which tasks do you usually perform?

SECTION C: PERCEPTION

9. What is your perception of turnitin software in terms of the following: ease of use, acceptance, and impact on research?
10. If you were given the opportunity to decide a way of detecting and avoiding plagiarism, would you go for any other software apart from turnitin?
11. Do you think turnitin improves students writing skills?

SECTION D: FACTORS AFFECTING APPLICATION OF TURNITIN

12. In your opinion, to what extent has the University management supported the turnitin application

13. Kindly enumerate the major challenges you encounter in the application and use of turnitin in the university

14. Please suggest possible solutions to the identified problems

THANK YOU