

UNIVERSITY OF GHANA, LEGON COLLEGE OF EDUCATION

SCHOOL OF INFORMATION AND COMMUNICATION STUDIES DEPARTMENT OF INFORMATION
STUDIES

THE PERCEPTION OF STUDENTS TOWARDS THE USE OF TURN-IT-IN SOFTWARE IN DETECTING
PLAGIARISM IN PUBLIC UNIVERSITIES IN GHANA.

BY

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THE REQUIREMENTS FOR THE AWARD OF MPhil INFORMATION STUDIES DEGREE.

JULY, 2019

DECLARATION

I sincerely declare that this thesis is my own work and was supervised by Dr. Musah Adams and assisted by Dr. Philip Nukpe. All the sources used have been duly acknowledged

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DEDICATION

This study is dedicated to my mum, Mrs Patricia Osei Nkrumah, all lecturers at the Department of Information Studies, and all my friends and loved ones for their unflinching support and progressive encouragement.

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ABSTRACT

In post-secondary education, academic misconduct has been a long-standing concern and is commonly acknowledged as a complex problem related to individual, institutional, and societal factors. This study examined the perception of students towards the use of the Turn-It-In software in detecting plagiarism in public universities in Ghana. The study specifically assessed the students' knowledge concerning plagiarism and their awareness, usage and perception about the use of Turn-It-In software in detecting plagiarism. The study also examined the students' computer literacy skills, their perceived ease of use of the Turn-It-In software, and the challenges they face in using the software. The research is helpful to the management of both University of Ghana and Kwame Nkrumah University of Science and Technology, educational professionals and policy makers

The research was based on the Technology Acceptance Model (TAM). The study employed the quantitative research methodology and the exploratory research design. A structured questionnaire was used to collect data from 276 respondents out of a sample of 344 students, giving a response rate of 80.23%. The College of Humanities and College of Health Sciences from both University of Ghana (UG) and Kwame Nkrumah University of Science and Technology (KNUST) were specifically targeted. Convenience sampling technique was adopted, data was collected using a questionnaire and were analyzed using SPSS version 22.

The findings disclosed that the students were fully conscious of plagiarism and they had a good knowledge of plagiarism acts. The results also revealed that the students were conscious of the presence in their various universities of the Turn-It-In software used to detect plagiarism. Their channels of awareness of the Turn-It-In software were through information gathered from their

lecturers, friends, Teaching Assistants and their universities' orientation programmes. The findings further revealed that the students perceived the Turn-It-In software to be beneficial to their academic activities. The students found it easy to use the Turn-It-In software and they preferred using it for checking the originality of their work as compared to other means of detecting plagiarism. Finally, the finding showed that the students had the computer literacy ability required to adequately utilize the Turn-It-In software. However, the major challenges faced by the students in their usage of the Turn-It-In software were: inadequate training on the usage of the software and system errors leading to the inability to access the Turn-It-In system. In conclusion, to mitigate the incidence of plagiarism among the graduate students of UG and KNUST, effective policies should be implemented to ensure the maximum use of the Turn-It-In software for plagiarism control.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

The impact of plagiarism among the scholarly population has introduced a lot of misconceptions and academic dishonesty (Mohammed, Iliyasu, & Habib, 2017). University academic dishonesty is a prevalent occurrence among students of all ages and specialties. Moreover, higher education throughout the globe is witnessing heightened reported instances of plagiarism particularly in this 21st century. Nowadays, the extensive use of the internet and the popularity of mobile and wireless devices have made it easier for students illegally and dishonestly to reach and transmit data (Hosny & Fatima, 2014). This subject has raised a lot of arguments among academics. For instance, Onuoha and Ikonne (2013) have asserted that, plagiarism incidents currently appear to be on the increase particularly with the emergence of the internet which made information more easily available and accessible without any geographical obstacles. Researchers can therefore have as easy as possible access to any document in any part of the globe. In addition, Köttgen et al (2013) state that, the incidence of plagiarism among students can be traced primarily to the introduction of information and communication technologies (ICTs) in education as well as the overabundance of internet resources.

Garba (2017) defined plagiarism as the use of content that is not quoted or referenced to its source. Simply put, it is plagiarism to present another person's work or property as one's work without proper recognition of the original work or using the hard work and dedication of someone, and to pass the work as yours. Köttgen et al. (2013) also defined plagiarism as corruption of the process of independent and critical thinking that is vital to adding

to the body of knowledge. Orim, Borg, and Awala-Ale (2013) both referred to plagiarism as scholarly malpractice and academic integrity infringement.

According to Garba (2017), plagiarism is an immoral act and a felony that one cannot escape from as this has damaged the reputations of numerous academics since ancient times. He further stated that generally plagiarism occurs as a result of ignorance, lack of skills, and academic pressure of publish or perish syndrome. Similarly, Orim et al. (2013) highlighted that most plagiarism cases occurred as a result of the lack of awareness and proper skills. The most common forms of plagiarism are copying information and using it as part of ones' assignment or essay, without acknowledging the original source of information. Usually this source of information could be from a book, an article, a website or any other electronic or non - electronic material whose author is not personally known to the student.

In literature, existing studies have suggested ways that can be used to overcome plagiarism in the field of academics which include the use of high-tech defenses like blocking, filtering and rating systems. However, this study focuses on the use of Turn-It-In software in checking plagiarism. Turn-It-In is a web-based software that is used for plagiarism detection and is meant to aid students and instructors in their joint effort to promote originality in student papers (Batane, 2010). Additionally, Turn-It-In is a web-based text-matching tool that compares students' written assignments with a database of pre-existing sources, including over 62 billion web pages, over 734 million student papers, and over 165 million journal articles, periodicals and books (Turn-It-In, 2018) . In demonstration, students submit an electronic form of their work through the software, which checks submissions for textual match with material in its database and creates an Originality Report which can be viewed, but one cannot view the reports of others (Garba, 2017). This helps in encouraging proper citing of other people's written material.

On the other hand, Thompsett and Ahluwalia (2010) observe that, the use of Turn-It-In is not easy and not useful as a learning tool. Their research demonstrates that the majority of students would like an alternative means of plagiarism detection. Sutherland-Smith (2010) also stressed that, merely identifying plagiarism does not help students to understand how to avoid plagiarizing in the future since, in the majority of cases, plagiarism is unintentional and is due to students' inadequately developed writing skills.

In addition, regarding the discrepancy between students' and the university's perceptions of what constitutes academic misconduct, Meadows and Randers (2012) suggest that students need more than just plagiarism detection. This is because the introduction of information and communication technology (ICT) in an organization does not mean it will be used as intended, as users may reject it, misuse it, sabotage it or work around it (Holden & Karsh, 2010). They further stated that, one of the significant factors in the planned introduction of information technology (IT) is the attitude of the individual that will be required to use it. Thus, an individual's acceptance of ICT is a crucial factor in determining the success or failure of an ICT system (Turn-It-In software inclusive). Hence, in addition to identifying plagiarism, assessing the awareness and perception level of academics, including students in relation to the use of Turn-It-In software is also paramount (Garba, 2017).

1.2 Statement of the problem

The practice of plagiarism has been rife in academic institutions all over the world. There is also a consensus among academics that the advancement of technology has increased what is in the public domain and made it easier to access and plagiarise. To address this issue, higher education traditionally used a rule compliance approach, which focuses on deterring, policing, and enforcing academic integrity rules (Gallant, 2008). In keeping with this strategy, text matching

software such as Turn-It-In has gained widespread use as an effective tool for deterring and catching plagiarism. Interestingly, numerous studies have been conducted on the incidence of plagiarism and the use of Turn-It-In software to detect plagiarism in tertiary institutions (Batane, 2010; Chew, Ding, & Rowell, 2015; Chuda, Navrat, Kovacova, & Humay, 2012; Onuoha & Ikonne, 2013; Orim et al., 2013; Ramzan, Munir, Siddique, & Asif, 2012). However, majority of these studies were conducted from the perspective of the developed nations.

Some research have been done recently in relation to the issues of plagiarism in Ghana (Appiah & Awuah, 2016; Augustine Aduko Alu, Roland Bardy, & Perpetua S. Dadzie, 2017; Grün et al., 2015; Russell, Goubran, Kwamena, & Knoefel, 2017; Saana, Ablordeppey, Mensah, & Karikari, 2016). But it appears less attention has been given to researching the use of the Turn-It-In software in detecting plagiarism in public universities in Ghana. Also, of the few studies conducted and stated above, they did not explore the use and perceptions of Turn-It-In software in Ghanaian public universities. It is for this reason that the researcher conducted this study to find out the extent to which students of public universities in Ghana know about plagiarism issues and the use of the plagiarism detection software, specifically the Turn-It-In software, to detect plagiarism in public universities in Ghana.

1.3 Purpose of the study

The purpose of this study is to examine the perception of students towards the use of the Turn-It-In software in detecting plagiarism in public universities in Ghana.

1.4 Objectives of the study

The specific objectives of this study were:

1. To examine the knowledge of students concerning plagiarism

2. To assess students' level of awareness of Turn-It-In software
3. To assess students' usage of Turn-It-In software
4. To assess the students' perception about the use of the Turn-It-In software.
5. To examine the challenges faced by students in the use of the Turn-It-In software for detecting plagiarism.
6. To make recommendations based on the findings of the study.

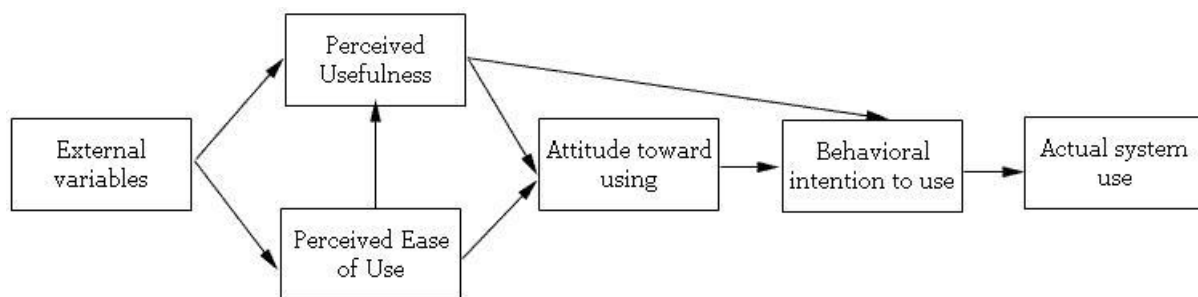
1.5 Theoretical framework

Theories are formulated to explain, predict, and understand the phenomena under study and, in many cases, to challenge and extend existing knowledge within the limits of critical bounding assumptions, according to Aamodt et al., (2008). White et al., (2013) state that, a theoretical framework is analogous to the frame of the house. Just as the foundation supports a house, a theoretical framework provides a rationale for predictions of a research's connection between variables. Thus the *Technology Acceptance Model* (TAM) is the theoretical model that will be adopted for this study. The *Technology Acceptance Model* created by Davis, Bagozzi, & Warshaw (1989) is one of the research models most commonly used to predict the use and acceptance of information systems and technology by individual users. TAM has been extensively researched and verified by different studies to examine individual behaviours in accepting and using technology in various information systems contexts.

This model comprises two factors: perceived usefulness and perceived ease of use. Davis et al., (1989) define perceived usefulness as the prospective user's subjective probability to improve his or her life or work by using a particular application system. Perceive ease of use can be defined as the extent to which the potential user expects effort-free target system. According to TAM, the most significant determinants of actual system use are ease of use and perceived usefulness. These

two factors are influenced by external variables. The main external factors that are usually manifested are social factors, cultural factors and political factors. Language, skills and facilitating conditions are social factors. Political factors are mainly the impact of using technology in politics and political crisis. The attitude to use concerns with the user's assessment of the desirability of using a specific information system application. Behavioural intent is the measure of the eagerness or readiness or probability of a person using the application. The following diagram further explains the model:

Figure 1: Technology Acceptance Model (TAM)



Source: Technology Acceptance Model (TAM) by Davis et al., (1989).

The two main principles of the theory which are Perceived Ease of Use and Perceived Usefulness concur with objective two (2) of this study in the sense that, if students are aware of the benefits they will gain from using the plagiarism software for instance, they will go ahead and make use of it. In other words, the more users of the software are aware of the benefits of using it, the more they will be using it as well. Moreover, social factors which is one of the external variables which influences the two major tenets of the theory includes issues such as skills and facilitating conditions concur with objective three (3). This is because users of the system must have the requisite skills and experience in the usage of the system so as to make full use of it and enjoy the full benefits of the system. Facilitating conditions also mean that computers and other

infrastructure which are required for the system to function must be in place so that the system can fully and effectively serve users.

1.6 Scope of the study

The study focused on the postgraduate students of the public universities in Ghana, since graduate students conduct a lot of research work. Currently, there are about 18 public universities in Ghana. However, this study focused on two of them, which are the University of Ghana, Legon and the Kwame Nkrumah University of Science and Technology. This is because, they are the only two public universities in Ghana that have actively and officially subscribed to the use of the Turn-It-In software as one of the tools in detecting plagiarism in the research works of their students and academics.

1.7 Significance of the findings

This study attempts to bring to the fore, the perception of university students in using the Turn-It-In software to detect plagiarism. It also sought to assess the challenges associated with the use of the software. Hence it will be significantly useful to the authorities of the two universities studied as this will enable them to do a gap analysis between the introduction of the software and its usefulness by the students.

Also, this study also serves as a guideline that will inform government, other institutions and policy makers when making decisions and designing policies in relation to plagiarism and the use of the Turn-It-In software.

Finally, the findings would pave way for more research to be carried out to ensure the continuous use and improvement of the Turn-It-In software. It would further add to existing literature and serve as an additional source of reference to researchers and students whose studies may be related to the topic under consideration in future.

1.8 Study setting

This section provides a short overview of the setting in which the research was carried out. The research was conducted at the University of Ghana, in the Greater Accra Region and also at the Kwame Nkrumah University of Science and Technology in the Ashanti Region.

1.8.1 University of Ghana

It is the largest university, and Ghana's premier university. It was founded in 1948 as the University College of the Gold Coast on the recommendation of the Asquith Commission on Higher Education in the then British colonies. "The University of Ghana is the highest ranked university in Ghana and the 7th best in Africa" (Amoah, 2016, p.1). The University of Ghana is known to be the first tertiary institution in Ghana that has introduced the Sakai as part of its methodology in teaching and learning (Oheneba-Sakyi & Amponsah, 2018). The mission of the university is to develop world- class products with the intent of meeting national development needs and associated global challenges through the provision of quality teaching and learning using the appropriate methodology and knowledge dissemination.

The University restructured and adopted the Collegiate System of management in the running of academic units during the 2014/2015 academic year. This aim of this reform was to decentralize the administration of academic programs in order to make the university administration more efficient and more effective while giving students greater choice in programs. The various academic units were organised into four (4) Colleges, namely: the College of Health Sciences, the College of Basic and Applied Sciences, the College of Education and College of Humanities. However, for purposes of this study, only the College of Health Sciences and College of Humanities were used.

1.8.1.1 College of Humanities

College of Humanities, University of Ghana, consists of six schools: University of Ghana Business School (UGBS), School of Arts, School of Performing Arts, School of Languages, School of Social Sciences, and University of Ghana School of Law. It is also home to three Research institutes: Institute of Statistical, Social and Economic Research (ISSER); Institute of African Studies (IAS), and the Regional Institute for Population Studies (RIPS); as well as five centres: Centre for Social Policy Studies (CSPS), Language Centre, Legon Centre for International Affairs and Diplomacy (LECIAD), Center for Gender Studies and Advocacy (CEGENSA) and the Centre for Migration Studies. It also houses the University of Ghana Accra City Campus, located close to the central business district of the nation's capital; Accra.

1.8.1.2 College of Health Sciences

Medical Sciences became part of University of Ghana's programs in 1962 when the first batch of students were admitted to pursue courses for a degree in medicine. The government of Ghana with Dr. Kwame Nkrumah as President, decided to have a Medical School fully owned by Ghana and with Ghanaian management and teaching faculty. In 1964, Professor C. O. Easmon was appointed first Dean of the then Ghana Medical School. This School was housed in temporary buildings at the Korle Bu Hospital that also became a Teaching Hospital to provide clinical courses for the School. In 1969, the Ghana Medical School was formally incorporated into the University of Ghana and was named as University of Ghana Medical School (UGMS). In that same year, the first 39 graduating students of the School were awarded University of Ghana degrees. On December 11, 1999, the University Council gave assent to the establishment of the College but changed the name to COLLEGE OF HEALTH SCIENCES. Schedule D of the University of Ghana Statutes that established the University of Ghana Medical School was therefore amended

to bring the College into being. The various schools under this college are the School of Medicine and Dentistry, School of Public Health, School of Nursing, School of Pharmacy, School of Biomedical and Allied Health Sciences, Noguchi Memorial Institute for Medical Research and Centre for Tropical, Clinical Pharmacology and Therapeutics.

1.8.2 Kwame Nkrumah University of Science and Technology (KNUST)

The University of Science and Technology succeeded the Kumasi College of Technology which was established by a Government Ordinance on 6th October, 1951. It was however, opened officially on 22nd January, 1952 with 200 Teacher Training students transferred from Achimota, to form the nucleus of the new College. The Kwame Nkrumah University of Science and Technology is a world-class academic centre of excellence, spearheading West Africa's pursuit of technological advancement. The campus is located at a very ideal place inside the city of Kumasi. The KNUST has, since January 2005, transformed from its previous centralized system of administration into significantly decentralized one called the Collegiate system. Under this system, the various faculties have been condensed into six colleges.

Since its inception, the University has been administered on the Faculty-based system. This naturally led to a situation where new Faculties and Institutes were created to meet the ever-growing academic pursuits of students. The resultant collection of Faculties largely hampered efficient administrative and academic operations, as duplication of efforts and long administrative processes were rampant. The need to deal with these complexities and harmonize the operation of the existing structures became apparent and unavoidable. This was more so, with the ever-increasing numbers in student population. True to the vision to make KNUST the model for technological education in Africa and the Vice-Chancellor's commitment to academic excellence, the Collegiate System came into being with the promulgation of the statutes on November 29,

2004. There are five main colleges at KNUST namely College of Engineering, College of Agriculture, College of Agriculture and Natural resources, College of Arts and Built Environment, College of Health Sciences and College of Humanities and Social Sciences. However only the College of Humanities and Social Sciences and College of Health Sciences were used for this study.

1.8.2.1 College of Humanities and Social Sciences

The College of Humanities and Social Sciences is an amalgamation of four Faculties, Sixteen (16) Departments and a Research Centre. The amalgamation was in line with the University's objective to achieve good governance and academic excellence through restructuring of academic and administrative units into Colleges. The year witnessed tremendous improvements in institutional linkages, income generation, receipt of donations, renovation of laboratories, procurement of facilities to enhance teaching and learning, presentations at conferences workshops and seminars, etc. Research output was comparatively better. Besides, invaluable services of diverse nature were rendered to the university, local and international communities whilst capacity building received a boost. The College is not relenting on its mission of ensuring the realization of its core duty of research and publication and, also building capacity to strengthen its workforce. The College, nevertheless, faces a lot of challenges including inadequate infrastructure especially, staff offices, spacious laboratories, workshops and equipment to make them function effectively, with growing student numbers and an unbearable student-staff ratio, some progress has been made to achieve excellence in teaching, learning and research area of the college.

1.8.2.2 College of Health Sciences

The College of Health Sciences comprises the Faculties of Allied Health Sciences, Pharmacy and Pharmaceutical Sciences, School of Medical Sciences, Dental School, School of Veterinary

Medicine and the Kumasi Centre for Collaborative Research in tropical medicine (KCCR). It attained the status of a college by a change in the University Statutes that came into being in January 2005. Prior to this time, the components of the College existed separately as the Faculty of Pharmacy and School of Medical Sciences. The strategic mandate of the College is derived from the Act establishing the University, which essentially is to provide higher education, undertake research, disseminate knowledge and foster relationships with outside persons and bodies.

1.9 Ethical Consideration

“Ethical issues in research are defined as behavior that conforms to standards of conducting a research” (Fraenkel & Wallen, 2000). Researchers are expected to comply with various professional ethical codes and regulations while undertaking a research study and this help to determine what is considered acceptable and unacceptable on the part of the research. Researchers need to protect their research participants, gain their trust, promote the integrity of research study, guard against misconduct and impropriety that might reflect on their organizations or institutions as well as coping with new challenging problems. It is one of the crucial factors that every researcher needs to take into consideration. In view of this, the respondents were duly informed about the original intent of the study. The confidentiality, anonymity and the rights for respondents to withdraw from taking part in answering the questionnaires were considered. However, the researcher did encourage respondents to take part in the research. As a matter of principle, ethical considerations were kept in mind at every stage of the study. Again, as academic work demands, all literary materials that were used in the study were dully acknowledged to prevent plagiarism. Finally, the researcher did strictly adhere to the University of Ghana code of conduct governing research studies.

1.10 Organization of chapters

The study was organized into six different chapters:

Chapter 1: this chapter dealt with the introduction which covered background to the study, statement of the problem, purpose of the study, objectives, theoretical framework, scope of the study, significance of the study and organization of the chapters.

Chapter 2: this chapter reviewed literature that is relevant to the study. The literature focused on studies which have been done concerning this research topic. The topics were discussed from the world point of view, African point of view and Ghanaian point of view.

Chapter 3: this chapter focused on the methodology of the study which included the research design, population of the study, selection of samples, data collection, data collection instruments and analysis of data.

Chapter 4: this chapter dealt with the analysis and interpretations of the findings

Chapter 5: this chapter discussed the major findings

Chapter 6: this chapter summarized the major findings, drew conclusion and made recommendations

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

A review of literature is the survey of works that are appropriate to a particular area of research. It offers a description, critical assessment and a summary of works related to the investigation of a research problem. It also provides an overview of the sources consulted while studying a particular topic and demonstrates to readers how the study fits within a broader field of study and the body of knowledge (Labaree, 2009). According to Kreuger & Neuman (2009), a literature review is a carefully constructed summary of current studies conducted on a subject matter that include the significant findings and methods researchers used while making sure to document the sources. It is used on the notion that, knowledge accumulates and that people learn to build on what others have accomplished. However, it is not a sequential list of all the sources, but an assessment that combines the prior studies, and also explains how it blends or integrates into the suggested research. All sides of an argument must be obviously explained and areas of agreement and disagreement should be highlighted in order to avoid bias. The major purposes for conducting a literature review are to: show the contributions of previous works to understanding a research problem being investigated; examine the relationships among existing works relating to the area of study; identify new ways to explain or interpret a prior study; identify gaps that exist in previous studies; and to fill a research gap (Labaree, 2009).

In view of the problems of the act plagiarism among students in higher institutions and the attempt to curb the situation, several studies have been performed on students' knowledge concerning plagiarism, and their perception of the use of the Turn-It-In software in detecting plagiarism. This

chapter presents a review of literature pertaining to the topic under study in view of the world, Africa and Ghana organized in eight subsections as outlined below:

- i. Plagiarism
- ii. Students' knowledge concerning plagiarism
- iii. Turn-It-In as a plagiarism detection tool
- iv. Students' awareness of Turn-It-In software
- v. Students' usage of Turn-It-In software
- vi. Students' perception about the use of Turn-It-In software
- vii. Computer literacy skills and perceived ease of use of Turn-It-In software
- viii. Challenges Students face in using Turn-It-In software

2.2 Plagiarism

Plagiarism as a concept occurs in multiple forms and therefore has multiple definitions. The term plagiarism comes from the Latin “plagiarus” which means “kidnapper”, according to Merriam Webster Dictionary (2019). The word was derived from the Latin “Plaga” which is a net used by hunters to catch game. By extension, the word is used to include a person who steals words rather than kids. Bretag (2013) defined plagiarism as the use of others' words, ideas, or creative work without appropriate acknowledgement, and does not necessarily imply intentional deceit. The University of Ghana (2015) in its plagiarism policy define plagiarism as “is to represent, without acknowledgement of its authorship by another, an expression of an idea or work of another in any academic examination or term test or in connection with any other form of work attributed to an individual, such as a publication, invention or creative work”. Plagiarism can therefore be established as the re-utilization of someone's work without proper acknowledgement. The work can be viewed as ideas, methods, results and the words of language used to describe these ideas,

methods and results. The policy describes plagiarism as an academic fraud or theft or the fraudulent use or theft of intellectual property. The fraud or theft may breach moral, educational and legal standards. According to Fishman (2009), “Plagiarism occurs when someone: uses words, ideas, or work products; attributable to another identifiable person or source; without attributing the work to the source from which it was obtained; in a situation in which there is a legitimate expectation of original authorship; in order to obtain some benefit, credit, or gain which need not be monetary”.

Hong (2017) stated that plagiarism is a serious misconduct affecting the credibility of scholarly journals and the trustworthiness of science communication. By this, most journal articles are affected since they are seen to be referring to the works of other authors though they are not formally acknowledged in the current literature. The author continues to indicate that, with the increase in Open Access (OA) and increment in the coverage of scholarly journals by global bibliographic databases, there is the likeliness of increased plagiarism as a result of the access to that information without one giving regard to the author amounting to plagiarism. Onuoha and Ikonne (2013) supported the opinion as they stated that the occurrences of plagiarism these days appear to be on the ascendancy particularly with the introduction of the internet which made information easily available and accessible with no geographical obstructions; thus assisting researchers to have easy access to documents and other records across diverse location in the world.

Plagiarism among students and other researchers can either be intentional or unintentional (Hage *et al.*, 2010). Pecorari and Petrić (2014) clarified that, the unintentional plagiarism happens when students do not have the essential training or have not been educated on the most proficient method to credit or acknowledge authors of whom they are replicating their literature. Moreover, the University of Ghana Plagiarism Policy (2015) describes two types of plagiarism namely;

intentional (prototypical) plagiarism and non-intentional (non-prototypical) plagiarism. The policy indicated that the intentional (prototypical) plagiarism involves “deliberately appropriates another person’s work”. The policy cited that, intentional plagiarism involves where a student uses sentences, phrases, paragraphs and pages belonging to another person verbatim, without citing the source reference or presenting the appropriated material in quotation marks. On the other hand, non-intentional (non-prototypical) plagiarism is not driven by the intention to deceive but involves the writer does not follow conventional standards for referencing. It can also occur when the writer produces imitations of a source text, because they are writing in a non-native language, they do not understand the language and technical concepts and the lack of understanding undermines their ability to present what they read in their own words (UG Plagiarism Policy, 2015). Dordoy (2012) grouped the reasons why students plagiarise into intentional and unintentional reasons. According to the author, the intentional reasons may include: laziness, poor management of time by students or researchers, pressure from other students, the pressure on students to receive good and higher grades, easy access to material via the internet, the fear of failure, and taking risks with the view that they will not be caught. The unintentional reasons may include: misconception of the rules involved in plagiarism and not being mindful of the dangers involved in plagiarism.

Plagiarism has diverse effects on the students, the integrity of the academic institution or institution of research. Batane (2010) pointed out that plagiarism affects not only individual students or researchers but also the integrity of the institution as a whole and the quality of its products. Therefore, it is important that each university crack down on this problem for its own sake and for the sake of the students. Also, apart from imparting academic knowledge to students, universities and colleges have a responsibility to impart moral and ethical values to students. Plagiarism is morally wrong; therefore, students should be discouraged from engaging in it. The University of

Ghana as an academic and research institution has put forth sanctions and punishment for students who plagiarize in the course of their academic work. The University of Ghana plagiarism policy (2015) indicated that, plagiarism is unacceptable and hence it is a serious offence in the University. The policy further indicated that, when plagiarism is suspected on a paper, a formal complaint is made to the Head of Department through the Dean/Director to the College Provost. A further investigation is done and a report submitted through the Provost to the Vice Chancellor. Upon receipt of the report, the Vice Chancellor shall refer the issue of plagiarism to the appropriate Disciplinary Committee for investigation where they hear and investigate the writer and they in turn submit their findings and recommendations to the Vice Chancellor for consideration and investigation. In all dealings of the issue of plagiarism, any allegation of plagiarism shall be supported with the relevant documentations/evidence.

2.3 Students' knowledge concerning plagiarism

The Merriam-Webster's dictionary (2019) defined knowledge as "the fact or condition of being aware of something". The Cambridge University Press (2019) also defined knowledge as the "understanding of or information about a subject that you get by experience or study, either known by one person or by people generally". Therefore, knowledge can be defined as the awareness of something or the amount of information one has concerning a particular subject either by experience or study. Students' knowledge of plagiarism can be defined as their awareness or understanding of the plagiarism act or in practice, the amount of information they have about the act.

2.3.1 Students' awareness of plagiarism

According to Akpojotor (2016), “awareness is knowledge about particular information and manifested through a particular behavior.” The Cambridge University Press (2017) defined awareness as one’s knowledge of the existence of something or his/her understanding of a particular situation or subject at the present time based on his/her experience or information. Based on the definitions above, the awareness of plagiarism can be defined as the knowledge of the existence of Turn-It-In.

Studies outside Africa that focused on students’ awareness of plagiarism recorded average level of awareness. Ryan et al. (2009) assessed undergraduate and postgraduate students’ perception of plagiarism and academic honesty in the University of Sydney, Australia. One of the objectives of the study was to investigate the students’ awareness of the university’s plagiarism policy. Data was collected from 1080 participants and the results revealed that majority of the participants were aware of the existence of the plagiarism policy of the university. This indicates that majority of the participants might as well be aware of the existence of plagiarism. In contrast, Ramzan et al. (2012) found that university students in Pakistan had low level of awareness of plagiarism and university plagiarism policies and processes. The authors collected data from 365 graduate and postgraduate students in Pakistan and the findings revealed that the students had low level of awareness of plagiarism and its policies in their universities.

Some studies in Africa have focused on students’ awareness of plagiarism and have recorded average level of awareness. Maina, Maina and Jauro (2014) investigated students’ awareness of plagiarism and their perception of punishment towards plagiarists in the Gombe State University, Nigeria. The findings revealed that out of 200 respondents, 63% were partially aware, 20% were aware, and 17% were completely unaware of plagiarism. This implies that majority of the students

were partially aware of the existence of plagiarism. Conformably, Idiegbegan-ose, Nkiko and Osinulu (2016) investigated the awareness and perception of plagiarism of postgraduate students in selected universities in Ogun State, Nigeria. The authors found that 38.8% of 338 respondents had high level of awareness, 46.4% had average level of awareness and 14.8% had low level of awareness of plagiarism. The results indicate that majority of the respondents had average level of awareness of the existence of plagiarism. Oyewole and Abioye (2015) supported the findings as the authors investigated the awareness of plagiarism acts and policy by post-graduate students in the University of Ibadan, Nigeria. The results revealed that out of 226 respondents, 171(86.4%) were aware of what plagiarism was and majority were highly aware of the different acts of plagiarism. However, 55.6% had no knowledge of the existence of a plagiarism policy in the university.

In Ghana, Abukari (2016) observed high level of awareness of plagiarism among students in the Narh-Bita College. The author investigated the awareness and incidence of plagiarism among students in higher education. A sample of 143 students were investigated and the results revealed that majority (76%) of the respondents were aware of plagiarism. The results further revealed that the respondents' sources of awareness of plagiarism were through information received from; lecturers (36%), colleagues (19%) and learning/reading (45%). However, majority (73%) of the respondents indicated that they had not received orientation on the plagiarism policy of the institution.

The review of literature has revealed that on the average students were aware of the existence of plagiarism and their sources of awareness were through information gathered from lecturers and colleagues and through reading or learning.

2.3.2 Students' understanding of the nature of plagiarism

Several studies have been conducted on students' understanding of plagiarism in the world, Africa and Ghanaian perspectives. Studies outside Africa recorded low level of understanding of the concept of plagiarism among students. Yang (2014) investigated English as a Foreign Language or English as a Second Language (EFL/ESL) students' understanding of plagiarism in Western Rock University, Pennsylvania. A questionnaire was used to collect data from 80 participants from different countries and various educational levels. The participants were asked to define the term plagiarism. Out of the 80 participants, 35 valid responses were obtained from 35 participants and the results showed that 71% of the 35 respondents could acceptably define plagiarism as they defined it as "deliberately using other's idea/work for its own interest without giving credit to the author". The results further revealed that although the respondents understood the basic definition of plagiarism at the abstract level, they could not properly apply the abstract definition of plagiarism to concrete situations.

In a similar study, Power (2009) investigated students' perception of plagiarism in Ohio State University, USA. In the study, the author asked 61 respondents the following question; "if you rewrite something you got from a book completely in your own words, do you need to cite that?" Results from the study revealed that 14 out of the 61 respondents answered the question correctly by indicating "yes". But when the respondents were asked to define plagiarism, majority of them defined it acceptably by indicating that plagiarism is "taking someone else's words or ideas and using them as one's own". This indicates that the respondents only understood plagiarism superficially and therefore could not apply the definition to real scenarios.

MacLennan (2018) also found similar results as the author investigated students' perception of plagiarism avoidance competencies in Saint Leo University, USA. The author found that in the pre-

instruction survey, 10 out of 11 respondents indicated that they had a good understanding of what constituted plagiarism and what is not. However, findings from the interviews revealed that majority of the respondents had misconceptions about what actually constituted plagiarism. The misconceptions chiefly stemmed at issues regarding what constituted originality and when citations are required. The author also found that several common challenges to avoiding plagiarism such as inadequate understating of when to cite, lack of informed faculty standards, poor information synthesis skills, and low understanding regarding the proper formatting of citations and references emerged from the interview. Findings from the author also indicates low level of understanding of instances of plagiarism in concrete scenarios.

Conformably, Hu and Lei (2012) investigated Chinese students' knowledge and attitudes towards plagiarism from an integrated perspective. A sample of 270 respondents from two Chinese universities were asked to rate three short English passages under different conditions. The student's ability to identify two forms of intertextuality (unacknowledged copying and unattributed paraphrasing) generally regarded as plagiarism in Anglo-American Academia were tested in the rating tasks. The results revealed that majority of the respondents were aware of the two forms of plagiarism; blatant plagiarism (unacknowledged copying) and subtle plagiarism (unattributed paraphrasing) but could not recognize them in the rating tasks. From the results, only one third of the participants could recognize the two forms of plagiarism in the passages. The results further showed that majority (31 out of 32) of the participants who identified the subtle plagiarism in one task also identified blatant plagiarism in another task. This generally indicates that the participants abstractly understood plagiarism and therefore could not apply their understanding in real scenarios. Consequently, Ahmad, Mansourizadeh and Ai (2012) examined postgraduate students' ability to categorize ten cases of plagiarism instances and also identify plagiarized paraphrased versions of five

excerpts of different source texts provided. The authors observed that the students had misconceptions about the different forms of plagiarism including “using another author’s ideas and style of writing”, “citation conventions”, and “collusion”. The results also showed that the students understood plagiarism superficially and therefore could not adequately identify the multiple forms of plagiarism. Majority (over 72%) of the students regarded copying as a form of plagiarism but only 33.3% of them could identify the instances of copying in the work.

Ismail (2018) also found low level of understanding of plagiarism among the Medical and Nursing students in Hawler Medical University, Iraq. A sample of 400 undergraduates were investigated and the results revealed that 34.8% of the students had no knowledge concerning plagiarism and only 28% were aware of the legal implications of plagiarism. The results also showed that the reasons for plagiarism among the students included: laziness, confusion, cultural reasons and the pressure to meet assignment deadlines.

Several studies in Africa have focused on the topic and have recorded low level of understanding and high incidence of plagiarism among students. Babalola and Yemisi (2012) investigated the awareness and incidence of plagiarism among undergraduates in Babcock University, Nigeria. The authors observed that most of the students were more likely to plagiarise unintentionally because they lacked adequate knowledge of the acts that constitute plagiarism. The results of the study showed that more than 60% of the students copy from the web without acknowledging the sources. The students also indicated that; poor knowledge of citation and referencing conventions, the ease of access to information from the internet, the desire to earn good grades, and the pressure to submit assignments ahead of the deadlines were the most prominent reasons for plagiarism. The authors also observed a strong positive relationship between the levels of awareness and incidence of plagiarism among the students. This indicates that the awareness of the acts that constitute plagiarism may not stop students from plagiarizing.

Consequently, Anney and Mosha (2015) investigated plagiarism practices among students in two universities (one public and the other private) in Tanzania. The findings indicated high incidence of plagiarism among the students of the selected universities as assignments submitted by the students during the course of the study contain significant amount of texts copied from other sources without acknowledgement. The findings also revealed that though most of the students understood that plagiarism was a dishonest act in academia, it had not stopped them from plagiarizing. The access to internet, shortage of books, laziness and poor academic writing skills were the contributing factors to plagiarism among the students. These findings generally indicate the lack of adequate knowledge of the acts that constitute plagiarism such as copying a text without acknowledging the source and inadequate knowledge of referencing among the students.

Sentleng and King (2012) confirmed the findings as the authors observed that plagiarism was fairly common among the undergraduate first, second and third year students of the departments of Chemistry and Mathematical Technology within the Faculty of Applied Science at a university of technology in South Africa. The authors stated that the students were aware of plagiarism but the lack of clear understanding of what plagiarism constitutes might be the root cause of the various forms of plagiarism (paraphrasing, summarizing and copying work from the internet without acknowledging the sources and inventing data and references) committed by the students. Majority (71.9%) of the students admitted that they had used the internet to compile their assignments; an indication that the internet was the most possible source of plagiarism.

In support of the findings, Ramadhan (2017) observed that none of the students of some selected East African universities had a clear understanding of what plagiarism is. This was due to the unclear definition of the concept in the institutional policy documents of the selected universities. Many of the students perceived plagiarism as a concept with many dimensions. The findings also revealed that

“copy – pasting” from the internet, lecturers’ work and colleagues’ work were the common forms of plagiarism found among the students. The students also indicated that the motivating factors behind the incidence of plagiarism among them included: the unclear definition of plagiarism in their respective institutional policy documents, ignorance and reluctance on the part of supervisors in checking plagiarism.

Another study by Ibegbulam and Eze (2015) corroborated the findings. The authors investigated the knowledge, perception and attitudes of Nigerian students to plagiarism. Students in the Faculty of Business Administration in the University of Nigeria, Enugu campus were the population of the study. The findings indicated that out of 282 respondents who were pre-tested, 33% had not regarded summarizing someone else’s ideas without giving credit to the author a form of plagiarism, and 17% had no knowledge if it was an act of plagiarism. Also, majority (71%) of the respondents had no knowledge that copying from the internet without acknowledging the source was an act of plagiarism. Only 24% regarded it as an act of plagiarism. Results from the post-text analysis also revealed that 95% of the respondents agreed that ignorance of the rules of academic research and writing, and 100% agreed that the fear of being scored poorly in assignments were some of the major reasons for plagiarism among the students. The findings generally indicate the lack of clear understanding of the acts that amount to plagiarism among the students.

The findings were confirmed by Kokkinaki, Demoliou and Lakolidou (2015). The authors found that students of the universities in Cyprus had lacked clear understanding of what plagiarism is. They stated that the students understanding of plagiarism was not shared by the universities or

academicians. The results of the study further revealed that majority of the students had inadequate citation and referencing skills as 78.3% of them admitted that they would have avoided being accused of plagiarism if they had cited their works appropriately. While findings by the authors above generally indicated low level of understanding and high incidence of plagiarism among students, the findings by Oyewole and Abioye (2015) were the opposite. The authors investigated the awareness of plagiarism acts and policy by post-graduate students in the University of Ibadan, Nigeria. The results revealed that out of 226 respondents, 171(86.4%) were aware of what plagiarism was and majority were highly aware of the different acts of plagiarism. Also, majority had high level of research skills and hence were able to avoid plagiarism. However, 55.6% had no knowledge of the existence of a plagiarism policy in the university.

Studies in Ghana that have focused on students' knowledge concerning plagiarism revealed low level of understanding of the concept of plagiarism among students. A study by Abukari (2016) revealed that despite the high level of awareness of plagiarism among the students of the Narh-Bita College, there were high incidences and practices of plagiarism in the academic life of the students. This was attributed to several factors including the inadequate knowledge of the institution's plagiarism policy. However, poor understanding of the concept of plagiarism was ranked as the leading cause of plagiarism among the students.

Glover, Korletey and Kpodo (2016) also found similar results as the authors observed that despite the stringent measures put in place by the Kwame Nkrumah University of Science and Technology (KNUST) to fight and prevent plagiarism among students, there were low level of understanding of the concept of plagiarism among the students. Results from the study revealed that out of 500 respondents, 67% indicated that they knew what constituted plagiarism, 57% could define plagiarism

correctly, and 16% had different perceptions regarding the actual meaning of plagiarism. However, majority of the respondents who indicated that they understood the concept of plagiarism in reality lacks the basics of what constitutes plagiarism. This shows that majority of the respondents only understood plagiarism abstractly and hence may not be able to recognise instances of plagiarism in concrete scenarios. This generally indicates low level of understanding of the concept of plagiarism among the students.

Another study by Appiah and Awuah (2016) corroborated the findings. The authors investigated the most common forms of plagiarism among university students in the Wa municipality in the Upper West Region. A questionnaire was used to collect data from 200 respondents and the results showed that the most frequent forms of plagiarism among the students were; paraphrasing without acknowledging the source, copying a text without acknowledgement, inventing or altering data and imitating friends work. The authors further stated that the incidence of the various forms of plagiarism stated above could be attributed to lack of adequate knowledge on paraphrasing and referencing; indicating that the students had low level of understanding of the fundamentals of plagiarism.

The review of literature has revealed that students had low level of understanding of the acts that constituted plagiarism leading to high incidence of plagiarism among them. The findings indicated that there is no clear and uniform definition of plagiarism. Students only understood plagiarism at the abstract level and therefore could not recognize the multiple forms of plagiarism in concrete scenarios. Copying, paraphrasing and/or summarizing from other sources without acknowledgement, inventing or altering data and references were the various forms of plagiarism committed by students. The findings also revealed that the inability to recognise the multiple forms of plagiarism in concrete scenarios, lack of adequate knowledge of when to cite, lack of informed faculty standards, poor information synthesis skills, ease of access to materials online and poor citations and referencing skills were the motivating factors to plagiarism among students. It was also found that awareness of plagiarism and the understanding of what constitutes it may not deter students from plagiarizing. Students also plagiarized because of the desire to earn good grades, the pressure to meet assignment deadlines and laziness.

2.4 Turn-It-In software as a plagiarism detection tool

While plagiarism is hardly a novel phenomenon in higher education, the availability of the Internet and the proliferation of electronic texts have changed the ways students access information and weave outside sources into their academic texts. In response to these changes and to the fears that administrators and educators have about plagiarism, numerous software programs have been developed which can detect plagiarism in students' texts. Companies such as iParadigms, which produced the Internet-based software program *Turn-It-In*, have achieved enormous worldwide success in licensing their product to high schools and universities across the globe.

Turn-It-In is one of many packages that attempt to offer a solution to the plagiarism problem. According to Liddell (2003), the Turn-It-In software is a tool that gives tutors the opportunity to check for suspected plagiarism and also acts as more all-round digital submission and grading tool. It therefore checks the originality of a particular work as presented by an individual and also encourages proper ways of citing other person's written materials or literature. Garba (2017) pointed out that, "The TURN-IT-IN software offers a web-based service to manage the process of submitting and tracking papers electronically, providing better-and faster-feedback to individuals". Batane, T. (2010) indicated that, the Turn-It-In is an online programme that is utilized for plagiarism recognition and is intended to help both students and instructors in their joint effort to improve and promote the originality of works; papers or assignments presented by student.

The University of Ghana in its quest to improve the originality of papers presented by students, encourage academic honesty by checking plagiarism introduced the Plagiarism policy in the year 2015 which assesses the use of the Turn-It-In software. The University employed the Turn-It-In software to facilitate the implementation of the UG Plagiarism policy. The Turn-It-In software was a means to encourage integrity among students, staff and faculty members of the University by acknowledging the ideas of others, and allowing the academic staff, students and other members

of the University community to gain confidence so that any assignment or work submitted by a person meets the criterion of high degree of originality. The Turn-It-In software is used by the University of Ghana primarily as an educational tool which assesses the similarities of academic or any literature against a wide range of databases of published and unpublished materials of other writers are showed online, and gives a report indicating the extent of text matching as illustrated by the colour coded similarity index (University of Ghana Special Reporter, 2016).

Turn-It-In helps in giving quick and instant feedback to students and examiners in checking the originality of their papers. While an individual; student, tutor or researcher spends long hours on a paper, it requires that he/she uses less time to check for the quality and originality of the work through a software which will give him/her quick and instant feedback without stress. The Turn-It-In software therefore helps in this regard by avoiding stress in checking the originality of a paper. The software therefore brings fairness, moral excellence and honesty into the academic environment by helping students and researchers in avoiding plagiarism. By this, it pursues that there will be no preference and there will be objectivity. There will be no human agent to manipulate the system to their favour.

Aside of the numerous benefits of the Turn-It-In software, it also has diverse challenges or limitations. The UG Special Reporter (2016) in its guidelines for using the Turn-It-In Software to determine plagiarism pointed out the following limitations of the TURN-IT-IN software:

- a. TURN-IT-IN does not offer a ready solution to plagiarism. Its use is therefore not a substitute for good academic writing practices, for example, correct citation and referencing.
- b. There are significant gaps in its search base. For example, TURN-IT-IN may not be able to; detect plagiarized work from books or sources which are 'old' and not available on the Internet,

detect work which is plagiarized by translating from one language to another, search all electronic journals, and detect images, graphs, mathematical equations that may have been plagiarized.

It is therefore important to note from the above that, though the Turn-It-In software is important and advantageous for checking plagiarism, it is limited in certain areas at meeting the needs associated to it.

2.4.1 How the Turn-It-In software works

One proactive countermeasure for dealing with Internet plagiarism is anti-plagiarism software, which can assist faculty detect, prevent, and educate students about such plagiarism. The software quickly detects plagiarism by trawling the Web and its own database, then matching text within students' assignments to text stored in the database, including Web documents; online publications of books, magazines, academic journals; and student papers that other faculties have previously submitted to check for plagiarism. Detecting plagiarism using these automated tools is necessary, because instructors cannot keep current with every new source of information in specific detail. In addition, the software can help deter students' plagiarism, because faculty can warn students of the effectiveness of the anti-plagiarism software. Furthermore, it highlights plagiarized words, sentences, or sections. Therefore the software provides an educational tool to instruct students about their incorrect usage of plagiarized words, phrases, and sections and help them learn to cite their sources properly.

Turn-It-In has been designed to point at the complete fingerprint of a document especially by means of comparing it with an “extensively indexed archive” of online sources including the essays previously entered to its database (Maurer, Kappe, & Zaka, 2006). With the help of software like Turn-It-In, an “originality report” is produced to illustrate the level of plagiarism that can be

found at the end of the process of comparing the submitted document with whatever is available in the Internet. Just like most software, the Turn-It-In software is one that has to be purchased in order to have unlimited access to it. There are however a few websites that offer free but limited access to the software on their platforms. For UG and KNUST, the universities have fully purchased and subscribed to the full usage of the software hence researchers in these institutions can have free access to the software anytime to check for the originality of their research works.

At KNUST for instance, it is only the lecturers who have the software installed on the various computers. When a student finishes his or her research work, then the supervisor of that student will allow him or her to access the software in order to run the final work through the Turn-It-In software. In University of Ghana, the situation differs a little. The University on the other hand has introduced a Learning Management system (LMS) called the SAKAI. The SAKAI is a platform that allows students, lecturers, teaching assistants and other academic staff to interact with each other seamlessly. For example, lecturers can upload an assignment on the SAKAI for students to download, do the assignment and upload the final results back on the SAKAI for lecturers to mark. Thus, a link to the Turn-It-In software is on the home page of the SAKAI platform. The URL of the SAKAI is also on the UG website, at the bottom of the home page. Through the link, students have access to the Turn-It-In software which they can use to check the originality of their works.

2.5 Students' awareness of Turn-It-In software

According to Akpojotor (2016), “awareness is knowledge about particular information and manifested through a particular behavior.” The Cambridge University Press (2017) defined awareness as one’s knowledge of the existence of something or his/her understanding of a particular situation or subject at the present time based on his/her experience or information. Based

on the definitions above, the awareness of Turn-It-In can be defined as the knowledge of the existence of Turn-It-In. Due to the high incidence of plagiarism among students, several higher institutions (in over 51 countries) across the globe have adopted Turn-It-In as an anti-plagiarism tool to curb the situation (Narasanaikar and Hangaragi, 2017). However, students need to be aware of the technology before they can fully utilize it. Despite the global popularity of the Turn-It-In software, few studies have focused on students' awareness of the software and have recorded high level of awareness.

Graham-Matheson and Starr (2013) investigated the use of Turn-It-In to help students avoid plagiarism in the Canterbury Christ Church University, UK. As part of the objectives of the study, the authors investigated the students' level of awareness of the Turn-It-In software adopted by the university. Data was collected from 367 respondents and the results revealed that students were fully aware of the software. The results further revealed that 72.5% of the respondents indicated that they heard of Turn-It-In, 43.6% knew all about Turn-It-In and 31.3% had heard about Turn-It-In but did not know much about it. However, 25.1% admitted that they knew very little about Turn-It-In. The respondents were also asked whether they were aware of the university's policy regarding the use of Turn-It-In. The results showed that 44.7% of the respondents indicated that they were fully aware of the policy and 36.5% indicated that they were partially aware. However, only 18.8% of the respondents indicated that they were not aware of the university's policy regarding the use of the Turn-It-In software. This indicates that the respondents were fully aware of the Turn-It-In software as well as the university's policy regarding its use.

In a similar study, Balbay and Kilis (2018) investigated the effectiveness of Turn-It-In software in detecting plagiarism in academic presentation slides in prominent English-medium Instruction University in Turkey. A sample of 311 students were investigated and the results revealed that the

respondents were aware of the advantages of using as a plagiarism detection tool. The students being aware of the advantages of using Turn-It-In implies that they were fully aware of the Turn-It-In software.

In Africa, Rop (2017) assessed the use of Turn-It-In to enhance research among postgraduate students and researchers in the University of Nairobi, Kenya. Data was collected from 205 respondents and the results revealed that the students' level of awareness of the Turn-It-In software was high. The issue of Turn-It-In full acceptance by students and lecturers had a mean score of approximately 4 on a scale of 5, which indicated that the respondents agreed that Turn-It-In was fully accepted as a way of enhancing research in the university. The respondents specifically indicated that they were aware of the advantages of Turn-It-In in enhancing research and the procedure for acquiring Turn-It-In account. They also indicated that they were aware that they needed to submit an originality report of their research work. This indicates that the students were fully aware of the benefits of using the software and hence had fully accepted it. Conformably, Garba (2017) found that the lecturers of the Bayero University, Kano, Nigeria, were aware of the existence of the Turn-It-In software. Perhaps, the knowledge of the lecturers concerning the software will be transferred to the students, which will also bring the knowledge to the existence of the Turn-It-In software.

The review of the literature has revealed that students are aware of the existence of Turn-It-In and associated advantages with respect to their academic work. The findings also revealed that students are aware of their institutional policies regarding the use of Turn-It-In.

2.6 Students' usage of Turn-It-In software

The Oxford University Press (2019) defined usage as “the action of using something or the fact of being used”. According to the Merriam-Webster Dictionary (2019), usage is “the action, amount,

or mode of using”. From the definitions above, the action of using Turn-It-In could be referred to as the usage of Turn-It-In. To benefit fully from the Turn-It-In software as a tool for mitigating the cancer of plagiarism, students have to made adequate use of it. Few Studies that have focused on the topic and have recorded low level of usage of software among students.

Graham-Matheson and Starr (2013) investigated the use of Turn-It-In to help students avoid plagiarism in the Canterbury Christ Church University, UK. Data was collected from 367 respondents and the results revealed that 166(45%) of the respondents indicated that they had used Turn-It-In software for originality checking. The results however indicated that despite the low level of usage of the software among the respondents, majority of those who had not used it were more willing to do so. Of the respondents who indicated that they had not used the Turn-It-In, 57.1% indicated that they were fully willing to use it, 28.7% were willing but with reservations, and 10.7% were indifferent. However, 1.9% indicated that they will not use it. The results also revealed that 45.2% of the respondents indicated that they had been required to use Turn-It-In as part of their studies in the university as against 54.8% who indicated the opposite. This indicates that the level of usage of the Turn-It-In software among the students was low. The findings were confirmed by Rop (2017) who assessed the use of Turn-It-In to enhance research among the postgraduate students and lecturers in the University of Nairobi, Kenya. Data was collected from 205 respondents and the results showed that the level of usage of Turn-It-In among the students was significantly low. This was attributed to the negative perception of the students towards the use of the software and the limited Turn-It-In licenses acquired by the university.

The review of the literature has shown that students’ level of usage of Turn-It-In was low due to their negative perception towards its use and the limited licenses acquired by universities. The

findings also revealed that students were more willing to use the Turn-It-In software. However, there were no effective policies by higher institutions requiring students to use it.

2.7 Students' perception about the use of the Turn-It-In software

The Cambridge University Press (2019) defines perception as “a thought, belief, or opinion, often held by many people and based on appearances”. The thoughts or opinions held by students concerning the use of the Turn-It-In software and its role in detecting plagiarism can be understood as their perception about the use of the software as a plagiarism detection tool. According to Jones (2009), the Turn-It-In software is used globally and it is a lead in detecting electronic plagiarism. This implies that the Turn-It-In software is been used by several Universities across the globe to fight the occurrence of plagiarism among students and researchers. On the basis of the use of the Turn-It-In software as an anti-plagiarism tool in mitigating the high incidence of plagiarism among students and researchers, several studies have been conducted on student' perception about the use of the software as an anti-plagiarism tool. Below are studies in relation to the topic grouped in two sections namely: perceived usefulness and ease of use of the Turn-It-In software, and preference of other means of checking plagiarism among students in the world, Africa and Ghanaian perspectives.

2.7.1 Perceived usefulness and ease of use the Turn-It-In software among students

Studies outside Africa that have focused on the topic recorded more positive and less negative perceptions regarding the perceived usefulness and ease of use of the Turn-It-In software as a plagiarism detection tool among students. Stappenbelt and Rowels (2009) investigated the effectiveness of the Turn-It-In software as a learning tool in academic writing education in the University of Western Australia. The findings revealed that the students' perception of the use of the Turn-it-In software as a learning tool was very positive as the students were supportive of the

adoption of the software. This was because the respondents showed a substantial improvement in their ability to avoid plagiarism through the use of the software over a period of time. In the study, the respondents were given individual access to the Turn-It-In software to self-assess their assignments as many times as required before submission. The results showed that there was a substantial (79%) decrease in the mean level of plagiarism from the first to the second submitted assignments. There were no cases of plagiarism detected in the final submitted assignment across 620 students. The results indicated that the use of the Turn-It-In software had improved the respondents paraphrasing skills and their ability to properly acknowledge sources. Most of the respondents strongly agreed that the use of the software had been helpful in their report preparations.

Bailey and Challen (2015) supported the finding that the use of Turn-It-In improves students' ability to properly acknowledge sources. The authors explored students' perception of the value of Turn-It-In software as a learning tool in the University of Wolverhampton, UK. A sample of 748 undergraduates were investigated and the results revealed that the use of Turn-It-In had helped the students in learning about appropriate source use. Ayon (2017) also found similar results as the author investigated the impact of Turn-It-In on students' plagiarism in a private Lebanese English-speaking university. Data was collected from 150 student participants and the results generally showed that the students had positive perception about the use of the software. This was because 75% of the participants supported the use of the software in the university, 57% admitted that their experience with the software was effective, and about 48.9% perceived the software to be beneficial to students' overall education. Results from the qualitative analysis further showed that the participants indicated that the use of the Turn-It-in software had; helped them work ethically, avoided plagiarism, improved their writing skills, improved their citation skills, made them to be self-dependent, and had made them creative.

However, the participants raised issues concerning the inconsistency in the use of the software among the various departments in the university. The author also found that the Turn-It-In software was a deterrent to students' plagiarism as 56% of the participants stated that they would have not plagiarized if they had known that their papers would be checked through Turn-It-In; an indication that the fear of being caught by Turn-It-In as a plagiarist deters students from plagiarizing. Stapleton (2012) confirmed the findings as the author assessed the effectiveness of Turn-It-In in detecting plagiarism among students in the Hong Kong Institute of Education, Hong Kong. The author found that Turn-It-In had a deterrent effect on plagiarism among students, however, care must be taken in assessing the results generated by the system.

Another study by Prescott (2012) produced similar findings. The author explored international students' attitudes and reactions to being asked; how they would like teachers to use the Turn-It-In software formatively, to support them in their studies in Bellerby's College, UK. The author found that majority (67%) of the respondents admitted that the use of Turn-It-In had helped them in identifying cases of plagiarism in their writings. The findings indicated that giving students the opportunity to resubmit their work when they have a high similarity score on their originality report improves their knowledge of avoiding plagiarism. This is because it helps in improving the knowledge on citation conventions and their summarizing and paraphrasing skills.

In corroboration with the findings, Atkinson and Yeoh (2009) investigated students and staff perception of the effectiveness of Turn-It-In in Curtin University of Technology, Australia. A survey questionnaire was completed by 171 students in the Curtin Business School who were involved in a trial of the software. Results from the qualitative analysis revealed that the students supported the use of the software and they stated that it was fair to use it as a plagiarism detection tool. The students also admitted that the use of the software will help in preventing the incidence of plagiarism among

them. However, the students raised concerns about being caught for unintentional plagiarism and the accuracy of the Turn-It-In software in detecting plagiarism. Dahl (2009) found that the students of the Middlesex University Business School, UK, had positive perception towards the use of Turn-It-In as a plagiarism detection tool. The author collected data from 24 undergraduate students and the results showed that majority (22) of them agreed that Turn-It-In was user-friendly, majority (22) agreed that Turn-It-In was a convenient way to submit work, and majority (22) preferred using Turn-It-In as compared to other plagiarism detection tools. This indicates that the students had positive perception about the use of Turn-It-In.

In a similar study, Graham-Matheson and Starr (2013) investigated the use of Turn-It-In to help students avoid plagiarism in the Canterbury Christ Church University, UK. A sample of 367 students were surveyed and the results revealed that the students were very supportive of the use of Turn-It-In. The results also showed that the students had positive experiences using Turn-It-In. Bensal and Miraflores (2013) explored the use of Turn-It-In in addressing the incidence of plagiarism among students in a private university in the Philippines. The argumentative essays (checked via Turn-It-In) of 31 students along with responses to two set of self-reflection survey were used. The results showed that the students had both negative and positive perceptions about Turn-It-In. On the positive side, the students admitted that the use of Turn-It-In had; increased their awareness of plagiarism, inculcated the sense of vigilance in them, improved their citation skills, and had helped them avoided unintentional plagiarism. The students also admitted that the Turn-It-In's originality reports serve to support the cautionary comments of teachers in students' drafts thereby strengthening the teachers' credibility. On the negative side, the students stated that the Turn-It-In software cannot detect improperly cited text and cross-check sources mentioned in the in-text citations with the reference list. Again, it cannot highlight pieces of information that needs citations. Also, it is a complex

program liable to be misused by students. The students also added that Turn-It-In's nature of detecting plagiarism by reporting the similarity of students' work with its vast database often creates some form of misunderstanding on concepts of similarity or originality versus plagiarism. Based on the findings, the authors recommended that special attention should be paid in monitoring the software and students should be trained on how to properly use the software. The authors also recommended that manual checking and human judgement of students' work (checked via Turn-It-In) are still needed because Turn-It-In merely presents the percentage of similarity of a document to other documents in its database but does not include necessary comments to guide students towards avoiding plagiarism.

Aisyah and Sugihartati (2019) found that students' perception about plagiarism may have an effect on their trust about the accuracy of Turn-It-In software as a plagiarism detection tool. The authors assessed the relationship between plagiarism perception and users trust about the accuracy of Turn-It-In software in the University of Indonesia. Data was collected from 85 student respondents and the results showed that there was a low positive correlation (Spearman's rank correlation coefficient of 0.389) between the respondents' perception of plagiarism and their trust about the accuracy of the Turn-It-In software. The findings indicated that if the respondents' perception of plagiarism was low, their trust about the accuracy of the Turn-It-In software would be low. Likewise, if the respondents' perception of plagiarism was high, their trust about the accuracy of the Turn-It-In software would also be high.

Whilst several studies outside Africa found that on the average, students had positive perception towards the use of Turn-It-In, the findings by Nova and Utami (2017) revealed that students had negative perception towards the use of Turn-It-In. The authors investigated EFL students' perception on the use of Turn-It-In for detecting plagiarism on academic writing. A self-reflection questionnaire was used to collect data from 20 students in a university in Bandung, Indonesia. In the

questionnaire, respondents were asked to indicate their opinions on the use of the Turn-It-In software for detecting plagiarism on their academic writing. The results revealed that majority of the respondents were not satisfied with the results of the Turn-It-In system due to their misunderstanding about plagiarism and the Turn-It-In system. Majority of the respondents raised concerns regarding the accuracy of the similarity percentage from the system. Although the respondents admitted that the use of the software had improved their writing skills, the inaccuracy of the results of the Turn-It-In evaluation perceived by the students raised their negative perception towards its use.

Another study by Thompsett and Ahluwalia (2010) confirmed the findings that students' had negative perception about the use of Turn-It-In. The authors investigated the perceptions of plagiarism and collusion among final year Pharmacology students in the University of East London. As part of the objectives of the study, the respondents were asked to indicate their levels of agreement as to whether Turn-It-In is a useful deterrent to plagiarism among students. The results revealed that majority of the students agreed that Turn-It-In was a deterrent because of the risk of being caught as a plagiarist. However, 59% of the students indicated that Turn-It-In was not user-friendly. From the results, the authors stated that perhaps, the students perceived the deterrent value of Turn-It-In to be less than its inconvenience of use. The authors also found that 53% of them stated that Turn-It-In does not help students to avoid plagiarism and that it is not a useful learning tool. Similarly, Biggam and McCann (2010) found that students' use of Turn-It-In in the University of Glasgow, UK does not significantly improve their quality of writing. This supports the finding that Turn-It-In is not a useful learning tool as noted by Thompsett and Ahluwalia (2010).

In Africa, Rop (2017) found that students had positive perception about the use of Turn-It-In as a plagiarism detection tool. The author assessed lecturers and postgraduate students' perception towards Turn-It-In as a plagiarism detection tool in the University of Nairobi, Kenya. The respondents (205) were asked to indicate their levels of agreement as to whether; Turn-It-In had been fully accepted as a tool for enhancing research in the university, it reduced students and lecturers workload, it improves students citations and referencing skills and whether it was user friendly. The results revealed that the respondents agreed that Turn-It-In had been fully accepted by the students and lecturers. The respondents also admitted that Turn-It-In improved students' citations and referencing skills and that it was user-friendly. Another study in South Africa confirmed the findings. The study examines the effectiveness of Turn-It-In in 30 non-profit higher educational institutions in South Africa. The results showed that the selected institutions had reduced unoriginal writing by 43.8% through the use of Turn-It-In. This results indicates that the use of Turn-It-In had helped students and researchers in the selected institutions in avoiding plagiarism (Turn-It-In, 2015).

The review of literature has revealed that on the average, students' perception about the perceived usefulness and ease of use of Turn-It-In was positive. Students were supportive of the adoption of the Turn-It-In software because of its associated benefits of; making them more aware of plagiarism; helping them to avoid plagiarism; improving their paraphrasing, citation and referencing skills; inculcating the sense of vigilance and creativity in them; and improving their writing skills. The findings also indicated that students were satisfied with the use of Turn-It-In as they admitted that they had positive experience with its use. Students admitted that Turn-It-In; has user-friendly interface, is a convenient way to submit their works, and has reduced students and lecturers workload. Some limitations of using the Turn-It-In software identified by students include: Turn-It-In; cannot

detect improperly cited text, cannot cross-check sources mentioned in the in-text citations with the reference list, cannot highlight pieces of information that needs citation, and Turn-It-In is a complex program liable to misuse by students. Students also raised concerns about the accuracy of its similarity percentage and its inconvenience of use.

2.7.2 Students' preference of other means of checking plagiarism other than Turn-It-In software

Turn-It-In software as an anti-plagiarism tool has gained global popularity as it has been adopted by higher institutions in several countries (51) around the world (Narasanaikar and Hangaragi, 2017). However, there are other means of checking plagiarism; filtering, blocking and the use of rating systems. A study that focused on students' preference of other means of detecting plagiarism other than Turn-It-In revealed that students preferred Turn-It-In as compared to other means of checking plagiarism.

Dahl (2009) found that the students of the Middlesex University Business School, UK, preferred the use of Turn-It-In as a plagiarism detection tool. The author collected data from 24 undergraduate students and the results showed that majority (22) of them agreed that Turn-It-In was user-friendly, majority (22) agreed that Turn-It-In was a convenient way to submit work, and hence majority (22) preferred using Turn-It-In as compared to other means of checking plagiarism. This indicates that the students preferred the use of Turn-It-In in checking the originality of their works as compared to other means such as filtering, blocking and the use of raking systems.

The findings by Ayon (2017) confirmed the results. The author investigated the impact of Turn-It-In on students' plagiarism in a private Lebanese English-speaking university. Data was collected from 150 student participants and the results generally showed that the students preferred the use of Turn-

It-In as a plagiarism detection tool as compared to other means of checking plagiarism. This was because 75% of the participants supported the use of the software in the university, 57% admitted that their experience with the software was effective, and about 48.9% perceived the software to be beneficial to students' overall education. This indicates that the participants would prefer to use to check the originality of their work as compared to other means.

The review of literature has shown that students preferred the use of Turn-It-In for checking plagiarism as compared to other means such as filtering, blocking and the use of rating systems.

2.8 Computer literacy skills and perceived ease of use of Turn-It-In software among students

The ability to efficiently and effectively utilize Turn-It-In largely depends on the level of skills of the individual. To make a maximum use of Turn-It-In, students must acquire and practice the skills necessary to exploit it. A skill is “the ability to do something well, usually as a result of experience and training” (Macmillan Dictionary 2019). Skills in the usage of Turn-It-In involve the ability to access and effectively interact with the Turn-It-In software. This includes students' ability to navigate through the software, submit their assignments and retrieve the originality report after processing. It also includes their ability to interpret the originality report. This therefore implies that students may require information and computer literacy skills in order to be able to effectively utilize Turn-It-In.

Studies that touched on the computer literacy skills and perceived ease of use of Turn-It-In revealed that on the average, students' skills in the usage of Turn-It-In was low. Nova and Utami (2017) investigated EFL students' perception on the use of Turn-It-In for detecting plagiarism on academic writing. A self-reflection questionnaire was used to collect data from 20 students in a university in Bandung, Indonesia. In the questionnaire, the respondents were asked to indicate their opinions on

the use of the Turn-It-In software for detecting plagiarism on their academic writing. The results revealed that majority of the respondents were not satisfied with the results of the Turn-It-In system due to their misunderstanding about the Turn-It-In system. The students' lack of understanding of the Turn-It-In software could come from lack of adequate training on how to use the software and hence their inadequate skills in the usage of the software.

In a similar study, Bensal and Miraflores (2013) explored the use of Turn-It-In in addressing the incidence of plagiarism among students in a private university in the Philippines. The authors found the students lack the information literacy skills needed to interpret the originality report generated by Turn-It-In. This was because the students indicated that Turn-It-In's nature of detecting plagiarism by reporting the similarity of students' work with its vast database often creates some form of misunderstanding on concepts of similarity or originality versus plagiarism. Based on the findings, the authors recommended that students must be trained on how to properly use the software. This indicates that the students lack the basic information literacy skills needed to interpret the originality report and therefore were not able to differentiate it from acts of plagiarism.

Another study by Thompsett and Ahluwalia (2010) showed that students of the University of East London lacked the ICT skills needed to effectively utilize Turn-It-In software. The authors investigated the perceptions of plagiarism and collusion among final year Pharmacology students in the University of East London and found 59% of the students indicated that Turn-It-In was not user-friendly. This also indicates that majority of the students lacked the ICT skills needed to exploit the Turn-It-In system. This may include the lack of skills on how to navigate and effectively communicate with the system through its user interface.

In contrast to the findings above, Dahl (2009) found that the students of the Middlesex University Business School, UK, had the skills necessary to use Turn-It-In. The author collected data from 24 undergraduate students and the results showed that majority (22) of them agreed that Turn-It-In was user-friendly. Majority (22) of the respondents also agreed that Turn-It-In was a convenient way to submit work. This indicates that the respondents had the ICT skills needed to navigate and effectively utilize the software; hence their assertion that Turn-It-In was user-friendly and a convenient way to submit work.

The review of literature has revealed that students had inadequate skills on how to effectively utilize the Turn-It-In software. The studies recommended that students should be trained on how use the software.

2.9 Challenges students face in using Turn-It-In software

The Cambridge University Press (2019) defined a challenge as “(the situation of being faced with) something that needs great mental or physical effort in order to be done successfully and therefore tests a person's ability”. The Merriam-Webster’s Dictionary (2019) also defined a challenge as “a stimulating task or problem”. Based on the above definitions, a challenge can be defined as a problem or difficulty one faces in a particular situation. Challenges in the use of Turn-It-In can therefore be defined as the problems or difficulties one faces when using the Turn-It-In software. Students’ may face several challenges in using the Turn-It-In software.

Garba (2017) pointed out that the Turn-It-In software provides web-based service to manage all the process of checking plagiarism and providing instant feedback. All web-based services require computers, electricity and internet connectivity in order to be able to operate. Hence the absence of computers, electricity and internet connectivity posit a challenge in accessing Turn-It-In. Web-based

services such as Turn-It-In also require licensing to be able to have unlimited access to it. UG and KNUST, for instance, have fully purchased and subscribed to the full usage of the software hence researchers in these institutions can have free access to the software anytime to check for the originality of their research works. This indicates institutions are required to purchase and subscribe to the Turn-It-In in order to enable students to have unlimited access to it. The absence of that poses a challenge since students will not be able to have access to it.

The findings by Darko-Adjei (2018) confirmed the above assertions relating to the challenges of using web-based services such as Turn-It-In. The author investigated students' perception and use of Sakai Learning Management System (LMS) in the University of Ghana. As part of the objectives of the study, the author explored the challenges students face in using the web-based service (Sakai). The results revealed that 52.2% of the respondents (230) indicated inadequate computers, 29.6% indicated poor internet connectivity, 40.4% indicated power outages, 25.2% indicated inadequate training and 38.3% indicated lack of infrastructure as the major challenges to the use of the Sakai LMS. Since Turn-It-In is also a web-based application, students are likely to face similar challenges in using it.

Moreover, in the University of Ghana, students get access to the Turn-It-In software via a link on the Sakai platform. This further indicates that the students will definitely face the same challenges if they are to access the Turn-It-In software. In some institutions, KNUST for instance, the Turn-It-In software resides on the personal computers of the lecturers; an indication that the absence of computers, power supply and internet connectivity will pose a challenge to the use of the software.

The review of literature has revealed that students may face several challenges in using the Turn-It-In software. These challenges include: inadequate computers, power surges, poor internet connectivity, and inability to access the Turn-It-In software due to issues of licensing, complex user-interface, among others.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explores the entire processes and procedures employed by the researcher to gather data to carry out the study. According to Leedy & Ormrod, (2005), as cited in Ankrah (2014, p115), “the word method is coined from two Greek elements: meth and odos. The meaning of meth being “after” and odos, “way”. The term research methodology refers to the method adopted in carrying out a research study. The methodology of the study indicates how the researcher conducted the study in the attempt to answer the research questions raised with the aim to achieve the objectives of the study. It helps to prove or disprove a set of hypotheses or research questions. The study was a purely quantitative study which adopted a survey method for the collection of data. This approach is suitable for this kind of study, as it aims to obtain the general perception students have on the use of the Turn-It-In software in detecting plagiarism among public universities in Ghana.

The quantitative method, according to Leedy & Ormrod (2005), aims to clarify and create projections that will give rise to different individuals and locations. This method is intended to make affirmation, establishment or validation of relationships between factors and also develop generation that adds to the theory or hypothesis of the study. This technique enables findings to be generalized easily, allowing the data collected from the targeted sample to be used to draw conclusions for the general population. In addition, this technique includes the researcher selecting what to study; asking peculiar and narrow questions; collecting quantifiable data from participants; analyzing these numbers using statistics; conducting the study in an impartial and objective way. The quantitative methods therefore involves primarily numeric or statistical methods of managing the research design. Fetters, Curry and

Creswell (2013) therefore posit that, the quantitative method involves numerical or statistical data which provides description of trends, attitudes, and opinions of a population of study by studying a sample of that particular population from which the researcher makes generalization and inferences from the results of the sample to the population through the use of questionnaires or structured interviews for the collection of data.

In other words, a survey provides a quantitative or numeric description of trends, attitude, or opinions of a population by studying a sample of the population. Hence, from the results of the sample, the researcher can then either make claim or generalize about the population (Creswell & Clark, 2017). A survey research is an approach that collects data through sampling from the population and uses statistical analysis to make inferences about the population (Curtis & Curtis, 2011). The survey research permits one to collect quantitative data for a quantitative analysis using descriptive and inferential statistics. For instance, a quantitative research approach is considered superior because of the following reasons;

1. It has high reliability; thus, it enables a research to be replicated which brings out the credibility of the findings.
2. It can easily be generalized since it normally involves a large sample size. The larger the sample size, the lesser the statistical error, and the higher the statistical power and also, the higher the representation of the population

There are arrays of research designs for various research studies; the primary intent for the choice of a survey research methodology for this study is not far-fetched. “Survey research methodology allows for the collection of a large amount of data from a sizeable population in a highly economically way” (Kumar, 2019 as cited in Acheampong, 2016, p.32). Again, the limited time scale for the research made the survey approach appropriate. Data is often collected using questionnaire which in turn allows for easy comparison in survey research methodology.

Since this study dealt with a large population, the survey research approach was therefore more appropriate.

3.1.1 Research Design

The research work requires a number of investigative instruments employed in arriving at the results by the researcher. This therefore calls for a specific research design. According to Creswell & Clark (2017), “a research design is the overall strategy that the researcher chooses to integrate the different components of the study in a coherent and logical way, thereby ensuring that the researcher effectively addresses the research problem”. Furthermore, Barnes, Grove, & Burns, (2003) posited that, the research design provides a blueprint for conducting a study with the greatest control over elements that may interfere with the legitimacy of the findings. The research design by this indicates the plan that depicts how, when and where information is going to be collected and analyzed by the researcher for the study.

Kothari, (2004) also defines a research design as “the arrangement of conditions for the collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. He further states that, a research design is the conceptual structure within which research is conducted. There are different research designs used by researchers in their quest to know, understand and solve a research problem. Three (3) key research designs employed by most scholars in their research are the descriptive, exploratory and explanatory research design. The choice of a research design to be employed by the researcher depends on the nature of the problem statement and the objectives of the study.

For the purpose of this study, the research design utilized by the researcher was the exploratory research. This design is appropriate since it helps to develop initial ideas and thoughts about the subject matter and gives further insight and direction for any research required. Furthermore, this design is fundamental where a researcher wants to have an in-depth understanding of the problem, distinguish between objectives or give further information needed to address any future research thereby acting as the foundation for any future studies. According to Aaker et al. (2000), the exploratory research is also seen to be very adaptive hence flexible in its usage as well as unstructured and qualitative in nature and serves as an input for further research. For the purpose of meeting the objectives of this study/research the quantitative research design was used. According to Babbie (2010), the quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires etc. The quantitative research therefore focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon (Mujis, Chapman, Collins, & Armstrong, 2010). The researcher in collecting quantitative data utilized the survey questionnaires which is the principal instrument used in surveys.

3.2 Selection of cases

Cases refer to the subjects that are selected for a research study. This study was conducted at the University of Ghana, Legon, in the Greater Accra region and also at the Kwame Nkrumah University of Science and Technology, Kumasi. This is because these are currently the only two public universities in Ghana that have introduced the use of the Turn-It-In software to check the originality of academic works. In this regard, graduate students in the diverse fields undertaking project works and assignments are expected to use the anti-plagiarism software to check the originality of the text. These two major public universities have over the years increased their research-based programs and most students are required to undertake project works at the Master

of Philosophy (MPhil) or even write term papers which require the tutors/lecturers to check the originality of such works to make sure students are not caught or involved in unethical academic practices in relation to plagiarism.

3.2.1 Population of the study

According to Graziano & Aflalo (2007), the population of a study refers to the large group with similar characteristics about whom the researcher wishes to obtain information. That is, those whom the researcher collects information from based on the problem statement. The population is therefore the set of people used in the study from which the researcher draws conclusions. Every study has a specific or target population about which the researcher gathers information and this target population has particular characteristics that are peculiar to them. Thus, a population simply refers to the total number of subjects that a sample is drawn from. Usually, it is impossible for the entire population to be used by researchers to conduct a study due to the following reasons:

1. It will be very costly and time consuming.
2. It is very difficult to study a huge number of subjects at a time.
3. At times, it is impossible to study the entire population for example, when a researcher wants to conduct a study on an entire population of a country for a quick decision to be taken.

The target population of this study was graduate students of public universities in Ghana with special focus on University of Ghana, Legon and the Kwame Nkrumah University of Science and Technology (KNUST) in Kumasi. A total of one thousand, seven hundred and twenty-two graduate students from both UG and KNUST formed the target population (1,722). Out of this number, a total of Five hundred and eighty-one (581) graduate students, representing 33.7% of the total

population, were selected from University of Ghana. Whereas, a total of one thousand, one hundred and forty-one (1141) graduate students were selected from KNUST, representing 66.3% of the total population. Graduate students from these two universities were further selected from only two colleges namely; The College of Humanities and the College of Health sciences. A total of one thousand, two hundred and ninety students (1290) representing 74.9% were selected from the College of Humanities while a total of four hundred and thirty-two (432) representing 25.1% were selected from the College of Health sciences.

The population for this study is illustrated in Table 3.1

Table 3. 1: Study Population

COLLEGE	UNIVERISTY OF GHANA	KNUST	TOTAL
College of Humanities (Business School only)	479	811	1290
College of Health Sciences	102	330	432
TOTAL	581	1141	1722

Source: Field Data from the Schools of Graduate Studies of UG and KNUST, 2019

The total number of students from the College of Humanities who were selected from UG were four hundred and seventy-nine students representing 37.1% of the total of 1290. Whereas, a total of eight hundred and eleven students from the College of Humanities representing 62.9% were selected from KNUST out of the total of 1290 students. College of Humanities. Again, out of the total 432 students from the College of Health Sciences, a total of one hundred and two (102)

students representing 23.6% of the 432 were selected from UG while three hundred and thirty students representing a total of 76.4% were selected from KNUST.

3.2.2 Selection of Sample

A sample is a subset of a population that is selected to represent a particular piece of a research study. The selected individuals are known as the subjects and those that will end up participating in the study become the respondents. This section comprises the sample size as well as the sampling technique that was used for the study.

3.2.2.1 Sample Size

Fraenkel & Wallen,(2009)define a sample size as “a subset of a population” and they add that, “it also helps to describe the precision of research”. According to Kreuger & Neuman,(2006)), the determination of a sample size can be solved by identifying the total population and using statistical equations to work out the sample size taking into consideration the degree of confidence level. The following reasons explain the need for the selection of a sample size:

1. It is less costly to work with a sample size than total population
2. A sample may provide the researcher with required information faster
3. In some instances, it is almost impossible to use an entire population for a study because the population may be so large and the time frame for the research may be too short to study the entire population. Also in cases where there is an outbreak of a disease, a research needs to be done quickly so as to find an immediate solution to the problem.

For the purpose of this study, the researcher will select the sample size with reference to the sampling ratios proposed by (Alreck & Settle, 2004). They proposed that, “for different population

sizes; sampling ratio of 30% is adequate for a population of less than 1,000; sampling ratio of 20% is adequate for a population between 1,000 and 10,000; and a sampling ratio of 10% is adequate for a population greater than 10,000. Only a small fraction of the entire population ordinarily provides sufficient representation of the group as a whole and enough accuracy to base decisions on the results with confidence". The researcher, therefore selected a sample size of 344 which is 20% of the 1722 of the selected students from the Colleges of Humanities and College of Health Sciences from both University of Ghana and KNUST.

$$\text{Sample size of students} = 20/100 * 1722 = 344.4$$

The total sample size=344

With reference to the sampling ratios proposed by Alreck & Settle,(2004), a proportionate sample size was selected from college. The proportionate sample size for each College was calculated using the following formula:

$$P.S = \frac{\text{Total number of students from a college}}{\text{Population size}} * 344$$

Population size

Where P.S = Proportionate Sample size.

A total sample size of 344 was chosen from the population of 1722 students for the study.

The following statistics show the population and proportionate sample size for each level.

College of Humanities, UG	$P.S = \frac{479}{1722} * 344$
	$= 95.6$

$$\begin{aligned} \text{College of Health Sciences, UG} \quad P.S &= \frac{102}{1722} * 344 \\ &= 20.3 \end{aligned}$$

$$\begin{aligned} \text{College of Humanities, KNUST} \quad P.S &= \frac{811}{1722} * 344 \\ &= 162 \end{aligned}$$

$$\begin{aligned} \text{College of Health Sciences, KNUST} \quad P.S &= \frac{330}{1722} * 344 \\ &= 66 \end{aligned}$$

A total sample size of three hundred and forty-four (344) students were selected for this study from both University of Ghana, Legon and the Kwame Nkrumah University of Science and Technology (KNUST) in Kumasi. Out of this number, a total of one hundred and sixteen (116) graduate students, representing 33.7% of the total population, were selected from University of Ghana. Whereas, two hundred and twenty-eight (228) graduate students were selected from KNUST, representing 66.3% of the total sample size. Again, out of the 344-sample size, a total two hundred and fifty-eight (258) representing 75% were selected from the College of Humanities while a total of eighty-six (86) students representing 25% were selected from the College of Health sciences.

The total number of students from the College of Humanities who were selected from UG were ninety-six students representing 37.2% of the total of 258. Whereas, a total of one hundred and sixty-two students from the College of Humanities representing 62.8% were selected from KNUST out of the total of 258 students. Again, out of the total 86 students from the College of Health Sciences, a total of twenty (20) students representing 23.6% of the 86 were selected from UG while sixty-six students representing a total of 76.4% were selected from KNUST.

The sample size for this study is illustrated in Table 3.1

Table 3. 2: Proportionate Sample Size by Colleges

COLLEGE	UNIVERSITY OF GHANA	KNUST	TOTAL
College of Humanities (Business School only)	96	162	258
College of Health Sciences	20	66	86
TOTAL	116	228	344

3.3 SAMPLING TECHNIQUE

Sampling refers to the process of selecting members from a population which are used to represent the entire population. Trochim (2005) defines sampling as “the process of selecting units (e.g., people, organizations) from a population of interest so that by studying the sample we may fairly generalize our results back to the population from which they were chosen”. According to Kothari (2004), the process of selecting a sample is called sampling technique.

There are different types of sampling techniques that a researcher can adopt for a research study. These include the simple random, convenience sampling, quota sampling and purposive sampling. However, the availability and ease of reaching intended subjects as well as the nature of the research will determine the type of sampling technique that is adopted for a particular study. The convenience sampling technique was used for this study.

The convenience sampling technique is a non-probability sampling technique where subjects are selected because of their convenient accessibility (Acheampong, 2016). The main reason for using convenience sampling was the fact that, the subjects are postgraduate students and most of them do not reside in hostels on campus as compared to the undergraduates. Thus, was difficult for the researcher to get all of them in the same place at a time to administer the questionnaire for the study.

3.4 Data Sources

There are two major sources of gathering information about a given research topic or problem of which a researcher seeks to find solutions. These sources can be from readily available information sources which can be collected by the researcher or the researcher gathering data from respondents (individuals of whom the researcher seeks to understand the situation). These sources constitute the secondary and primary sources of data.

Secondary Sources: this type of data was gathered from accessing already existing documents and literature on the research topic as have been done by different scholars in the area. Some of these literature and documents include; books, journal articles, UG documents (Manual) on plagiarism and online sources.

Primary Data Sources: this refers to the raw data collected by the researcher from respondents of the study mainly graduate students on the subject matter.

3.5 Data Collection Instrument

A research instrument is a written list of questions, the answers to which are recorded by respondents (Kumar, 2019). The researcher in using the quantitative methods in collecting data, utilized a structured questionnaire which was developed and distributed to respondents.

The copies of the questionnaire that were completed by the respondents and found usable were collected for editing, coding and analysis using the Statistical Package for the Social Sciences (SPSS) and MS Excel where the results were discussed based on the objectives of the study.

Thus, the data was collected through a survey whose principal instrument is a questionnaire. According to Brace (2018), a questionnaire constitutes a set of well-structured questions to examine and ascertain response from respondents of the study in this case the sample (graduate students in University of Ghana and Kwame Nkrumah University of Science and Technology). The questionnaire was therefore used to obtain primary data on the perception of students on the use of Turn-It-In software in detecting plagiarism among public universities in Ghana.

Below are some reasons for the choice of a questionnaire for this study:

1. It saves the researcher's time as each participant enters his/her responses on the questionnaire as compared to the time required to conduct personal interviews.
2. It is very economical as compared to interviews.
3. Respondents have the feeling that, they will remain anonymous and this will enable them to give out objectives view as the purpose of a study demands.
4. Large amounts of data on a broad range of topics may be collected within a fraction of time.
5. Again, the questionnaire is a widely used and useful instrument for collecting survey information providing structures, often numerical data, being able to be administered without the presence of the researcher and often being comparatively straight forward to analyze.

Despite the above strengths of questionnaires, it is saddled with some challenges such as not providing an opportunity to collect additional information through observation, probing,

prompting and at times the inability to clarify questions while they are being completed. In spite of these weaknesses, the questionnaire was considered the most suitable for the nature and purpose of this research.

The questionnaire was personally structured by the researcher for the data collection. The questionnaire was in two parts, the first part dealt with personal information while the second part specifically asked about the theme of the study. Generally, the questionnaire for this study was divided into seven (7) parts. Part of the questionnaire for this study was structured and the other part was unstructured. “Yes” or “No” questions which are classified as a categorical scale was used to measure some items on the questionnaire. The first part (Part 1) focused on Demographical Data of respondents. The second to seventh parts were captioned as follows:

The second part (Part 2) – Students’ knowledge concerning plagiarism

The third part (Part 3) – Students’ awareness of Turn-It-In Software

Fourth part (Part 4) – Students’ usage of the Turn-It-In software

Fifth part (Part 5) – Students Perception about the Turn-It-In software

Sixth part (Part 6) – Computer literacy skills and perceived ease of use of Turn-It-In software

Seventh part (Part 7) - Challenges students face in using Turn-It-In software

Each part indicated the purpose for those set of questions and also had instructions which aided the responses to each question without or less difficulties and provided spaces where necessary for the open-ended questions. Also, some of the questions in the questionnaire were the closed-ended Likert-scale type. This type of questions has been found to be the most suitable type of the measurement of attitudes and perceptions. This is because it enables respondents to indicate the

degree of their believe in a given statement (Best & Khan as cited in Agbofa, 2012). The questions which were set using the Likert Scale had responses ranging from 1 to 5 where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree or Very Bad = 1, Bad = 2, Average =3, Good = 4, Very Good = 5

The questionnaire also had open-ended questions. In the open-ended questions, respondents were allowed to express their views on the research questions without any restrictions to particular answers. In the closed-ended questions, respondents were restricted to specific questions with related answers from which they chose their answers. These allowed for easy editing, coding and analysis of the data in the closed-ended questions.

3.6 Data Collection Procedure

For KNUST, the researcher gathered the data for this study on their main campus in the month of November, 2018, at the time the students were preparing for the end of semester examinations. So most of them were found on the KNUST main campus at areas such as; libraries, computer laboratories, graduate hostels and lecture halls. With the help of some executives of the KNUST GRASAG, the researcher located areas where the post graduate students had gathered for their tutorials and group discussions. For the areas where students had gathered with their tutors, the researcher asked for permission before copies of the questionnaire were distributed. The researcher made enquiries to make sure that the subjects fell within the appropriate category before the copies of the questionnaire were distributed. The copies of the questionnaire were distributed to those who were available either before or after their discussion groups. Also, the researcher distributed some copies of the questionnaire to students in the libraries and graduate hostels. The researcher then continued to carry out these same activities until the required total number of respondents for each discipline was obtained for the study. Copies of the questionnaire were distributed by the

researcher and assisted by one national service personnel and some GRASAG executives as well as group leaders when available. In order to ensure that the respondents understood the questions as intended by the researcher, the researcher first discussed the questionnaire with those who assisted in collecting the data so that they too were able to help the respondents adequately. In addition, the respondents were encouraged to get in touch with the researcher through phone calls or text messages so that questions which they did not understand could be explained to them. Thus, the researcher was available to answer the questions from the respondents any time they faced difficulties in answering any part of the questionnaire. At the point where subjects felt reluctant to take part in filling the questionnaire, the researcher encouraged them to do so.

3.6 Data Analysis and Presentation

According to Burns and Grove (as cited in Acheampong, 2016), “data analysis is the process of extracting from a given data, relevant information from which a summarized and comprehensible numerical description can be formulated”. The researcher will use Statistical Package for Social Sciences (SPSS) version 22 to analyze the data collected. SPSS is a widely used software in the social sciences for statistical analysis, manipulation of quantitative data and also for producing tables and graphs that summarize the data that has been collected. One major advantage with the use of SPSS software is that, it is much easier to define variables, input data and generate concise results that are easily comprehensible. With SPSS one can analyze data in three basic ways:

1. Describe data using descriptive statistics e.g. frequency, mean, minimum and maximum
2. Examine relationships between variables e.g. correlation, regression, factor analysis.
3. Compare groups to determine if there are significant differences between these groups e.g. T-test and ANOVA (Opie & Brown, 2019)

The primary data as was indicated earlier were gathered through the use of questionnaires through a survey. After the field survey, the questionnaires were retrieved from the respondents. The requisite editing was done on the received questionnaires to check for errors with the right corrections been made. Furthermore, each questionnaire that was completed was coded by allotting them with a serial number to help the researcher in easy identification. A scoring code was assigned to each response before the data was entered into the SPSS for manipulation. For easy interpretation of data, the summary of the results from the SPSS were collated into figures and tables namely; the frequency distribution table, bar chart and pie chart with the use of the MS Excel.

3.7 Ethical Issues

It is important that, the researcher be guided by certain ethical considerations to promote integrity and avoid all forms of misconduct in the study. According to Creswell & Clark (2017), the researcher needs to protect respondents used in the study, develop trust with them, promote integrity, be guided against misconduct and any impropriety that might reflect on their organizations or institutions and also cope with new challenges.

Simply put, the ethical issues are the code of conduct that guide the researcher in the study. The ethical issues that were considered by the researcher in this study were; informed consent, anonymity, privacy and confidentiality of information related to respondents and finally adherence to the guiding principles (requirements) of the University of Ghana in relation to project work.

With regard to informed consent, respondents used in the study were informed on their consent and permission to partake in the study and also what is required of them. They were willfully and

voluntarily involved in the study without been forced. Moreover, the purpose of the study was disclosed to them so they can easily give the requisite information.

In addition, the researcher guaranteed and ensured that, the privacy and confidentiality of respondents was adhered to as data was been collected. Therefore, the questionnaire excluded names identification so as to keep respondents anonymous and their information private and confidential.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter of the study deals with the data presentation and the analysis of data collected through the survey. The researcher collected through the issuance of copies of a questionnaire with respondents being graduate students from the University of Ghana and Kwame Nkrumah University of Science and Technology. These respondents were targeted and reached for the completion of the questionnaire through the distribution of printed copies of the questionnaire which were distributed by the researcher and assisted by two other National Service personnel. The questions were simple and straightforward which helped respondents to understand the purpose or goal of the study and these allowed for good responses.

A response rate (also known as completion rate or return rate) in survey research refers to the number of people who answered the survey divided by the number of people in the sample” (Ankrah, 2014, p.142). According to Babbie (2010) as cited in Anaman, et al (2018), a response rate of at least 50% is adequate for analysis and reporting. It was further stated that a response rate of 60% is good while that of 70% is very good and above is excellent. After the survey, a total of two hundred and seventy six (276) responses were received out of the total sample of three hundred and forty four (344). This represents a response rate of 80.23%.

After receiving the completed copies of the questionnaire, they were analyzed using the Statistical Package for the Social Sciences (SPSS) version 22, while Microsoft Excel was used to generate tables and figures using values from frequencies and related percentage scores.

The analysis was based on the topic under study organized in seven subsections as outlined below:

- i. Demographic information of respondents
- ii. Students' knowledge concerning plagiarism
- iii. Students' awareness of Turn-It-In software
- iv. Students' usage of Turn-It-In software
- v. Students' perception about the use of Turn-It-In software
- vi. Computer literacy skills and perceived ease of use of Turn-It-In software
- vii. Challenges students face in using Turn-It-In software

4.2 Demographic Information of respondents

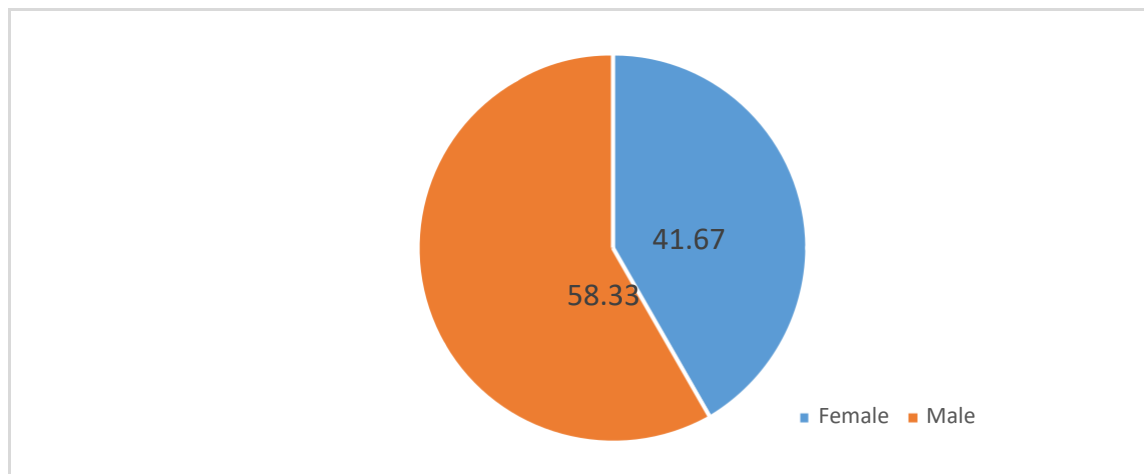
Demographic information refers to the characteristics of the population under study. According to Salkind (2016) the demographic information provides data regarding research participants and it is necessary for the determination of whether the individuals in a particular study are a representative sample of the target population for generalization purposes. The demographic information looks at the gender, age, educational qualification, marital status, family size, ethnicity, race, income etc. For the purpose of this study, the researcher looked at the following demographic information; gender, age, education level (college and the college levels) of the respondents.

4.2.1 Gender Distribution of Respondents

According to Encarta Dictionary (2019), “gender is the sex of a person or organism, or of a whole category of people or organisms”. As earlier researchers have proven, gender has a significant influence on the use of new technology (Callahan, 2018). With regard to the gender distribution of the respondents, they were asked to indicate whether they were males or females. The results showed that 161(58.33%) of the respondents were males while 115 (41.67%) were females. This

indicates that the highest number of respondents were males. Figure 4.1 illustrates the gender distribution of the respondents.

Figure 4. 1: Gender of Respondents



Source: Field Data, 2019

N=276

4.2.2 Age Distribution of Respondents

Age is defined as “a description of an individual's development based on biomarkers” (Poston, 2019). Age is one of the critical demographic characteristics in research that need to be considered especially in the area of electronic learning (Aramide, Ladipo, & Adebayo, 2015). In view of this, the respondents were asked to indicate their ages in ranges. From Table 4.1, it was observed that many of respondents, 139 (50.36%) were within the age bracket of 26-35 years. This was followed by those within the ages 36-45 years 86 (31.16%), those 46years and above 27 (9.78%) and finally those 25years or below 24 (8.70%). From the results of the age distribution, it can be observed that highest number of the graduates were within the age bracket of 26-35 years, followed closely by those between 36-45years. Moreover, there were few persons of the ages above 46years studying or undertaking graduate or tertiary studies. Table 4.1 depicts the age distribution of the

respondents.

Table 4. 1: Age Distribution of Respondents

Category	Frequency	Percent
25 years or below	24	8.70
26-35 years	139	50.36
36-45 years	86	31.16
46 Above	27	9.78
Grand Total	276	100.00

Source: Field Data, 2019

N=276

4.2.3 Institution of Respondents

Table 4.2 shows the distribution of respondents in the two universities namely Kwame Nkrumah University of Science and Technology (KNUST) and University of Ghana (UG).

Table 4. 2: Institution of Respondents

Category	Frequency	Percent
UG	154	55.80
KNUST	122	44.20
Total	276	100.00

Source: Field Data, 2019

N=276

From 4.2, a total responses of 276 were received after the issuance of the questionnaire during the survey. From the responses, 154 (55.8%) were from UG and 122 (44.2%) were from KNUST. This shows that, there were more responses from UG than KNUST.

4.2.4 Colleges of Respondents

Students in a university are identifiable by the disciplines they study. The various disciplines are classified into colleges. Hence respondents were asked to identify the various colleges they belonged to. From Table 4.3, it is observed that the highest number of respondents 159 (57.61%) belonged to the College of Humanities and Social Sciences while 117 (42.39%) of the respondents belonged to the College of Health Sciences. This shows a high level of students of the Humanities and Social Sciences than those of the Health Sciences as illustrated in Table 4.3.

Table 4. 3: Colleges of Respondents

Category	Frequency	Percent (%)
College of Health Science	117	42.39
College of Humanities and Social Sciences	159	57.61
Grand Total	276	100.00

Source: Field Data, 2019

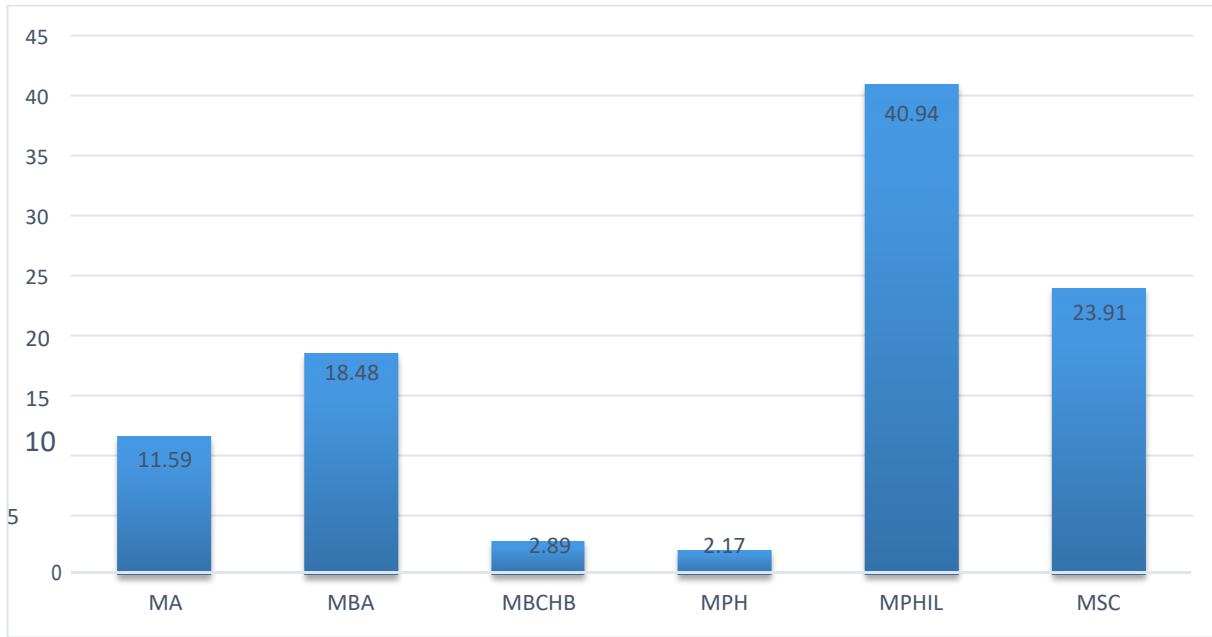
N=276

4.2.5 College Levels of Respondents

Figure 4.2 shows the distribution of the various levels of graduate students in the Colleges of the universities as used in the study. It was realized that the highest number of the respondents were MPHIL students 94 (40.94%), followed by MSc 55 (23.91%), MBA 43 (18.48%), MA 27

(11.59%), MBCHB 7 (2.89%), and MPH 5 (2.17%) respectively. This shows that there were more MPHIL students as compared to the other levels as indicated in Figure 4.2

Figure 4. 2: College Levels of Respondents



Source: Field Data, 2019

N=276

4.3 Students’ knowledge concerning plagiarism

One of the major objectives of the study was to investigate students’ knowledge concerning plagiarism. The Cambridge University Press (2019) defined knowledge as the “understanding of or information about a subject that you get by experience or study, either known by one person or by people generally”. Therefore, knowledge can be defined as the awareness of something or the amount of information one has concerning a particular subject either by experience or study. Students need to have adequate knowledge about plagiarism in order to be able to avoid it. They need to be aware of plagiarism and also understand the various acts that constitutes it in order to be able to avoid indulging in those acts. To assess the respondents’ knowledge concerning

plagiarism, the researcher assessed their awareness of plagiarism and their understanding of the nature of plagiarism.

4.3.1 Respondents' awareness of Plagiarism

With regard to the respondents' awareness of plagiarism, they were asked to indicate whether they have heard of plagiarism or not. From Table 4.4, it is apparent that all the respondents 276 (100%) from the selected universities (UG and KNUST) indicated that they had heard of plagiarism. This implies that the respondents were aware of plagiarism since they had heard of it. Table 4.4 represents the respondents' awareness of plagiarism.

4.3.2 Respondents' understanding of the nature of plagiarism

In order to ascertain the respondents' understanding of the nature of plagiarism, they were asked to indicate the various acts that constitute plagiarism. Results from Table 4.5 showed that majority 119 (43.12%) of the respondents (276) indicated "Copying and submission of one's previous work without acknowledging the source", 83 (30.07%) indicated "closely paraphrasing sentences and ideas of people without referencing them" and 74 (26.81%) indicated "submission of someone's work without permission or reference". The results indicate that the respondents basically understood what constitute plagiarism since they could identify some acts of plagiarism. From the results, it is apparent that some of the respondents did not agree with one another on whether some acts constituted the acts of plagiarism. This implies that plagiarism as a concepts occurs in multiple forms and therefore has no uniform definition since there were differences in the respondents' understanding of the acts that constituted plagiarism. Table 4.5 illustrates the respondents' understanding of the nature of plagiarism.

Table 4. 5: Respondents' Understanding of Nature of Plagiarism

Plagiarism Acts	Frequency	Percentage
Copying and submission of one's previous work without acknowledging source.	119	43.12
Closely paraphrasing sentences and ideas of people with referencing making reference to the source	83	30.07
Submission of someone's work without permission or Reference	74	26.81
Total	276	100

Source: Field Data, 2019

N=276

4.4 Students' awareness of Turn-It-In software

According to Akpojotor (2016), "awareness is knowledge about particular information and manifested through a particular behavior." The Cambridge University Press (2017) defined awareness as one's knowledge of the existence of something or his/her understanding of a particular situation or subject at the present time based on his/her experience or information. To determine the respondents' awareness of Turn-It-In software, the researcher investigated their awareness and channels of awareness of the Turn-It-In software.

4.4.1 Respondents' awareness of Turn-It-In software

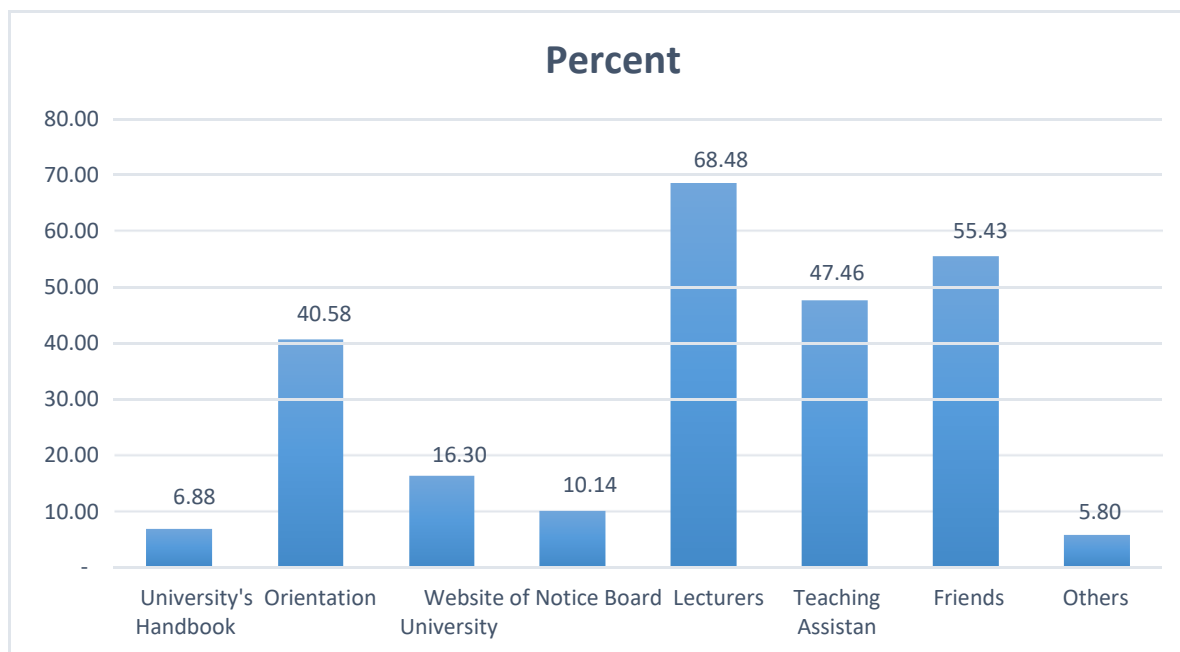
To obtain information on the respondents' awareness of Turn-It-In software as a plagiarism detection tool, they were asked to indicate whether they were aware of the existence of the Turn-It-In software. Table 4.6 shows that all the respondents 276 (100%) indicated that they were

aware of the existence of the Turn-It-In software. The results imply that both the graduate students of KNUST and UG were aware of the existence of the Turn-It-In software used for detecting plagiarism in their respective institutions. Table 4.6 depicts the respondents' awareness of the existence of Turn-It-In software.

4.4.2 Respondents' channels of awareness of Turn-It-In Software

The researcher also sought to know the respondents' channels of awareness of the Turn-It-In software. To achieve this, the respondents were asked to indicate their channels of awareness of the existence of the Turn-It-In software. From Figure 4.3, it is apparent that the respondents' were aware of the existence of the Turn-It-In software through information gathered from lecturers (68.48%); friends (55.43%); Teaching Assistants (47.46%); university's orientation programme (40.58%); university websites (16.30%); university's handbook (6.88%); and other sources (5.80%). From the results, it is evident that the major channels of the respondents' awareness of the existence of the Turn-It-In software were through information gathered from their lecturers, friends, Teaching Assistance, and through their respective university orientation programmes. Figure 4.3 represents the respondents' channels of awareness of the existence of the Turn-It-In software

Figure 4. 3: Channels of Awareness of the Turn-It-In software



Source: Field Data, 2019

N=276

4.5 Students' usage of Turn-It-In software

The Oxford University Press (2019) and Webster's Dictionary (2019), suggest the meaning of the action, or mode of using". From the definitions above, the action of using Turn-It-In software can be referred to as the usage of the Turn-It-In software. To benefit fully from the Turn-It-In software as a tool for mitigating the cancer of plagiarism, students have to make adequate use of it. With regard to the respondents' usage of the Turn-It-In software, they were asked to indicate their levels of agreement or disagreement to a specific statement provided by the researcher. The researcher also assessed their frequency of usage of the Turn-It-In software and their usage of the software when compelled by lecturers. The findings are presented below:

4.5.1 Readiness to frequently use the Turn-It-In software

With regard to the respondents' levels of agreement or disagreement to the statement, "I think that I would like to use the Turn-It-In software frequently", Table 4.7 shows that 86 (31.16%) indicated Strongly Agree, 63 (22.83%) indicated Agree, 38 (13.77%) indicated Disagree and 50 (18.22%) indicated Strongly Disagree. In total, 149 (53.99%) were in agreement with the statement while 88 (31.89%) disagreed with the statement. Also, 39 (14.13%) of the respondents were indifferent with respect to the statement. Out of the total number of respondents from UG 154 (55.8%) and KNUST 122 (44.2 %), the highest from UG 48 (31.17%) and KNUST 38 (31.15%) strongly agreed to the statement. Out of the respondents who agreed to the statement, 32 (20.78%) and 31 (25.41) were from UG and KNUST respectively. However, 19 (15.57%) of the respondents from KNUST and 19 (12.34%) from UG disagreed. Moreover, 30 (19.48%) of the respondents from UG and 20 (16.39%) from KNUST strongly disagreed. From the results, it is obvious that most of the respondents were ready to use the software frequently as most of the respondents from both KNUST and UG strongly agreed or agreed to the statement. Table 4.7 illustrates the responses.

Table 4. 7: I Think That I Will Like to Use the Turn-It-In software frequently

Institution	Agree		Disagree		Neutral		Strongly Agree		Strongly Disagree		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
KNUST	31	25.41	19	15.57	14	11.48	38	31.15	20	16.39	122	44.20
UG	32	20.78	19	12.34	25	16.23	48	31.17	30	19.48	154	55.80
Total	63	22.83	38	13.77	39	14.13	86	31.16	50	18.12	276	100.00

Source: Field Data, 2019

N=276

4.5.2 Frequency of usage of the Turn-It-In software

To obtain information on the respondents' frequency of usage of the Turn-It-In software, they were asked to indicate their frequency of usage of the software. From the results, out of 189 (68.48%) of the respondents who indicated that they rarely used the Turn-It-In software, 112 (72.73%) were from UG while 77 (63.11%) were from KNUST. Out of 29 (10.51%) who indicated Weekly, 13 (10.66%) were from KNUST while 16 (10.39%) were from UG. Few of the respondents 26 (9.42%) and 11 (3.99%) from both institutions indicated Monthly and Regularly respectively. The results show that most of the students from both institutions (UG and KNUST) rarely used the Turn-It-In software. From the results, it can be deduce that the level of usage of the Turn-It-In software by the graduate students of UG and KNUST was low because most of the students from both institutions hardly used the software. Perhaps the students only use it when compelled by their instructors or lecturers or due to their negative perception towards the usage of the software. Table 4.8 represents the respondents' frequency of use of the Turn-It-In software.

Table 4. 8: Frequency of Use of the Turn-It-In Software

Institution	NA		Regularly		Monthly		Rarely		Weekly		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
KNUST	8	6.56	4	3.28	8	6.56	77	63.11	13	10.66	122	44.20
UG	13	8.44	7	4.55	18	11.69	112	72.73	16	10.39	154	55.80
Total	21	7.61	11	3.99	26	9.42	189	68.48	29	10.51	276	100.00

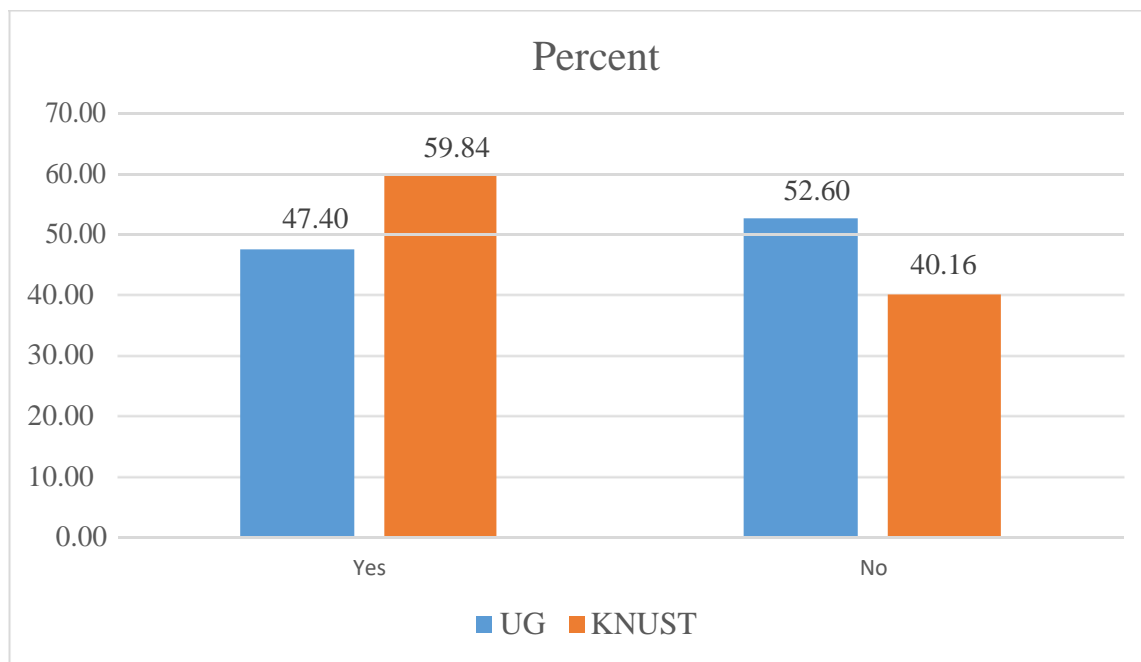
Source: Field Data, 2019

N=276

4.5.3 Usage of the Turn-It-In software when compelled by lecturers

The respondents were also asked to indicate whether their usage of the Turn-It-In software was compelled by their lecturers or not. The findings revealed that 146 (52.90%) indicated “Yes” while 130 (47.10%) indicated “No”. Out of the respondents who indicated “Yes”, 73 (59.84%) were from KNUST while 73 (47.40%) were from UG. From the respondents who indicated “No”, 81 (52.60%) and 49 (40.16%) were from UG and KNUST respectively. From the results, it can be deduced that many of the students from both universities only used the Turn-It-In software because they were compelled to do so by their lecturers. Figure 4.4 represents the results.

Figure 4. 4: Usage of the Turn-It-In software when compelled by lecturers



Source: Field Data, 2019

N=276

4.6 Students' perception about the use of Turn-It-In software

The Cambridge University Press (2019) define perception as “a thought, belief, or opinion, often held by many people and based on appearances”. The thoughts or opinions held by students concerning the use of the Turn-It-In software and its role in detecting plagiarism can be understood as their perception about the use of the software as a plagiarism detection tool. To ascertain the respondents' perception about their use of the Turn-It-In software, the researcher investigated their perceived usefulness and ease of use of the Turn-It-In software, and their preference of other means of checking plagiarism other than the Turn-It-In software.

4.6.1 Respondents' perceived usefulness of Turn-It-In software

The importance of every software (technology) to reduce manual work cannot be overlooked and how the technology helps to reduce workload and improve work with the greatest efficiency and effectiveness is paramount. Abdullah, Ward, & Ahmed (2016) indicated that, perceived usefulness is “the degree to which an individual believes that utilizing a particular system would upgrade his or her job performance”. By this research, perceived usefulness will benefit graduates through the use of the Turn-It-In software to easily check plagiarism hence improving the originality of reports and projects. The researcher in her quest to assess the usefulness of the Turn-It-In software requested respondents to indicate their agreement or disagreement to certain statements as presented in the various tables and figures below.

4.6.1.1 Perceived research enhancement benefits of Turn-It-In

Literature for research is very critical for the collection of data especially in relation to the secondary sources where different literature of other authors or scholars are utilized. The Turn-It-

In software helps to check for plagiarism and the use of it determines to some level the quality and originality of one's work. In assessing if the software enhances the research experience of the respondents, many of the respondents 98 (35.51%) indicated Agree and 86 (31.16%) indicated Strongly Agree. Those who indicated Neutral were 45 (16.30%) whilst those who were in disagreement and indicated Disagree and Strongly Disagree were 28 (10.14%) and 19 (6.88%) respectively. 122 (44.2 %) of the total respondents were from KNUST whereas 154 (55.8%) respondents were from UG. From the Table, it can be observed also that, respondents from UG who indicated agree to the statement were 56 (36.36%) whilst that of KNUST 42 (34.43%). Furthermore, 40 (32.79%) respondents from KNUST and 46 (29.87%) from UG pointed out Strongly Agree to the statement to indicate that the Turn-It-In software enhances their research experience. In contrast to the above on those who agreed and strongly agreed, some respondents from UG 16 (10.39%) and KNUST 12 (9.84%) indicated Disagree. Also, 11 (7.14%) respondents from UG and 8 (6.56%) from KNUST strongly disagreed to the statement. The responses are represented in Table 4.9.

Table 4. 9: Turn-It-In software enhances my Research experience

Institution	Agree		Disagree		Neutral		Strongly Agree		Strongly Disagree		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
KNUST	42	34.43	12	9.84	20	16.39	40	32.79	8	6.56	122	44.20
UG	56	36.36	16	10.39	25	16.23	46	29.87	11	7.14	154	55.80
Total	98	35.51	28	10.14	45	16.30	86	31.16	19	6.88	276	100.00

Source: Field Data, 2019

N=276

From the results in Table 4.9, it can be pointed out that those who indicated Strongly Agree and Agree to the statement far outweighed those who indicated Strongly Disagree and Disagree. This indicates that the Turn-It-In software enhances the research experiences of the students in UG and KNUST.

4.6.1.2 Ease of upload of assignment into Turn-It-In software.

With regard to the statement; “I can easily upload my assignments on the turn-it-in software”, the results in Table 4.10 show that the highest number of respondents 78 (28.26%) indicated Strongly Agree while 62 (22.46%) indicated Agree. From the total of Strongly Agree, 52 (33.77%) respondents were from UG while 26 (21.31%) were from KNUST. Additionally, 32 (26.23%) respondents from KNUST and 30 (19.48%) from UG respectively indicated Agree. Moreover, those who indicated Strongly Disagree and Disagree were 50 (18.12%) and 34 (12.32%) respectively. In relation to those who indicated Strongly Disagree, 33 (21.43%) were from UG while 24 (19.67%) were from KNUST. Also, out of those who indicated Disagree, 17 (13.93%) were from KNUST while 17 (11.04%) were from UG. Some of the respondents 45 (16.30%) indicated Neutral to show neither Agree nor Disagree. The results also showed that, 122 (44.2 %) of the total respondents were from KNUST whereas 154 (55.8%) respondents were from UG. From the above, it can be observed that, most students’ used the Turn-It-In software to easily upload their assignments to check originality content to avoid plagiarism. Table 4.10 shows responses of the students on their ability to upload assignments unto the Turn-It-In software.

Table 4. 10: Easy upload of assignments unto the Turn-It-In software.

Institution	Agree		Disagree		Neutral		Strongly Agree		Strongly Disagree		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
KNUST	32	26.23	17	13.93	23	18.85	26	21.31	24	19.67	122	44.20
UG	30	19.48	17	11.04	22	14.29	52	33.77	33	21.43	154	55.80
Total	62	22.46	34	12.32	45	16.30	78	28.26	57	20.65	276	100.00

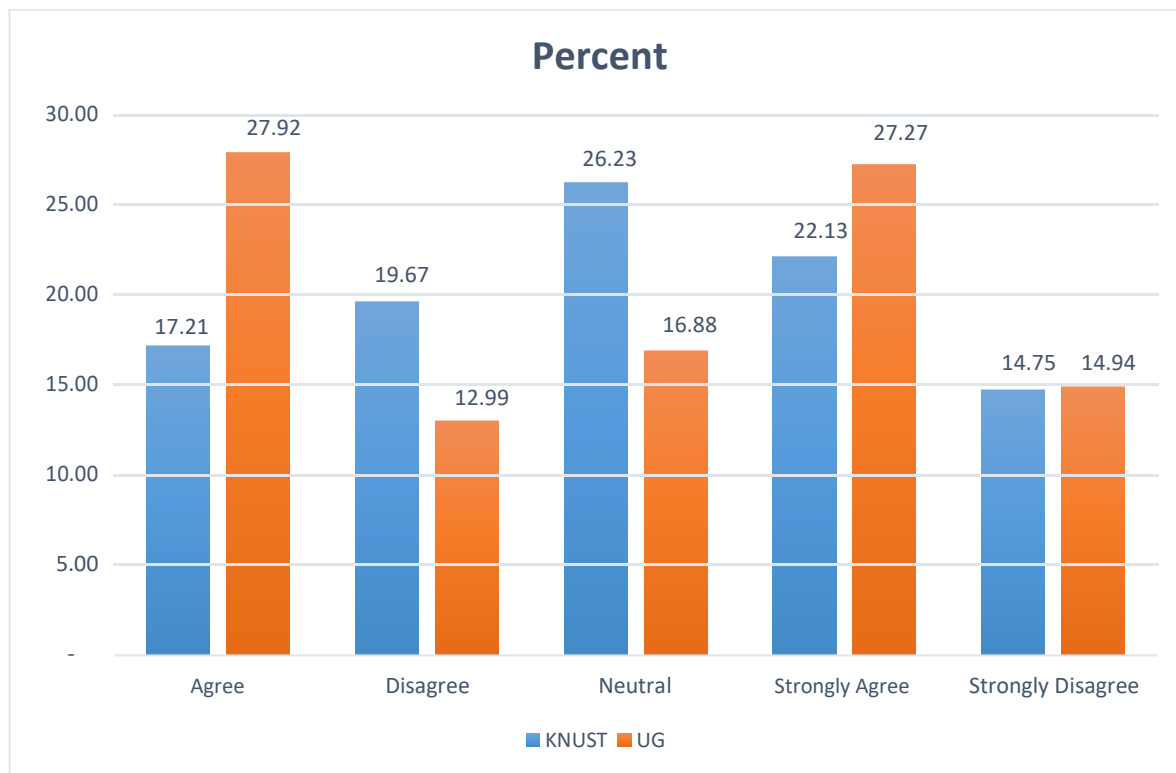
Source: Field Data, 2019

N=276

4.6.1 Perceived enhancement of academic performance of Turn-It-In software

The respondents were also asked to give their opinions on the perceived usefulness of the Turn-It-In software on the statement, “Using the Turn-It-In increases my academic performance”. The results are represented in the Figure 4.5.

Figure 4. 5: Turn-It-In usage increases academic performance



Source: Field Data, 2019

N=276

From Figure 4.5, many of the respondents pointed out their agreement to the statement with those who indicated Strongly Agree representing 69 (25%) and Agree 64 (23.19%) totaling 133 (48.19%). From the total of those who indicated Strongly Agree, 42 (27.27%) were from UG and 27 (22.13%) were from KNUST. For those who pointed out Agree, 43 (23.19%) and 21 (17.21%) were from UG and KNUST respectively. In contrast to those who were in agreement, those who disagreed hence indicating Strongly Disagree and Disagree were 41 (14.86%) and 44 (15.94%)

respectively. From this result, 23 (14.75%) and 18 (14.75%) were from UG and KNUST respectively representing those who strongly disagreed. Furthermore, those who indicated Disagree were 24 (19.67%) from KNUST and 20 (12.99%) from UG accordingly. The results show that most of the respondents from both universities agreed that the Turn-It-In usage improved their academic performance as most respondents were in agreement with the statement.

4.6.1.4 Turn-It-In as an enabler to gain confidence in research activities

The respondents also indicated their levels of agreement or disagreement with regard to the statement “Using the Turn-It-In software has enabled me to gain extra confidence in my research activities”. Many of the respondents were in agreement to the statement representing Strongly Agree 82 (29.71%) and Agree 69 (25%) totaling 151 (54.71%). In relation to those who strongly agreed, 49 (31.82) and 33 (27.05%) respondents were from UG and KNUST respectively. Also, those who indicated Agree showed that, 41 (26.62%) were from UG while 28 (22.95%) were from KNUST. In contrast, those who were in disagreement to the statement indicating Strongly Disagree and Disagree were 37 (13.41%) and 37 (13.41%) respectively. Those who indicated strongly disagree were 20 (16.39%) from KNUST and 17 (11.04) from UG. Those who indicated Neutral were 51 (18.48%). This therefore posits that, the Turn-It-In software has enabled and improved the confidence of respondents in their research activities. Table 4.11 depicts the responses.

Table 4. 11: Turn-It-In usage increases confidence in research activities.

Institution	Agree		Disagree		Neutral		Strongly Agree		Strongly Disagree		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
KNUST	28	22.95	17	13.93	24	19.67	33	27.05	20	16.39	122	44.20
UG	41	26.62	20	12.99	27	17.53	49	31.82	17	11.04	154	55.80
Total	69	25.00	37	13.41	51	18.48	82	29.71	37	13.41	276	100.00

Source: Field Data, 2019

N=276

4.6.1.5 Ability to access the Turn-It-In software on smart phones anywhere and anytime

On the statement “I can access the Turn-It-In software with my smart phone anywhere”, many of the respondents were in agreement representing Strongly Agree 53 (19.20%) and Agree 40 (14.49%) making a total agreement of 93 (33.69%). For those who indicated strongly agree, 26 (21.31%) were from KNUST while 27 (17.53%) were from UG. Also, for Agree, 27 (17.53%) and 13 (10.66%) were from UG and KNUST respectively. In contrast, those who were in disagreement hence indicating Strongly Disagree 48 (17.39%) and Disagree 44 (15.94%) making a total disagreement of 92 (33.33%). From this, those who indicated Strongly Disagree showed that, 28 (22.95%) and 20 (12.99%) were from KNUST and UG respectively. Also, those who indicated Disagree showed that, 26 (16.88%) were from UG and 18 (14.75%) were from KNUST. Moreover, there was a huge number who indicated Neutral representing 91 (32.97%). This indicates that many respondents were indifferent to the statement. From a comparative analysis by deducing from the above, it can be observed that there were uncertainties and challenges with regard to respondents’ ability to assess the software on their smart devices. The responses are represented in Figure 4.6.

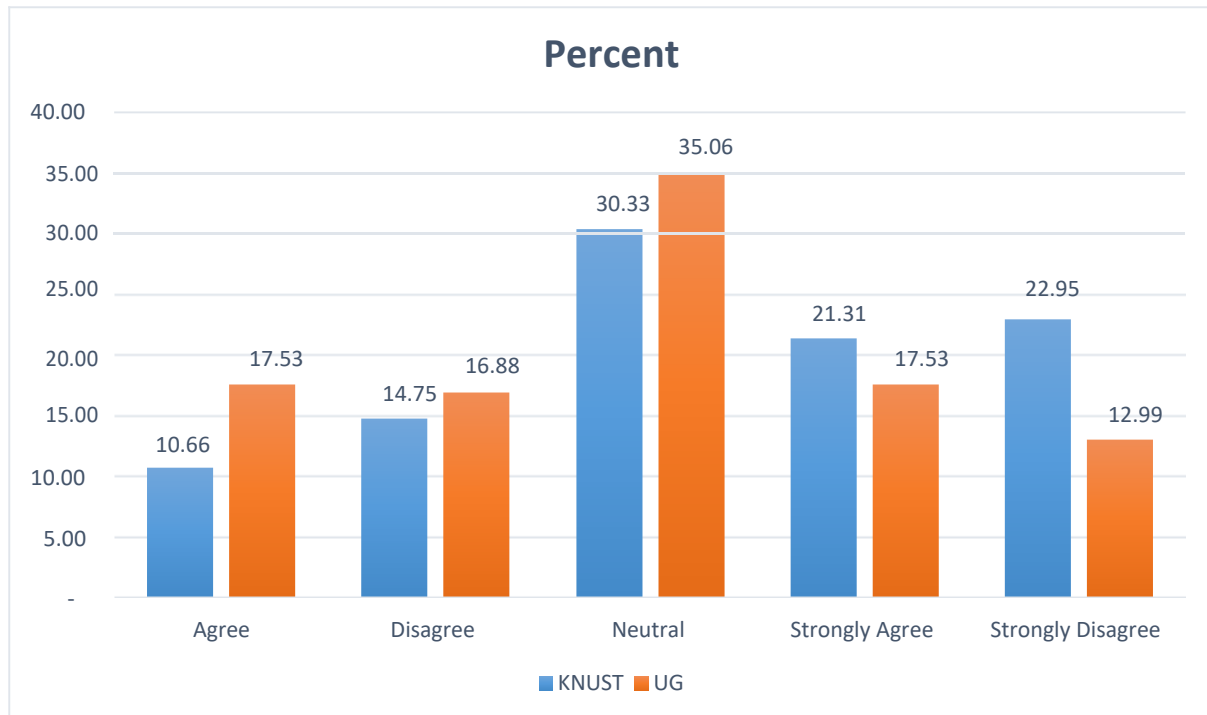


Figure 4. 6: Ability to access the Turn-It-In software on smart phone anywhere and anytime

Source: Field Data, 2019

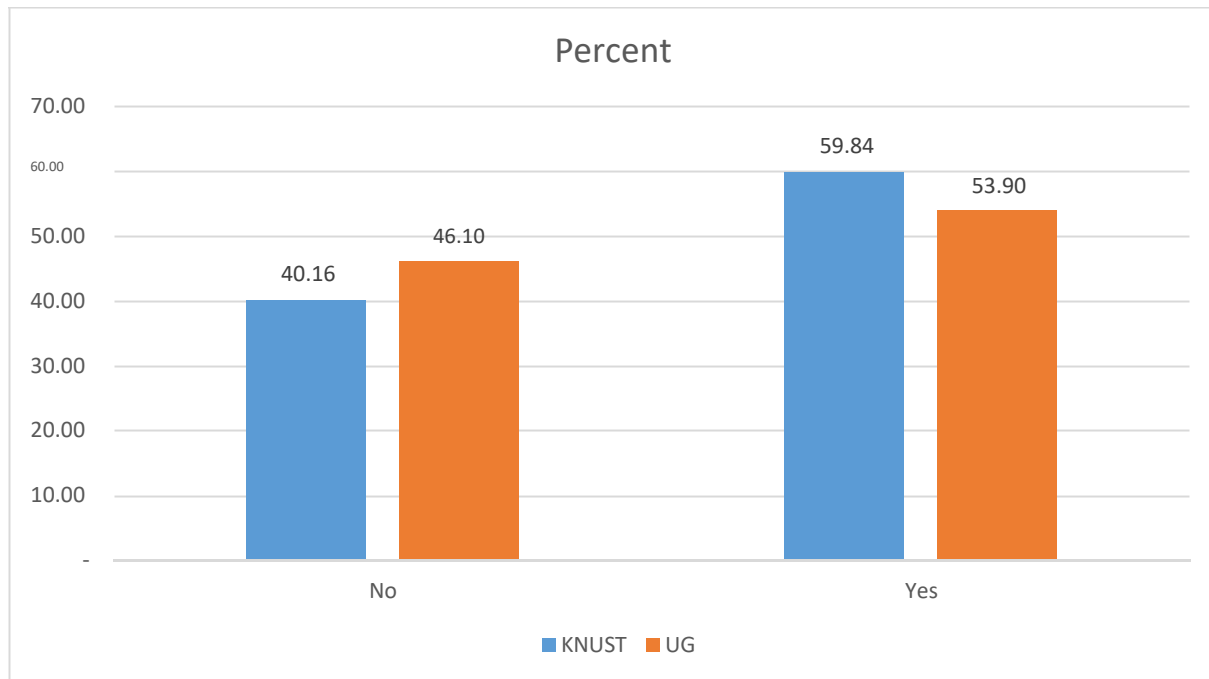
N=276

4.6.1.6 Turn-It-In contribution to academic work

For this statement, a good number of respondents 156 (56.52%) indicated that the Turn-It-In software had contributed tremendously to their academic work hence indicating “Yes”. Also, 120 (43.48%) of the respondents admitted that the Turn-It-In software had not contributed much to their academic work hence indicated “No”. Out of the respondents who indicated “Yes”, 73 (59.84%) were from KNUST and 83 (53.90%) were from UG. In contrast, out of those who indicated “No”, 71 (46.10%) were from UG while 49 (40.16%) were from KNUST. From the results, it can be deduced that, though a higher response rate of 156 (56.52%) indicated tremendous contribution of the software to their academic work, there is much to be done to improve its usage

in the universities to help improve academic work since there was a great number who indicated “No” 120 (43.48%) to the statement. The responses are illustrated in Figure 4.7.

Figure 4. 7: Turn-It-In software has contributed tremendously to your academic work



Source: Field Data, 2019

N=276

4.6.2 Respondents’ perceived ease of use of Turn-It-In software

As part of investigating the respondents’ perception about their usage of the Turn-It-In software, the researcher investigated their perception about the ease of use of the Turn-It-In software. The respondents were asked to indicate their levels of agreement or disagreement with regard to some statements provided by the researcher. The results are presented below:

4.6.2.1 Ease of use Turn-It-In software

On the statement “I find it easy to use the Turn-It-In software”, many of the respondents agreed to the statement representing Strongly Agree 79 (28.62%) and Agree (60 (21.74%). Also, those neutral were 53 (19.20%) whereas those who disagreed to the statement indicating Strongly

Disagree and Disagree were 43 (15.58%) and 41 (14.86%) respectively. With reference to those who indicated Strongly Agree, 52 (33.77%) and 27 (22.13%) were from UG and KNUST respectively. Also for Agree, 32 (26.23%) and 28 (18.18%) were from KNUST and UG respectively. In contrast to those who agreed to the statement, the respondents who indicated Strongly Disagree were 24 (19.67%) and 19 (12.34%) from KNUST and UG respectively. Lastly those who Disagree were 20 (16.39%) and 21 (13.64%) from KNUST and UG respectively. This shows that a good number of the respondents agreed to the statement “I find it easy to use the Turn-It-In software” hence finding it easy to use the Turn-It-In software for their works. The ease of usage of the Turn-It-In software was important for students to show interest in its usage to complete their academic works. Table 4.12 depicts the responses.

Table 4. 12: Easy Usage of the Turn-It-In software

	Agree		Disagree		Neutral		Strongly Agree		Strongly Disagree		Total	
Institution	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
KNUST	32.00	26.23	20.00	16.39	19.00	15.57	27.00	22.13	24.00	19.67	122.00	44.20
UG	28.00	18.18	21.00	13.64	34.00	22.08	52.00	33.77	19.00	12.34	154.00	55.80
Total	60.00	21.74	41.00	14.86	53.00	19.20	79.00	28.62	43.00	15.58	276.00	100.00

Source: Field Data, 2019

N=276

4.6.2.2 Turn-It-In interface flexibility and friendliness

On the statement “The interface of the Turn-It-In is friendly and flexible to use”, those who agreed to the statement were the highest number representing Strongly Agree 67 (24.28%) and Agree 54 (19.57%). Of the total for Strongly Agree, 31 (25.41) were from KNUST while 36 (23.38%) were from UG. Also, for those who indicated Agree, 32 (20.78%) were from UG and 22 (18.03%) were from KNUST. Those who indicated Neutral were 70 (25.36%). Those who disagreed with the statement hence indicating Strongly Disagree and Disagree were 45 (16.30%) and 40 (14.49%) respectively. Of those who indicated Strongly Disagree, 21 (17.21%) were from KNUST while 24 (15.58%) were from UG. Also, for those who indicated Disagree, 23 (14.94%) were from UG and 17 (13.93%) were from KNUST. The results from the responses showed that a good number of the respondents agreed to the fact that the interface of the Turn-It-In software was friendly and flexible to use. The results are illustrated in Table 4.13.

Table 4. 13: Interface of Turn-It-In is friendly and flexible to use.

Institution	Agree		Disagree		Neutral		Strongly Agree		Strongly Disagree		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
KNUST	22	18.03	17	13.93	31	25.41	31	25.41	21	17.21	122	44.20
UG	32	20.78	23	14.94	39	25.32	36	23.38	24	15.58	154	55.80
Total	54	19.57	40	14.49	70	25.36	67	24.28	45	16.30	276	100.00

Source: Field Data, 2019

N=276

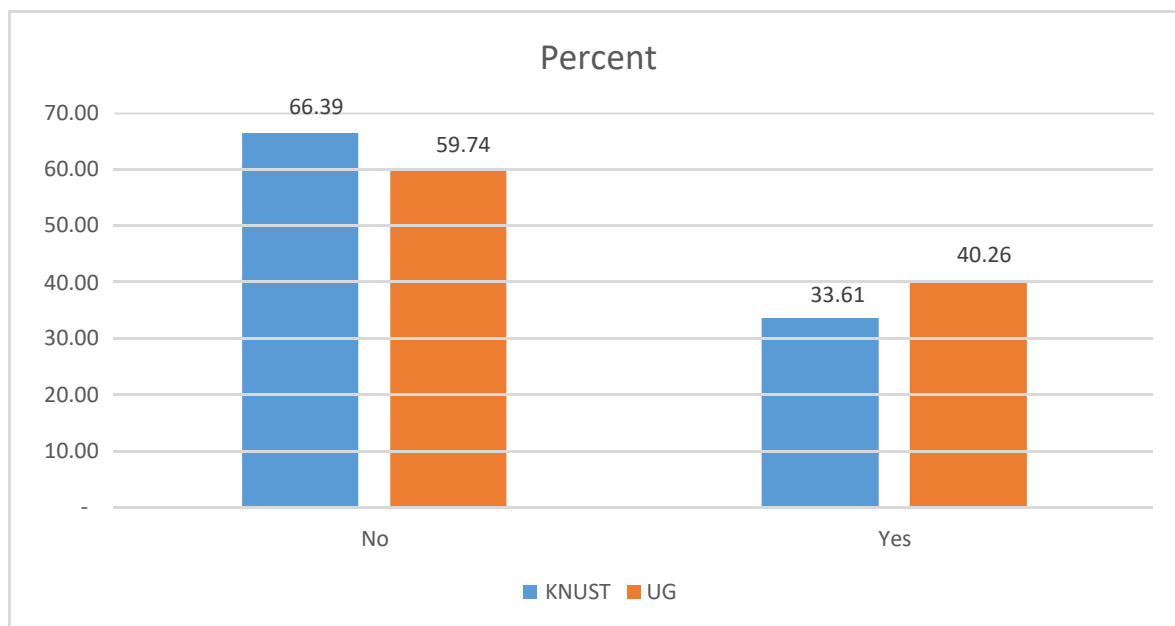
4.6.3 Preference of other means of checking plagiarism other than Turn-It-In

The researcher also investigated the respondents’ preference of other means of checking plagiarism other than the Turn-It-In software as part of finding out their perception about the use of the Turn-It-In software. The respondents were asked to indicate their preference of other means of checking plagiarism, other options they prefer and their reasons for preference. The following subsections present the results.

4.6.3.1 Respondents’ preference of other means of checking plagiarism

Figure 4.8 represents the respondents’ preference of other means of checking plagiarism.

Figure 4. 8: Respondents preference of other means of checking plagiarism



Source: Field Data, 2019

N=276

With regard to the respondents’ preference of other means of checking plagiarism, Figure 4.8 showed that many of the respondents indicated “No” 173 (62.68%), hence denied preference of other means of checking plagiarism rather than the use of the Turn-It-In software. Those who

indicated “Yes”, hence indicating their preference of other means were 103 (37.32%). The total number of respondents from UG and KNUST were 154 (55.8%) and 122 (44.2 %) respectively. Out of the respondents from UG, 92 (59.74%) and 62 (40.26%) indicated “No” and “Yes” respectively. Out of the number of respondents from KNUST, 81 (66.39%) indicated “No” while 41 (33.61%) indicated “Yes”. From the results, it can be deduced that a good number of the students from both UG and KNUST preferred using the Turn-It-In software to check plagiarism rather than other means.

4.6.3.2 Respondents’ preferred options for checking plagiarism

The respondents who indicated that they preferred other means of checking plagiarism were also asked to indicate their preferred options. The results from Table 4.14 revealed that many of the respondents 75 (54.74%) preferred using Filtering to check plagiarism. Other preferences included Rating System 46 (33.58%), Filtering & Rating System 09 (6.57%), Blocking 04 (2.92%), Filtering, Rating System & Blocking 02 (1.46%) and filtering & blocking 01 (0.73%). From the responses, it can be deduced the respondents who preferred other options for checking plagiarism preferred Filtering, and Rating Systems more than any other option as indicated above. Table 4. 14 depicts the respondents’ preference of other options for checking plagiarism.

Table 4. 14: Respondents' preferred options for checking plagiarism

Category	Frequency	Percent
Blocking	04	2.92
Filtering	75	54.74
Rating System	46	33.58
Filtering & Blocking	01	0.73
Filtering & Rating System	09	6.57
Filtering, Rating System & Blocking	02	1.46
Grand Total	137	100.00

Source: Field Data, 2019**N=137**

4.6.3.3 Respondents' reasons for Preference

The respondents who indicated their preferred options for checking plagiarism other the Turn-It-In software were then asked to indicate their reasons for preference. Table 4.15 showed that many of the respondents 110 (80.29%) indicated Fast and easy to use, 92 (67.15%) indicated Easy to identify exactly what is been plagiarized, 86 (62.77%) indicated Accuracy of checking plagiarism, 59 (43.07%) indicated Very convenient and simple to use, 56 (40.88%) indicated Very reliable, 42 (30.66%) indicated Easy to access and 24 (17.52%) indicated User friendly. This shows that among the reasons for other means of checking plagiarism indicated by the respondents, Fast and ease of use was rated the highest followed by Easy to identify exactly what is been plagiarized, Accuracy of checking plagiarism, Very convenient and simple to use, Very reliable, Easy to access and User friendly respectively. The responses are represented in Table 4.15

Table 4. 15: Respondents' reasons for Preference

Category	Frequency	Percent
Accuracy of checking plagiarism	86	62.77
Fast and easy to use	110	80.29
Easy to identify exactly what is been plagiarized	92	67.15
Very convenient and simple to use	59	43.07
Easy to access	42	30.66
Very reliable	56	40.88
User friendly	24	17.52

Source: Field Data, 2019**N=276**

4.7 Computer literacy skills and perceived ease of use of Turn-It-In software

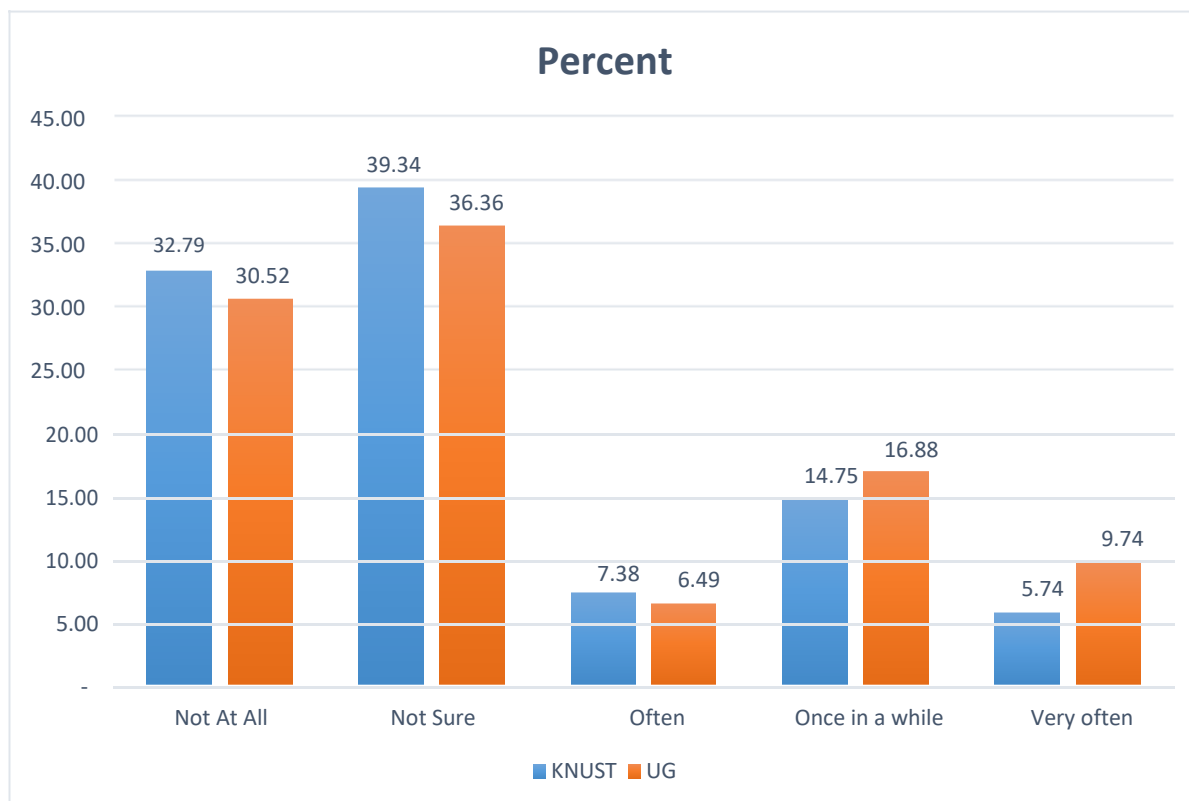
The ability to efficiently and effectively utilize the Turn-It-In software largely depends on the level of skills of the individual. To make a maximum use of Turn-It-In, students must acquire and practice the skills necessary to exploit it. A skill is “the ability to do something well, usually as a result of experience and training” (Macmillan Dictionary 2019). Skills in the usage of Turn-It-In involve the ability to access and effectively interact with the Turn-It-In software. This includes students’ ability to navigate through the software, submit their assignments and retrieve the originality report after processing. It also includes their ability to interpret the originality report. This therefore implies that students may require information and computer literacy skills in order to be able to effectively utilize Turn-It-In. In ascertaining the respondents’ computer literacy skills

and their perceived ease of use of the Turn-It-In software, the researcher assessed the frequency of training provided by their Colleges on the use of the Turn-It-In software and their knowledge in navigating the Turn-It-In software. The respondents were then asked to rate their skills with respect to specific statements provided by the researcher. Finally, the respondents were asked to indicate their levels of agreement or disagreement with respect to specific statements provided by the researcher. This results are presented in the following subsections.

4.7.1 Provision of training on how to use the Turn-It-In software

With regard to the frequency of training provided by the Colleges of the respondents, the respondents were asked to indicate how often their Colleges provide training on the use of the Turn-It-In software. Figure 4.9 depicts the responses.

Figure 4. 9: Provision of Training on how to use the Turn-It-In software



Source: Field Data, 2019

N=276

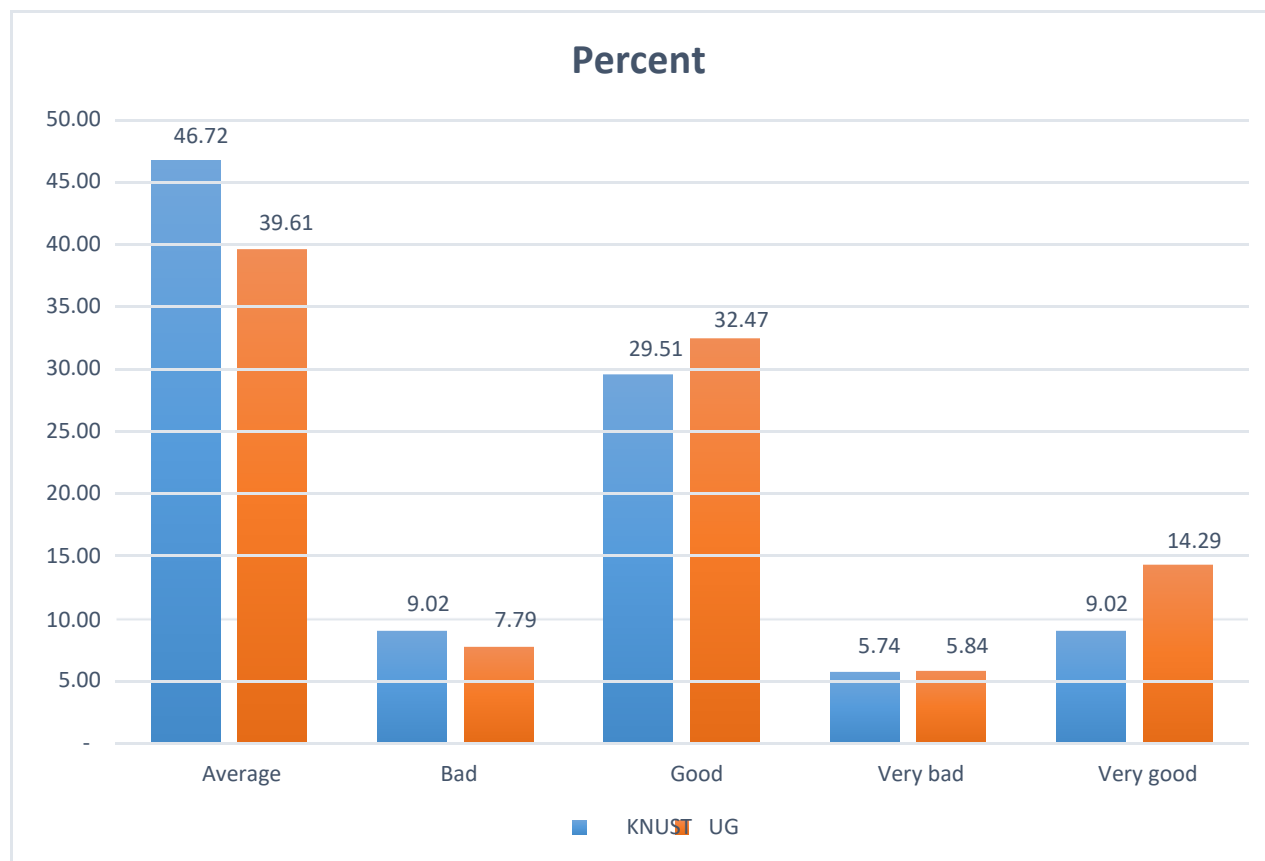
The results from Figure 4.9 revealed that many of the respondents, 209 (75.70%), indicated that they were not sure whether their Colleges provided training on how to use the Turn-It-In software. From this, 109 (39.34%) were from KNUST and 100 (36.36%) were from UG. A significant number 175 (63.31%) also indicated Not at all; meaning their Colleges did not provide such training. Of this total, 91 (32.79%) were from KNUST and 84 (30.52%) were from UG. Also, some of the respondents 88 (31.63%) indicated Once in a while. Out of this 41 (14.75%) and 47 (16.88%) were from KNUST and UG respectively. Those who indicated Very often were 43 (15.48%) of which 16 (5.74%) and 27 (9.74%) were from KNUST and UG respectively. Finally those who indicated Often were 38 (13.87%) of which 20 (7.38%) and 18 (6.49%) from KNUST and UG respectively. The results indicate that training on the use of the Turn-It-In software was

questionable in the various colleges of the respondents. The results also indicate that UG and KNUST do not provide adequate training on the use of the Turn-It-In software for their students as most of the respondents from both universities indicated Not at all and Not Sure.

4.7.2 Respondents' ability to submit assignment through the Turn-It-In software

The respondents also rated their ability to submit assignments through the Turn-It-In software. The findings indicated that many of the respondents 118 (42.75%) indicated Average, 86 (31.16%) indicated Good, 33 (11.96%) indicated Very Good, 23 (8.33%) indicated Bad, and 16 (5.80%) also indicated Very bad. From the total of those who indicated Average, 61 (39.61%) were from UG and 57 (46.72%) were from KNUST. Also, for those who indicated Good, 50 (32.47%) were from UG and 36 (29.51%) were from KNUST. Out of those who indicated Very Good, 22 (11.96%) were from UG and 11 (9.02%) were from KNUST. For those who indicated Bad, 12 (7.79%) were from UG while 11 (9.02%) were from KNUST. From the findings, it can be inferred that many respondents' ability to submit assignment through the Turn-It-In software was average; an indication that the students of both universities have the ability to submit their assignments through the Turn-It-In software. The findings also implies that in UG and KNUST, students' ability to submit assignments through the Turn-It-In software was average. Figure 4.10 illustrates the respondents' ability to submit assignment through the Turn-It-In software.

Figure 4. 10: Respondents’ ability to submit assignment through the Turn-It-In software



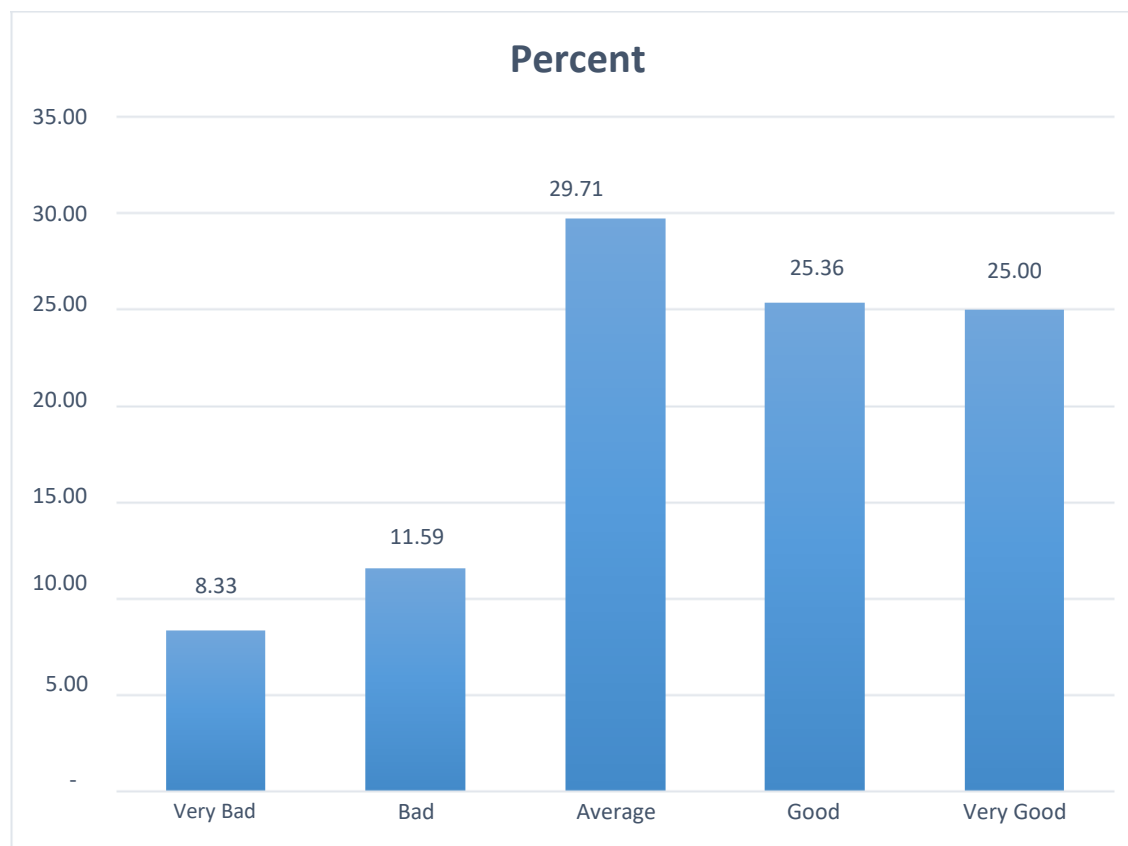
Source: Field Data, 2019

N=276

4.7.3 Respondents’ ability to retrieve their work and plagiarism report from the Turn-It-In software.

The researcher again asked the respondents to rate their ability to retrieve the report of their work after submitting it through the Turn-It-In software. The findings revealed that those who were positive to the statement and expressed their ability to retrieve such report hence indicating Very Good 69 (25%) and Good 70 (25.36%) totaled 139 (50.36%). Those who indicated Average were 82 (29.71%). Also those who indicated Very Bad 23 (8.33%) and Bad 32 (11.59%) totaled 55 (19.92%). The results indicate that many of the respondents were able to retrieve the report of their

work after submitting it through the Turn-It-In software. The results also indicate that many of students in UG and KNUST were able to retrieve the report of their work after submitting it through the Turn-It-In software. Figure 4.11 illustrates the respondents’ ability to retrieve the reports of their works after submitting them through the Turn-It-In software.



Source: Field Data, 2019

N=276

Figure 4. 11: Respondents’ ability to retrieve their work report after submission through the Turn-It-In software.

4.7.4 Requirements for special computer skill in using Turn-It-In

Finally, the respondents were asked to indicate their levels of agreement or disagreement with regard to the statement, “Turn-It-In does not require any special computer skill in using it”. The results showed that the highest number of respondents 60 (21.74%) indicated Strongly Agree and

66 (23.91%) indicated Agree. Out of those who indicated Strongly Agree, 27 (22.13%) and 33 (21.43%) were from KNUST and UG respectively. Also, 40 (25.97%) and 26 (21.31%) from UG and KNUST respectively indicated Agree. In contrast, those who indicated Strongly Disagree and Disagree were 41 (14.86%) and 55 (19.93%) respectively. From these totals, 19 (15.57%) and 22 (14.29%) from KNUST and UG respectively indicated Strongly Disagree. Also, 28 (22.95%) respondents from KNUST and 27(17.53%) from UG indicated Disagree. Finally those who indicated Neutral were 54 (19.57%). The results show that many of the respondents from both universities were in agreement with the statement; “Turn-It-In does not require any special computer skills in using it”. This therefore implies that most of the respondents from both UG and KNUST agreed that they do not need any special computer literacy skills in using the Turn-It-In software. The responses are illustrated in Table 4.16

Table 4. 16: Turn-It-In does not require any special computer skill in using it

	Agree		Disagree		Neutral		Strongly Agree		Strongly Disagree		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
KNUST	26	21.31	28	22.95	22	18.03	27	22.13	19	15.57	122	44.20
UG	40	25.97	27	17.53	32	20.78	33	21.43	22	14.29	154	55.80
Total	66	23.91	55	19.93	54	19.57	60	21.74	41	14.86	276	100.00

Source: Field Data, 2019

N=276

4.8 Challenges students face in their usage of the Turn-It-In software

The Cambridge University press (2019) defined a challenge as “(the situation of being faced with) something that needs great mental or physical effort in order to be done successfully and therefore tests a person's ability”. The Merriam-Webster’s Dictionary (2019) also defined a challenge as “a stimulating task or problem”. Based on the above definitions, a challenge can be defined as a problem or difficulty one faces in a particular situation. Challenges in the use of Turn-It-In can therefore be defined as the problems or difficulties one faces when using the Turn-It-In software. Where technologies and machines operate, there is the tendency of users facing diverse challenges in their operations aside the numerous benefits enjoyed in using the platform. The Turn-It-In software is likely to bring along with it its own challenges which the researcher sought to ascertain from the respondents in their use of the Turn-It-In software. To assess the challenges the respondents’ face in using the Turn-It-In software, they were asked to indicate the challenges they face in using the software from a list of statements that the researcher perceived to best describe the challenges students may face in using the Turn-It-In software. The results are presented below.

4.8.1 Inadequacy of training on how to use the Turn-It-In software

On the first statement; “There is inadequate training on how to use the Turn-It-In software” the highest number of respondents 166 (60.14%) indicated “Yes”; meaning they agreed that inadequate training on how to use the Turn-It-In software was a challenge that they faced in using the Turn-It-In software. In contrast, a good number 110 (39.86%) of the respondents indicated ‘No’; meaning that inadequate training on how to use the Turn-It-In software does not posit a challenge in using it. Out of the number of respondents who indicated “Yes”, 94 (61.04%) were from UG while 72 (59.02%) were from KNUST. From the number of respondents who indicated

“No”, 50 (40.98%) were from KNUST while 60 (38.94%) were from UG. From the results, it can be inferred that inadequate training on how to use the Turn-It-In software posits a challenge to using it as the highest number of respondents from both universities indicated “Yes” with regard to the statement. The results are represented in Table 4.17

Table 4. 17: There is inadequate training on the usage of the Turn-It-In software

Institution	Yes		No		Total	
	Freq.	%	Freq.	%	Freq.	%
KNUST	72	59.02	50	40.98	122	44.20
UG	94	61.04	60	38.96	154	55.80
Total	166	60.14	110	39.86	276	100.00

Source: Field Data, 2019

N=276

4.8.2 Difficulty in getting access to the internet

The respondents were also asked to indicate whether the difficulty in getting access to the internet posits a challenge to their usage of the Turn-It-In software. The results revealed 107 (38.77%) of the respondents indicated “Yes”; meaning the difficulty in getting access to the internet posits a challenge to their usage of the Turn-It-In software. However, the highest number of respondents 169 (61.23%) indicated “No”; meaning the difficulty in getting access to the internet did not posit a challenge to their usage of the Turn-It-In software. Out of those who indicated “Yes”, 61 (39.61%) were from UG while 46 (37.70%) were from KNUST. Also, from those who indicated “No”, 93 (60.39%) were from UG while 76 (62.30%) were from KNUST.

The results imply that the students from both UG and KNUST did not consider the difficulty in getting access to internet a challenge to their usage of the Turn-It-In software. The responses are illustrated in Table 4.18.

Table 4. 18: Difficulty in accessing the internet

Institution	Yes		No		Total	
	Freq.	%	Freq.	%	Freq.	%
KNUST	46	37.7	76	62.3	122	44.2
UG	61	39.61	93	60.39	154	55.8
Total	107	38.77	169	61.23	276	100

Source: Field Data, 2019

N=276

4.8.3 System errors causing inability to access the Turn-It-In software

With regard to the statement “Sometimes I experience system errors and inability to access the turn-it-in software”, as one of the challenges to the use of the Turn-It-In software, the highest number of respondents 147 (53.26%) indicated “Yes” while 129 (46.74%) indicated “No”. From the total of those who indicated “Yes”, 77 (50%) and 70 (57.38%) were from UG and KNUST respectively. Also, for those who indicated “No”, 77 (50%) were from UG while 52 (42.62%) were from KNUST. The findings showed that many of the respondents from both universities indicated that system errors and the inability to access the Turn-It-In software was a challenge that they faced in their usage of the Turn-It-In software. The findings can be ascertained because like all

other software, the Turn-It-In software is liable to system errors and its accessibility is limited due to licensing issues. Table 4.19 represents the responses.

Table 4. 19: System errors and inability to access the Turn-It-In software

Institution	Yes		No		Total	
	Freq.	%	Freq.	%	Freq.	%
KNUST	70	57.38	52	42.62	122	44.2
UG	77	50	77	50	154	55.8
Total	147	53.26	129	46.74	276	100

Source: Field Data, 2019

N=276

4.7.4 Power outages denying access to the Turn-It-In software

On the statement “Power outages sometimes deny me from accessing the Turn-it-in software”, the results revealed that majority of the respondents indicated “No” representing 223 (80.80%) to show that power outages does not affect their access to the Turn-It-In software. However, 53 (19.20%) indicated “Yes” to show that power outages affected their access to the Turn-It-In software. The respondents from KNUST who indicated “No” were 95 (77.87%) while that of UG were 128 (83.12%). Out of those who indicated “Yes”, 27 (22.13%) were from KNUST while 26 (16.88%) were from UG. The results from the responses showed that power outages did not significantly affect students’ access to the Turn-It-In software as majority of the respondents indicated “No”. Table 4.20 represents the results.

Table 4. 20: Power outages denying accessing the Turn-It-In software

Institution	Yes		No		Total	
	Freq.	%	Freq.	%	Freq.	%
KNUST	27	22.13	95	77.87	122	44.2
UG	26	16.88	128	83.12	154	55.8
Total	53	19.2	223	80.8	276	100

Source: Field Data, 2019

N=276

CHAPTER FIVE

DISCUSSION OF MAJOR FINDINGS

5.1 Introduction

This chapter discusses the major findings of the study based on the main objectives of the study under the following subsections: students' knowledge concerning plagiarism; students' level of awareness of Turn-It-In software; students' usage of Turn-It-In software; computer literacy skills and perceived ease of use of Turn-It-In software; students' perception about the use of Turn-It-In software; and challenges students face in using Turn-It-In software.

5.2 Students' Knowledge concerning plagiarism

One of the major objectives of the study was to investigate students' knowledge concerning plagiarism. The Cambridge University Press (2019) defined knowledge as the “understanding of or information about a subject that you get by experience or study, either known by one person or by people generally”. Therefore, knowledge can be defined as the awareness of something or the amount of information one has concerning a particular subject either by experience or study. Students need to have adequate knowledge about plagiarism in order to be able to avoid it. They need to be aware of plagiarism and also understand the various acts that constitute it in order to be able to avoid indulging in those acts. To assess the respondents' knowledge concerning plagiarism, the researcher assessed their; awareness, channels of awareness of plagiarism and their understanding of the nature of plagiarism.

5.2.1 Respondents' Awareness of plagiarism

With regard to the respondents' awareness of plagiarism, they were asked to indicate whether they have heard of plagiarism or not. The findings of the study revealed high level of awareness of plagiarism among the respondents. All the respondents 276(100%) indicated that they had heard of plagiarism. This indicates that the respondents were highly aware of plagiarism. In support of the findings, Abukari (2016) observed high level of awareness of plagiarism among students in the Narh-Bita College, Ghana. The author investigated the awareness and incidence of plagiarism among students in higher education. A sample of 143 students were investigated and the results revealed that majority (76%) of the respondents were aware of plagiarism. The findings by Oyewole and Abioye (2015) further confirmed the results. The authors investigated the awareness of plagiarism acts and policy by post-graduate students in the University of Ibadan, Nigeria and found that the students were highly aware of plagiarism. The results revealed that out of 226 respondents, 171(86.4%) were aware of what plagiarism was and majority were highly aware of the different acts that constituted it. However, the findings by Ramzan et al. (2012) were the opposite. The authors found that university students in Pakistan had low level of awareness of plagiarism and university plagiarism policies and processes. The authors collected data from 365 graduate and postgraduate students in Pakistan and the findings revealed that the students had low level of awareness of plagiarism and its policies in their universities.

5.2.2 Respondents' understanding of the nature of plagiarism

The respondents were also asked to demonstrate their understanding of the nature of plagiarism by indicating the acts that constitute plagiarism. The findings revealed that the highest number of respondents 119 (43.12%) indicated "Copying and submission of one's previous work without acknowledging the source", 83 (30.07%) indicated "Closely paraphrasing sentences and ideas of

people without referencing the source” and 74 (26.81%) indicated “Submission of someone’s work without permission or reference”. This result indicate that the respondents had good understanding of what constituted plagiarism since they could identify some acts of plagiarism. From the results, it is apparent that some of the respondents did not agree with one another on whether some acts constituted plagiarism. This implies that plagiarism as a concept occurs in multiple forms and therefore has no uniform definition since there were differences in the respondents understanding of the acts that constituted plagiarism. The findings are consistent with Oyewole and Abioye (2015). The authors investigated the awareness of plagiarism acts and policy by post-graduate students in the University of Ibadan, Nigeria. The results revealed that out of 226 respondents, 171(86.4%) were aware of what plagiarism was and majority were highly aware of the different acts of plagiarism; an indication that the respondents had good understanding of what plagiarism was.

Ramadhan (2017) also observed that many of the students of some selected East African universities perceived plagiarism as a concept with many dimensions. This indicates that the students had different understanding of what constituted plagiarism. In contrast to the findings, Babalola and Yemisi (2012) observed that most of the undergraduate students at Babcock University, Nigeria were more likely to plagiarize unintentionally because they lacked adequate knowledge of the acts that constitute plagiarism. Ibegbulam and Eze (2015) also had contrasting results. The authors found that majority (71%) of 282 students in the University of Nigeria had no knowledge that “copying from the internet without acknowledging the source” was an act of plagiarism. This indicates the students’ inadequate understanding of the acts that constitute plagiarism.

5.3 Students' awareness of Turn-It-In software

The Cambridge University Press (2017) defined awareness as one's knowledge of the existence of something or his/her understanding of a particular situation or subject at the present time based on his/her experience or information. To determine the respondents' awareness of Turn-It-In software, the researcher investigated their awareness and channels of awareness of the Turn-It-In software.

5.3.1 Respondents' awareness of Turn-It-In software

With regard to the respondents' awareness of the Turn-It-In software, they were asked to indicate whether they were aware of the existence of the Turn-It-In software in their institutions. The findings revealed that all the respondents 276 (100%) were aware of the existence of the Turn-It-In software. This implies that the graduate students of UG and KNUST were fully aware of the existence of the Turn-It-In software used for checking plagiarism in their respective institutions. In conformity with the findings, Graham-Matheson and Starr (2013) investigated students' level of awareness of Turn-It-In software in the Canterbury Christ Church University, UK. Data was collected from 367 respondents and the results revealed that the students were fully aware of the existence of the software. The results further revealed that majority (72.5%) of the students indicated that they had heard of Turn-It-In, 43.6% knew all about Turn-It-In and 31.3% had heard about Turn-It-In but did not know much about it. This indicates that majority of the students were aware of the existence of the Turn-It-In software in their institution.

5.3.2 Respondents' channels of awareness of the Turn-It-In software

The respondents were also asked to indicate their channels of awareness of the existence of the Turn-It-In software. The findings showed that the respondents' were aware of the existence of the Turn-It-In software through information gathered from their lecturers 189 (68.48%); friends 152 (55.43%); Teaching Assistants 131 (47.46%); university's orientation programmes 112 (40.58%); university websites 44 (16.30%); university's handbook 19 (6.88%); and other sources 16 (5.80%). From the results, it is evident that the major channels of the respondents' awareness of the existence of the Turn-It-In software were through information gathered from their lecturers, friends, Teaching Assistants, and through their respective university orientation programs. This implies that the graduate students of UG and KNUST were aware of the existence of Turn-It-In software mainly through information gathered from their lecturers, followed by their friends, Teaching Assistants and through their respective university orientation programmes respectively. The findings are supported by Abukari (2016) who investigated the awareness of plagiarism among students of the Narh-Beta College, Ghana and found that the students' channels of awareness of plagiarism were through information received from their lecturers (36%), colleagues/friends (19%) and through learning/reading (45%). Since Turn-It-In software was the tool used for checking plagiarism among the students, it can be concluded that the students got aware of Turn-It-In through their channels of awareness of plagiarism as stated above.

5.4 Students' usage of Turn-It-In software

The Oxford University Press (2019) defined usage as "the action of using something or the fact of being used". According to the Merriam-Webster's Dictionary (2019), usage is "the action, amount, or mode of using". To ascertain the respondents' usage of the Turn-It-In software, the researcher assessed their levels of agreement or disagreement with respect to a specific statement provided

by the researcher, their frequency of usage of the software, and their usage of the software when compelled by lecturers.

5.4.1 Readiness to frequently use the Turn-It-In software

The respondents were asked to indicate their levels of agreement or disagreement with regard to the following statement; “I think that I would like to use the Turn-It-In software frequently”. The findings revealed that Out of the total number of respondents from UG 154 (55.8%) and KNUST 122 (44.2 %), most from UG 48 (31.17%) and KNUST 38 (31.15%) strongly agreed to the statement. From the results, it is obvious that most of the respondents were willing to use the software frequently as most of the respondents from both KNUST and UG strongly agreed or agreed to the statement. The findings are consistent with Graham-Matheson and Starr (2013) who investigated the use of Turn-It-In to help students avoid plagiarism in the Canterbury Christ Church University, UK and found that despite the low level of usage of the Turn-It-In software among the students, majority of those who had not used it were more willing to do so. Out of the respondents 201 (55%) who indicated that they had not used the Turn-It-In software, 115 (57.1%) indicated that they were fully willing to use it and 58 (28.7%) were willing but with reservations.

5.4.2 Respondents’ frequency of usage of the Turn-It-In software

To obtain information on the respondents’ frequency of usage of the Turn-It-In software, they were asked to indicate their frequency of usage of the software. From the findings, out of 189 (68.48%) of the respondents who indicated that they “rarely” used the Turn-It-In software, 112 (72.73%) were from UG while 77 (63.11%) were from KNUST. Out of 29 (10.51%) who indicated

“Weekly”, 13 (10.66%) were from KNUST while 16 (10.39%) were from UG. Few of the respondents from both institutions indicated monthly and daily respectively. The results show that most of the students from both institutions (UG and KNUST) rarely used the Turn-It-In software. From the results, it can be deduced that the level of usage of the Turn-It-In software by the graduate students of UG and KNUST was low because most of the students from both institutions hardly used the software. Perhaps the students only used it when compelled by their instructors or lecturers or due to their negative perception towards the usage of the software. The findings are corroborated by Rop (2017) who assessed the use of Turn-It-In to enhance research among the postgraduate students and lecturers in the University of Nairobi, Kenya. Data was collected from 205 respondents and the results showed that the level of usage of Turn-It-In among the students was significantly low. This was attributed to the negative perception of the students towards the use of the software and the limited Turn-It-In licenses acquired by the university.

5.4.3 Respondents’ usage of the Turn-It-In software when compelled by their lecturer

The respondents were also asked to indicate whether their usage of the Turn-It-In software was compelled by their lecturers or not. The findings revealed that 146 (52.90%) indicated “Yes” while 130 (47.10%) indicated “No”. Out of the respondents who indicated “Yes”, 73 (59.84%) were from KNUST while 73 (47.40%) were from UG. From the respondents who indicated “No”, 81 (52.60%) and 49 (40.16%) were from UG and KNUST respectively. From the results, it can be deduced that many students from both universities only used the Turn-It-In software because they were compelled to do so by their lecturers. In support of the findings, Jones (2008) observed that students mostly used the Turn-It-In software when they are required to do so by their lecturers in order to check for plagiarism to test the originality of their work.

5.5 Students' perception about the use of the Turn-It-In software

The Cambridge University Press (2019) define perception as “a thought, belief, or opinion, often held by many people and based on appearances”. The thoughts or opinions held by students concerning the use of the Turn-It-In software and its role in detecting plagiarism can be understood as their perception about the use of the software as a plagiarism detection tool. To ascertain the respondents' perception about their use of the Turn-It-In software, the researcher investigated their perceived usefulness and ease of use of the Turn-It-In software, and their preference of other means of checking plagiarism other than the Turn-It-In software.

5.5.1 Respondents' perceived usefulness of the Turn-It-In software

The respondents were asked to indicate their levels of agreement or disagreement with respect to some statements provided by the researcher. The findings are presented below:

5.5.1.1 Perceived research enhancement benefits of Turn-It-In

With regard to the first statement; “Turn-It-In software enhances my research experience”, out of 276 respondents, 122 (44.2 %) were from KNUST and 154 (55.8%) were from UG. From the total number of respondents from UG, 46 (29.87%) indicated Strongly Agree, 56 (36.36%) indicated Agree, 16 (10.39%) indicated Disagree and 11 (7.14%) indicated Strongly Disagree. Out of the Total number of respondents from KNUST, 40 (32.79%) indicated Strongly Agree, 42 (34.43%) indicated Agree, 12 (9.84%) indicated Disagree and 8 (6.56%) indicated Strongly Disagree. The results imply that many of the respondents from both universities agreed that the use of Turn-It-In software had enhanced their research experience. In support of the findings, Thuku (2017) stated that the Turn-It-In software as an online service helps students to submit their research papers and assignments. The author further stated that as students understand plagiarism and appreciate the use of the Turn-It-In software to check the originality of written reports and documents, they gain

insight into the research studies especially in building on the literature reviews. This confirms the findings of this study which pointed out that respondents' research experiences were enhanced due to their knowledge and use of the Turn-It-In software.

5.5.1.2 Ease of upload of assignments into the Turn-It-In software

With regard to the statement; "It is easy to upload assignments unto the Turn-It-In software", out of 276 respondents, 78 (28.26%) indicated Strongly Agree while 62 (22.46%) indicated Agree. From the number of respondents who indicated Strongly Agree, 52 (33.77%) were from UG while 26 (21.31%) were from KNUST. Out of the number of respondents who indicated Agree, 32 (26.23%) were from KNUST while 30 (19.48%) were from UG. Also 50 (18.12%) and 34 (12.32%) indicated Strongly Disagree and Disagree respectively. Out of those who indicated Strongly Disagree, 33 (21.43%) were from UG and 24 (19.67%) were from KNUST. Out of those who indicated Disagree, 17 (13.93%) were from KNUST and 17 (11.04%) were from UG. However, 45 (16.30%) of the respondents indicated Neutral. From the results, it can be deduced that many of the students from both universities agreed that it was easy to upload assignments unto the Turn-It-In software. Dahl (2009) supported the findings as the author found that the students of the Middlesex University Business School, UK, admitted that the Turn-It-In software was user-friendly and that it was a convenient way to submit work. This indicates that it was easy for the students to upload their assignments unto the Turn-It-In software.

5.5.1.3 Perceived enhancement of academic performance of Turn-It-In

On the statement; "Using the Turn-It-In increases my academic performance", out of 276 respondents, 133 (48.19%) agreed to the statement with 69 (25%) and 64 (23.19%) indicating Agree and Strongly Agree respectively. From the total of the respondents who indicated Strongly Agree, 42 (27.27%) were from UG and 27 (22.13%) were from KNUST. From the total of the

respondents who indicated Agree, 43 (23.19%) and 21 (17.21%) were from UG and KNUST respectively. In contrast to those who were in agreement, those who disagreed hence indicating Strongly Disagree and Disagree were 41 (14.86%) and 44 (15.94%) respectively. Out of the number who indicated Strongly Disagree, 23 (14.75%) and 18 (14.75%) were from UG and KNUST respectively. From the number of respondents who indicated Disagree, 24 (19.67%) were from KNUST and 20 (12.99%) were from UG. The results show that many of the students from both universities agreed that the usage of the Turn-It-In software had improved their academic performance. In support of the findings, Ayon (2017) investigated the impact of Turn-It-In on students' plagiarism in a private Lebanese English-speaking university. Data was collected from 150 student participants and the results generally showed that the students had positive perception about the use of the software. This was because 75% of the participants supported the use of the software in the university, 57% admitted that their experience with the software was effective, and about 48.9% perceived the software to be beneficial to students' overall education. This indicates that the use of the Turn-It-In software had improved the respondents' academic performance; hence their assertions that their experiences with the Turn-It-In software was very effective and that the Turn-It-In software was beneficial to their overall education.

5.5.1.4 Turn-It-In as enabler to gain confidence in research activities

With regard to the statement; "Using the Turn-It-In software has enabled me to gain confidence in my research activities", many of the respondents 151 (54.71%) were in agreement to statement with 82 (29.71%) indicating Strongly Agree and 69 (25%) indicating Agree. Out of those who strongly agreed, 49 (31.82) and 33 (27.05%) were from UG and KNUST respectively. From those

who agreed, 41 (26.62%) were from UG while 28 (22.95%) were from KNUST. However, some of the respondents, 37 (13.41%) and 37 (13.41%) strongly disagreed and disagreed respectively. Of those who strongly disagreed, 20 (16.39%) from KNUST and 17 (11.04) were from UG. The number of respondents who indicated Neutral were 51 (18.48%). The results imply that the use of the Turn-It-In software had improved the confidence of the respondents from both universities in their research activities. The findings are confirmed by Ayon (2017) who investigated the impact of Turn-It-In on students' plagiarism in a private Lebanese English-speaking university and found that most of the students admitted that the use of the Turn-It-in software had; helped them work ethically, avoided plagiarism, improved their writing skills, improved their citation skills, made them to be self-dependent, and had made them creative. These assertions indicate that the students had gained confidence in their research activities through the use of the Turn-It-In software.

5.5.1.5 Ability to access the Turn-It-In software on smart phones anywhere and anytime

With regard to the respondents' "ability to access the Turn-It-In software on smart phone anywhere and anytime", 93 (33.69%) of the respondents agreed to the statement with 53 (19.20%) and 40 (14.49%) indicating Strongly Agree and Agree respectively. Out of those who indicated Strongly Agree, 26 (21.31%) were from KNUST while 27 (17.53%) were from UG. From those who indicated Agree, 27 (17.53%) and 13 (10.66%) were from UG and KNUST respectively. In contrast, 92 (33.33%) of the respondents disagreed to the statement with 48 (17.39%) and 44 (15.94%) indicating Strongly Disagree and Disagree respectively. Of those who indicated Strongly Disagree, 28 (22.95%) and 20 (12.99%) were from KNUST and UG respectively. Out of those who indicated Disagree, 26 (16.88%) were from UG and 18 (14.75%) were from KNUST. A significant number 91 (32.97%) of the respondents indicated Neutral. This indicates that there were a lot of respondents who were indifferent to the statement. The results imply that many of

the respondents from both universities were certain that they can access the Turn-It-In software on their smart phones anywhere and anytime. However, a significant number were not quite certain about their ability to access the Turn-It-In software on their smart phones anywhere and anytime. The findings also imply that the Turn-It-In software was not user-friendly to a significant number of the respondents since they were uncertain of their ability to access it using their smart phones. Thompsett and Ahluwalia (2010) confirmed the findings as the authors investigated the perceptions of plagiarism and collusion among final year Pharmacology students in the University of East London and found that 59% of the students indicated that Turn-It-In software was not user-friendly.

5.5.1.6 Turn-It-In software contribution to academic work

The respondents were also asked to indicate whether the Turn-It-In software has contributed tremendously to their academic work. The findings revealed that a good number of respondents 156 (56.52%) indicated “Yes”; meaning the Turn-It-In software had contributed tremendously to their academic work. However, 120 (43.48%) of the respondents indicated “No”; meaning the Turn-It-In software had not contributed much to their academic work. From the respondents who indicated “Yes”, 73 (59.84%) were from KNUST while 83 (53.90%) were from UG. Out of the respondents who indicate “No”, 71 (46.10%) were from UG while 49 (40.16%) were from KNUST. From the results, it can be inferred that though many of respondents indicated that the Turn-It-In software had tremendous contribution to their academic work, a significant number indicated that the Turn-It-In software had not contributed much to their academic work. The findings imply that a significant number of the graduate students in UG and KNUST do not perceive that the Turn-It-In software is beneficial to their overall education. In contrast to the findings, Ayon (2017) investigated the impact of Turn-It-In on students’ plagiarism in a private

Lebanese English-speaking university. Data was collected from 150 student participants and the results generally showed that the students had positive perception about the use of the software. This was because 75% of the participants supported the use of the software in the university, 57% admitted that their experience with the software was effective, and about 48.9% perceived the software to be beneficial to students' overall education. This indicates that the use of the Turn-It-In software had contributed tremendously to the respondents' academic work; hence their assertions that their experiences with the Turn-It-In software was very effective and that the Turn-It-In software was beneficial to their overall education.

5.5.2 Respondents' perceived ease of use of the Turn-It-In software

As part of investigating the respondents' perception about their use of the Turn-It-In software, the researcher investigated their perception about the ease of use of the Turn-It-In software. The respondents were asked to indicate their levels of agreement or disagreement to some statements provided by the researcher. The findings are discussed below:

5.5.2.1 Ease of use Turn-It-In software

On the statement "I find it easy to use the Turn-It-In software", many of the respondents agreed to the statement with 79 (28.62%) and 60 (21.74%) indicating strongly agree and agree respectively. However, 53 (19.20%) were neutral to the statement whereas 43 (15.58%) and 41 (14.86%) strongly disagreed and disagreed respectively. With reference to those who indicated Strongly Agree, 52 (33.77%) and 27 (22.13%) were from UG and KNUST respectively. Also, for those who agreed, 32 (26.23%) and 28 (18.18%) were from KNUST and UG respectively. In contrast to those who agreed to the statement, the respondents who strongly disagreed were 24 (19.67%) and

19 (12.34%) from KNUST and UG respectively. Lastly with those who disagreed, 20 (16.39%) and 21 (13.64%) were from KNUST and UG respectively. This shows that, a good number of the respondents agreed to the statement; “I find it easy to use the Turn-It-In software”. The ease of usage of the Turn-It-In software is important for students to show interest in its usage to complete their academic works. The findings are consistent with Dahl (2009) as the author found that the students of the Middlesex University Business School, UK, admitted that the Turn-It-In software was user-friendly and that it was a convenient way to submit work. This indicates that the students had found it easy to use the Turn-It-In software. In contrast to the findings, Thompsett and Ahluwalia (2010) investigated the perceptions of plagiarism and collusion among final year Pharmacology students in the University of East London and found that 59% of the students indicated that Turn-It-In software was not user-friendly. This indicates that the students had not found the Turn-It-In software easy to use.

5.5.2.2 Turn-It-In interface flexibility and friendliness

With regard to the statement; “The interface of the Turn-It-In is friendly and flexible to use”, a good number of the respondents strongly agreed 67 (24.28%) and agreed 54 (19.57%). From the total of those who strongly agreed, 31 (25.41) were from KNUST while 36 (23.38%) were from UG. Of those who indicated Agree, 32 (20.78%) were from UG and 22 (18.03%) were KNUST. A significant number 70 (25.36%) indicated Neutral. Those who disagreed to the statement hence indicating Strongly Disagree and Disagree were 45 (16.30%) and 40 (14.49%) respectively. Of those who indicated Strongly Disagree, 21 (17.21%) were from KNUST while 24 (15.58%) were from UG. Also, those who indicated Disagree were 23 (14.94%) from UG and 17 (13.93%) from KNUST. The results from the responses showed that, a good number of the respondents agreed that the interface of the Turn-It-In software is friendly and flexible to use. However, the findings

by Bensal and Miraflores (2013) were the opposite. The authors explored the use of Turn-It-In in addressing the incidence of plagiarism among students in a private university in the Philippines and observed that the students perceived the Turn-It-In software as a complex program liable to be misused by students. The complexity of the Turn-It-In software perhaps means that its interface is not friendly and flexible to use.

5.5.3 Respondents' preference of other means of checking plagiarism

The researcher also investigated the respondents' preference of other means of checking plagiarism other than the Turn-It-In software as part of finding out their perception about the use of the Turn-It-In software. The respondents were asked to indicate their preference of other means of checking plagiarism, other options they prefer and their reasons for preference. The findings are discussed below:

5.5.3.1 Respondents' preference of other means of checking plagiarism

With regard to the respondents' preference of other means of checking plagiarism, many of the respondents 173 (62.68%) indicated "No", hence denied preference of other means of checking plagiarism rather than the use of the Turn-It-In software. Those who indicated "Yes", hence indicating their preference of other means were 103 (37.32%). The total number of respondents from UG and KNUST were 154 (55.8%) and 122 (44.2 %) respectively. Out of the respondents from UG, 92 (59.74%) and 62 (40.26%) indicated "No" and "Yes" respectively. Out of the number of respondents from KNUST, 81 (66.39%) indicated "No" while 41 (33.61%) indicated "Yes". From the results, it can be deduced that a good number of the students from both UG and KNUST preferred using the Turn-It-In software to check plagiarism rather than other means. The findings are supported by Dahl (2009) as the author found that the students of the Middlesex University Business School, UK, preferred the use of Turn-It-In as a plagiarism detection tool. The author

collected data from 24 undergraduate students and the results showed that majority (22) preferred using Turn-It-In as compared to other means of checking plagiarism.

5.5.3.2 Respondents' preferred options for checking plagiarism

The respondents who indicated that they preferred other means of checking plagiarism were also asked to indicate their preferred option. The findings revealed that many of the respondents 75 (54.74%) preferred using Filtering to check plagiarism. Other preferences included Rating System 46 (33.58%), Filtering & Rating System 09 (6.57%), Blocking 04 (2.92%), Filtering, Rating System & Blocking 02 (1.46%) and filtering & blocking 01 (0.73%). From the responses, it can be deduced that, the respondents who preferred other options for checking plagiarism preferred Filtering, and Rating Systems more than any other option as indicated above. The findings are in contrast to Dahl (2009) as the author found that the students of the Middlesex University Business School, UK, preferred the use of Turn-It-In as a plagiarism detection tool as compared to other means such as filtering, rating systems and blocking. The author collected data from 24 undergraduate students and the results showed that majority (22) preferred using Turn-It-In as compared to other means of checking plagiarism.

5.5.3.3 Respondents' reasons for their preference

The respondents who indicated their preferred options for checking plagiarism other the Turn-It-In software were then asked to indicate their reasons for preference. The findings showed that many of the respondents 110 (80.29%) indicated Fast and easy to use, 92 (67.15%) indicated Easy to identify exactly what is been plagiarized, 86 (62.77%) indicated Accuracy of checking plagiarism, 59 (43.07%) indicated Very convenient and simple to use, 56 (40.88%) indicated Very reliable, 42 (30.66%) indicated Easy to access and 24 (17.52%) indicated User friendly. This shows that among the reasons for other means of checking plagiarism indicated by the respondents,

Fast and ease of use was rated the highest followed by Easy to identify exactly what is been plagiarized, Accuracy of checking plagiarism, Very convenient and simple to use, Very reliable, Easy to access and User-friendliness respectively. In contrast to the findings, Ayon (2017) investigated the impact of Turn-It-In on students' plagiarism in a private Lebanese English-speaking university. Data was collected from 150 student participants and the results generally showed that the students preferred the use of Turn-It-In as a plagiarism detection tool as compared to other means of checking plagiarism. This was because 75% of the participants supported the use of the software in the university, 57% admitted that their experience with the software was effective, and about 48.9% perceived the software to be beneficial to students' overall education. This implies that there are more pertinent reasons for using Turn-It-In as compared to the other means of checking plagiarism as indicated above.

5.6 Computer literacy skills and perceived ease of use of Turn-It-In among students

The ability to efficiently and effectively utilize Turn-It-In largely depends on the level of skills of the individual. To make a maximum use of Turn-It-In, students must acquire and practice the skills necessary to exploit it. A skill is "the ability to do something well, usually as a result of experience and training" (Macmillan Dictionary 2019). Skills in the usage of Turn-It-In involve the ability to access and effectively interact with the Turn-It-In software. This include students' ability to navigate through the software, submit their assignments and retrieve the originality report after processing. It also includes their ability to interpret the originality report. This therefore implies that students may require information and computer literacy skills in order to be able to effectively utilize Turn-It-In.

In ascertaining the respondents' computer literacy skills and their perceived ease of use of the Turn-It-In software, the researcher assessed the frequency of training provided by their Colleges

on the use of the Turn-It-In software and their knowledge in navigating the Turn-It-In software. The respondents were then asked to rate their skills with respect to specific statements provided by the researcher. Finally, the respondents were asked to indicate their levels of agreement or disagreement with respect to specific statements provided by the researcher. This findings are discussed below.

5.6.1 Provision of training on how to use the Turn-It-In software

With regard to the frequency of training provided by the Colleges of the respondents, the respondents were asked to indicate how often their Colleges provide training on the use of the Turn-It-In software, the findings revealed that many of respondents 209 (75.70%) indicated that they were not sure whether their colleges provided training on how to use the Turn-It-In software. From this, 109 (39.34%) were from KNUST and 100 (36.36%) were from UG. A significant number 175 (63.31%) also indicated Not at all; meaning their colleges did not provide such training. Of this total, 91 (32.79%) were from KNUST and 84 (30.52%) were from UG. Also, some of the respondents 88 (31.63%) indicated Once in a while. Out of this 41 (14.75%) and 47 (16.88%) were from KNUST and UG respectively. Those who indicated Very often were 43 (15.48%) of which 16 (5.74%) and 27 (9.74%) were from KNUST and UG respectively. Finally those who indicated Often were 38 (13.87%) of which 20 (7.38%) and 18 (6.49%) from KNUST and UG respectively. The results indicate that training on the use of the Turn-It-In software was questionable in the various colleges of the respondents. The results also indicate that UG and KNUST do not provide adequate training on the use of the Turn-It-In software for their students as many of the respondents from both universities indicated Not at all and Not Sure. The findings

by Darko-Adjei (2018) rejected findings above as the author explored the challenges students face in using the web-based service (Sakai) in the University of Ghana. The results revealed that out of 230 respondents, only a quarter 57.96 (25.2%) of them indicated inadequate training as a challenge to the use of the Sakai LMS. This indicates that the students of UG had received adequate training on the use of the Sakai platform. Since students in the University of Ghana get access to the Turn-It-In software via a link on the Sakai platform, receiving training on the use of the Sakai platform also implies receiving training on the use of the Turn-It-In software.

5.6.2 Respondents' ability to submit assignments through the Turn-It-In software

The respondents also rated their ability to submit assignments through the Turn-It-In software. The findings indicated that many of the respondents 118 (42.75%) indicated Average, 86 (31.16%) indicated Good, 33 (11.96%) indicated Very good, 23 (8.33%) indicated Bad, and 16 (5.80%) also indicated Very bad. From the total of those who indicated Average, 61 (39.61%) were from UG and 57 (46.72%) were from KNUST. Also, for those who indicated Good, 50 (32.47%) were from UG and 36 (29.51%) were from KNUST. Out of those who indicated Very good, 22 (11.96%) were from UG and 11 (9.02%) were from KNUST. For those who indicated Bad, 12 (7.79%) were from UG while 11 (9.02%) were from KNUST. From the findings, it can be inferred that many of the respondents' ability to submit assignments through the Turn-It-In software was average; an indication that the students of both universities had the ability to submit their assignments through the Turn-It-In software. The findings also imply that in UG and KNUST, students' ability to submit assignments through the Turn-It-In software was average. Dahl (2009) found similar results as the author observed that majority (22 out of a total of 24) of the students of the Middlesex University Business School, UK, admitted that the Turn-It-In software was a convenient way to

submit their work. This implies that students had the ability to submit their assignments through the Turn-It-In software.

5.6.3 Respondents' ability to retrieve their work and plagiarism report from Turn-It-In software

The researcher again asked the respondents to rate their ability to retrieve the report of their work after submitting it to the Turn-It-In software. The findings revealed that those who were positive to the statement and expressed their ability to retrieve such report hence indicating Very good 69 (25%) and Good 70 (25.36%) totaled 139 (50.36%). Those who indicated Average were 82 (29.71%). Also, those who indicated Very bad 23 (8.33%) and Bad 32 (11.59%) totaled 55 (19.92%). The results indicate that many of the respondents were able to retrieve the report of their work after submitting it through the Turn-It-In software. The findings imply that many students in UG and KNUST were able to retrieve the reports of their works after submitting them through the Turn-It-In software. Bensal and Miraflores (2013) confirmed the findings as the authors explored the use of Turn-It-In in addressing the incidence of plagiarism among students in a private university in the Philippines. The argumentative essays (checked via Turn-It-In) of 31 students along with responses to two set of self-reflection survey were used. From the results, the students admitted that the Turn-It-In's originality reports serve to support the cautionary comments of teachers in students' drafts thereby strengthening the teachers' credibility. This indicates that the students had the ability to retrieve and interpret the originality report of their work after submitting it through the Turn-It-In software.

5.6.4 Requirements for specialized computer literacy skill in using Turn-It-In

Finally, the respondents were asked to indicate their levels of agreement or disagreement with regard to the statement; “Turn-It-In software does not require any special computer literacy skill in using it”. The findings showed that many of the respondents 60 (21.74%) indicated Strongly Agree and 66 (23.91%) indicated Agree. Out of those who indicated Strongly Agree, 27 (22.13%) and 33 (21.43%) were from KNUST and UG respectively. Also, 40 (25.97%) and 26 (21.31%) from UG and KNUST respectively indicated Agree. In contrast to the above, those who indicated Strongly Disagree and Disagree were 41 (14.86%) and 55 (19.93%) respectively. From these totals, 19 (15.57%) and 22 (14.29%) of the respondents from KNUST and UG respectively indicated Strongly Disagree. Also, 28 (22.95%) respondents from KNUST and 27(17.53%) from UG indicated Disagree. Finally, those who indicated Neutral were 54 (19.57%).

The findings showed that most of the respondents from both universities were in agreement with the statement; “Turn-It-In software does not require any special computer literacy skill in using it”. This therefore implies that many of the respondents from both UG and KNUST agreed that they do not need any special computer literacy skill in using the Turn-It-In software. However, the findings by Thompsett and Ahluwalia (2010) showed that the students of the University of East London needed some computer literacy skills in order to be able to exploit the Turn-It-In software as it was observed that the students lacked the ICT skills needed to effectively utilize Turn-It-In software. The authors investigated the perceptions of plagiarism and collusion among final year Pharmacology students in the University of East London and found 59% of the students indicated that Turn-It-In was not user-friendly. This indicates that most of the students lacked the ICT skills needed to exploit the Turn-It-In system. This may include the lack of skills on how to navigate and

effectively communicate with the system through its user interface. The findings imply that ICT skills are needed in order to be able to effectively utilize the Turn-It-In software.

5.6 Challenges students face in their use of the Turn-It-In software

The Cambridge University press (2019) defined a challenge as “(the situation of being faced with) something that needs great mental or physical effort in order to be done successfully and therefore tests a person's ability”. The Merriam-Webster’s Dictionary (2019) also defined a challenge as “a stimulating task or problem”. To assess the challenges the respondents face in using the Turn-It-In software, the respondents were asked to indicate the challenges they face in using the software from a list of statements that the researcher perceived to best describe the challenges students may face in using the Turn-It-In software. The findings are discussed below.

5.6.1 Inadequacy of training on how to use the Turn-It-In software

On the first statement; “inadequate training on how to use the Turn-It-In software” most of the respondents 166 (60.14%) indicated “Yes”; meaning they agreed that inadequate training on how to use the Turn-It-In software was a challenge that they faced in using the Turn-It-In software. In contrast, a good number 110 (39.86%) of the respondents indicated “No”; meaning that inadequate training on how to use the Turn-It-In software does not posit a challenge in using it. Out of the number of respondents who indicated “Yes”, 94 (61.04%) were from UG while 72 (59.02%) were from KNUST. From the number of respondents who indicated “No”, 50 (40.98%) were from KNUST while 60 (38.94%) were from UG. From the results, it can be inferred that inadequate training on how to use the Turn-It-In software presents a challenge to using it as most of the respondents from both universities indicated “Yes” to the statement. The findings by Darko-Adjei (2018) rejected the findings above as the author explored the challenges students face in using the web-based service (Sakai) in the University of Ghana. The results revealed that out of 230

respondents, 57.96 (25.2%) of them indicated inadequate training as a challenge to the use of the Sakai LMS. This indicates that the majority of the students of UG did not regard inadequate training as a factor that poses a challenge to the use of the Turn-It-In software since the students get access to the Turn-It-In software via a link on the Sakai platform.

5.6.2 Difficulty in getting access to the internet

The respondents were also asked to indicate whether the difficulty to getting access to the internet posits a challenge to using the Turn-It-In software. The findings revealed that from the responses, 107 (38.77%) of the respondents indicated “Yes”; meaning the difficulty in getting access to the internet posits a challenge to using the Turn-It-In software. However, many of the respondents 169 (61.23%) indicated “No”; meaning the difficulty in getting access to the internet does not posit a challenge to the use of the Turn-It-In software. Out of those who indicated “Yes”, 61 (39.61%) were from UG while 46 (37.70%) were from KNUST. Also, from those who indicated “No”, 93 (60.39%) were from UG while 76 (62.30%) were from KNUST. The findings imply that the students from both UG and KNUST did not consider the difficulty in getting access to the internet a challenge to the use of the Turn-It-In software. Darko-Adjei (2018) confirmed the above assertions relating to the challenges of using web-based services such as Turn-It-In in UG. The results revealed out of 230 respondents, 68 (29.6%) indicated poor internet connectivity as a challenge to the use of the Sakai LMS. This implies that majority of the students in UG admitted that poor internet connectivity is not a challenge to the use of the Sakai platform. Since UG students get access to the Turn-It-In software via a link on the Sakai platform, it implies that poor internet connectivity will not pose a challenge to the use of the Turn-It-In software.

5.6.3 System errors causing inability to access the Turn-It-In software

With regard to the statement “Sometimes I experience system errors and inability to access the turn-it-in software”, as one of the challenges to the use of the Turn-It-In software, many of the respondents 147 (53.26%) indicated “Yes” while 129 (46.74%) indicated “No”. From the total of those who indicated “Yes”, 77 (50%) and 70 (57.38%) were from UG and KNUST respectively. Also, for those who indicated No, 77 (50%) were from UG while 52 (42.62%) were from KNUST. The findings showed that many of the respondents from both universities indicated that system errors and the inability to access the Turn-It-In software was a challenge that they faced in their usage of the Turn-It-In software. The findings can be ascertained because like all other software, the Turn-It-In software is liable to system errors and its accessibility is limited due to licensing issues.

5.6.4 Power outages denying access to the Turn-It-In software

On the statement “Power outages sometimes deny me from accessing the Turn-it-in software”, the results revealed that majority of the respondents indicated “No” representing 223 (80.80%) to show that power outages does not affect their access to the Turn-It-In software. However, 53 (19.20%) indicated “Yes” to show that power outages affected their access to the Turn-It-In software. The respondents from KNUST who indicated “No” were 95 (77.87%) while that of UG were 128 (83.12%). Out of those who indicated “Yes” 27 (22.13%) were from KNUST while 26 (16.88%) were from UG. The results from the responses show that power outages do not significantly affect students’ access to the Turn-It-In software as majority of the respondents indicated “No”. Darko-Adjei (2018) confirmed the findings as the author found that out of 230 respondents, less than half, 92 (40.4%), indicated power outages as a challenges to the use of the Sakai LMS in UG. This implies that most of the students in UG admitted that power outages is not

a major challenge to the use of the Sakai platform. Since UG students get access to the Turn-It-In software via a link on the Sakai platform, it implies that poor internet connectivity will not pose a challenge to the use of the Turn-It-In software.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This is the last chapter and it presents a summary of the major findings, a conclusion and recommendations based on the findings. The study sought to find out the perception of students towards the use of Turn-It-In software in detecting plagiarism among public universities in Ghana. The specific objectives of the study were to investigate the students' knowledge concerning plagiarism, their awareness, usage and perception about the use of the Turn-It-In software, and the challenges they face in their usage of the Turn-It-In software. The study also sought to make recommendations based on the findings.

6.2 Summary of the major findings

The summary of the major findings are presented below under the following sub-headings:

- i. Students' knowledge concerning plagiarism
- ii. Students' awareness of Turn-It-In software
- iii. Students' usage of Turn-It-In software
- iv. Students' perception about the use of Turn-It-In software
- v. Computer literacy skills and perceived ease of use of Turn-It-In software
- vi. Challenges students face in using Turn-It-In software.

6.2.1 Students' knowledge concerning plagiarism

The findings revealed high level of awareness of plagiarism among the graduate students of UG and KNUST. The results revealed that all the respondents were aware of plagiarism since they indicated that they had heard of it. The results also showed that most of the respondents had good understanding of what constitute plagiarism since they could identify the various acts of plagiarism. The findings further indicated that despite the high level of awareness and understanding of plagiarism among the respondents, some disagreed with one another on whether some acts constitute plagiarism. This implies that plagiarism as a concept occurs in multiple forms and therefore has no uniform definition since there were differences in the respondents understanding of the acts that constituted plagiarism.

6.2.2 Students' awareness of Turn-It-In software

The findings of the study revealed high level of awareness of the Turn-It-In software among the graduate students of UG and KNUST. The results showed that all the respondents were fully aware of the existence of the Turn-It-In software used for detecting plagiarism in their respective institutions. The results also indicated that the respondents got aware of the Turn-It-In software mainly through information gathered from their lecturers, colleagues/friends, Teaching Assistants, and their respective universities' orientation programmes.

6.2.3 Students' usage of Turn-It-In software

The findings of the study indicated low level of usage of the Turn-It-In software by the graduate students in UG and KNUST. However, many of the respondents from both UG and KNUST were willing to use the Turn-It-In software for plagiarism detection. The results also showed that many of the respondents rarely used the Turn-It-In software to check plagiarism. Many of the respondents only used the Turn-It-In software when compelled by their lecturers.

6.2.4 Students' perception about the use of the Turn-It-In software

The findings of the study revealed that the graduate students in UG and KNUST generally perceived the Turn-It-In software to be useful in their overall education. The results showed that many of the respondents admitted that the use of the Turn-It-In software had enhanced their research experience. Also, many of the respondents agreed that it is easy to upload assignments unto the Turn-It-In software. Furthermore, many of the respondents agreed that the use of the Turn-It-In software had; improved their academic performance, contributed tremendously to their academic work and had improved their confidence in their research activities. However, a significant number of the respondents were not certain about their ability to access the Turn-It-In software on their smart phones.

The findings also revealed that the graduate students of UG and KNUST generally perceived that the Turn-It-In software is easy to use. The results showed that a good number of the respondents found it easy to use the Turn-It-In software. Also, a good number of the respondents agreed that the interface of the Turn-It-In software is flexible and friendly.

The findings further revealed that most of the graduate students in UG and KNUST preferred the use of Turn-It-In software for plagiarism detection as compared to other means of checking plagiarism. The results showed that most of the respondents from both universities preferred using Turn-It-In software to check plagiarism rather than other means. However, a good number of the respondents preferred filtering and rating systems other than the Turn-It-In software. The reasons for their preference were; fast and ease of use, easy to identify exactly what is been plagiarized, accuracy of checking plagiarism, very convenient and simple to use, very reliable, easy to access and user-friendliness.

6.2.5 Computer literacy skills and perceived ease of use of Turn-It-In software

The findings of the study revealed that on the average, the graduate students in UG and KNUST had the computer literacy skills needed for the effective and efficient use of the Turn-It-In software. The results showed that many of the respondents had the ability to submit their assignments through the Turn-It-In software. Many had the ability to retrieve the reports of their work after submission through the Turn-It-In software. Consequently, many of the respondents indicated that the use of the Turn-It-In software does not require any special computer literacy skill.

6.2.6 Challenges students face in their usage of the Turn-It-In software

The findings revealed that, the major challenges faced by graduate students of UG and KNUST in their usage of the Turn-It-In software were: inadequate training on how to use the Turn-It-In software, and system errors and inability to access the Turn-It-In software. However, majority of the respondents admitted that power surges and the difficulty in getting access to the internet were not significant challenges to their usage of the Turn-It-In software.

6.3 Conclusion

The incidence of plagiarism among students is on a rise due to the availability and ease of accessibility to large volumes of information on the internet. Students have access to numerous paper databases, where they can find and download already-written and pass them as their own. They tend to copy passages from different online publications and compile them as their own work. To mitigate this rising plagiarism cancer among the 21st century students, several plagiarism detection software have been employed by several universities across the globe. The prominent among them is the Turn-It-In software. Therefore, it is important for instructors and the university administration to be informed about students' perception about the use of the Turn-It-In software as a plagiarism detection tool. Such information would help instructors and the university administration in coming

up with effective policies governing the use of the Turn-It-In software in order to achieve the goal of reducing the incidence of plagiarism among students.

The findings of the study have revealed that graduate students of UG and KNUST were aware of plagiarism and had good understanding of the acts that constitute it. Also, the students were aware of the existence of the Turn-It-In software used for checking plagiarism in their institutions but they rarely used it. The students perceived the Turn-It-In software to be useful to their overall education and they preferred using it as compared to other means of checking plagiarism. Consequently, the students had the computer skills needed to effectively utilize the Turn-It-In software. However, they faced several challenges in their usage of the software.

6.4 Recommendations

Recommendations made based on the findings of the study are as follows:

6.4.1 Turn-It-In software training as part of the university curriculum

The findings of the study revealed that inadequate training on how to use the Turn-It-In software was one of the major challenges that the graduate students of UG and KNUST faced in their usage of the Turn-It-In software. Therefore, students need to be trained on how to access and use the Turn-It-In software for checking plagiarism. A structured curriculum should therefore be established as part of student's normal lessons periods where time is allocated on their time table for training on how to use the Turn-It-In software.

Periodically, a lecturer can deliberately give students an essay assignment and request students attach a Turn-It-In report to their work on submission. For instance, with graduate students who write term papers, lecturers can request students to attach a Turn-It-In report to their term papers when submitting them.

6.4.2 Establishing stringent and effective policies regarding the use of the Turn-It-In software

It was also found that the graduate students of both UG and KNUST rarely used the Turn-It-In software for checking the originality of their work. This could be as a result of the absence of effective policies restricting their usage of the Turn-It-In software. Therefore, the administrations of both universities should put in place stringent and effective policies that will push students into using the Turn-It-In software for checking the originality of their works.

6.4.3 Availability and ease of accessibility of the Turn-It-In software

It was pointed out that the graduate students of KNUST did not have direct access to the Turn-It-In software for checking the originality of their work. It is only the lecturers who have the software installed on the various computers. When a student finishes his or her research work, then the supervisor of that student will allow him or her to access the software in order to run the final work through the Turn-It-In software. This discourages the students from using the software and does not also allow the students to use the software as a learning tool helping them to avoid plagiarism. Hence the Turn-It-In software should be made available and easily accessible to the graduate students of KNUST to enable them to make the maximum use of it.

6.4.4 Periodic enhancement of the Turn-It-In software to avoid system errors

The findings of the study also revealed that system errors and inability to access the Turn-It-In software was a major challenge that the graduate students of UG and KNUST faced in using the Turn-It-In software. Hence the Turn-It-In software should be enhanced periodically to avoid the dangers of system errors and limited accessibility.

6.4.5 Encouraging students to use the Turn-It-In software as a learning tool helping the to avoid plagiarism

It was also observed that many of the graduate students of UG and KNUST only used the Turn-It-In software because they were compelled by their lecturers. Therefore the students should be encouraged to use the Turn-It-In software frequently on their own but not as a result of being compelled by their lecturers. This can be achieved when the students are made to see the Turn-It-In software as a learning tool helping them to avoid plagiarism.

6.5 Suggestions for further studies

Further research should be conducted on students' perception towards the use of Turn-It-In software in detecting plagiarism in subsequent years to help ascertain students' awareness and usage of the Turn-It-In software. The study should be replicated using a much bigger sample that represents a cross-section of the entire student population of all public universities in Ghana to get a holistic picture of the perception of the use of the Turn-It-In software in detecting plagiarism by graduate students in Ghana.

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APPENDIX A: QUESTIONNAIRE

**SCHOOL OF INFORMATION AND COMMUNICATION STUDIES DEPARTMENT
OF INFORMATION STUDIES UNIVERSITY OF GHANA, LEGON**

Topic: The perception of students towards the use of Turn-It-In software in detecting

Plagiarism in public universities in Ghana.

Dear Colleagues,

I am an Mphil student from the Department of Information studies of the College of Education. I am currently conducting a study on the above topic. The attached questionnaire is meant for gathering information to identify the awareness level, perception and the extent to which postgraduate students in Ghanaian public universities use the Turn-It-In software to detect the level of originality of various research activities such as theses and assignments.

Many of the questions do not require a great deal of writing, because you are expected to indicate your choice of answer by ticking (✓) in the appropriate box. In situations where you are to specify your answer by writing, please be as concise as possible. The success of this study depends on your answers to the questions and your views expressed frankly and accurately as possible.

Your answers will be treated in the strictest confidence and shall be used for the purpose of this research only.

Counting on your support and co-operation.

Yours Sincerely]

Vera Ohene Gyemfah

Please you may contact me on

Tel: 0248827117

Email: ohenevera@gmail.com

PART 1: DEMOGRAPHICAL DATA

Please tick (√) appropriately.

- 1. Gender: (I) Male [] (II) Female []

- 2. Age: (I) less than 25 [] (II) 26-35 [] (III) 36-45 [] (IV) 46 and above []

- 3. College:
UG [] KNUST []
Health sciences [] Humanities/Social sciences []
Humanities (Business school) [] Health Sciences []

- 4. Current level of study
PhD [] M.PHIL [] MBA [] Others.....
MA [] MSC [] MPH []

PART 2: STUDENTS’ KNOWLEDGE CONCERNING PLAGIARISM

- 1. Have you heard about the term plagiarism? YES [] NO []

- 2. If yes, how do you understand the term plagiarism?
.....
.....
.....

PART 3: STUDENTS’ AWARENESS OF THE TURN-IT-IN SOFTWARE

- 1. Are you aware of the existence of the Turn-It-In software? YES [] NO []

- 2. If yes, how did you get to know about it? Tick (√) all that apply
(I) University’s handbook [] (II) Orientation []
(III) Website of the university [] (IV) Notice board []
(V) Lecturers [] (VI) Teaching assistant []
(VI) Friends [] (VII) Other.....

PART 4: STUDENTS' USAGE OF THE TURN-IT-IN SOFTWARE.

From the table below, tick (✓) the extent to which you agree or disagree with the following statements.

Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), Strongly Agree (SA)

No.	Items	SD	D	N	A	SA
1.	I think that I would like to frequently use the Turn-It-In software.	[]	[]	[]	[]	[]
2.	I use the Turn-It-In software only when I am compelled by my instructor to do so.	[]	[]	[]	[]	[]

3. How often do you use the Turn-It-In software?

(I) Daily [], (II) Weekly [], (III) Monthly [], (IV) Rarely

PART 5: STUDENTS PERCEPTION OF TURN-IT-IN SOFTWARE

From the table below, tick (✓) the extent to which you agree or disagree with the following statements.

Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), Strongly Agree (SA)

No.	Items	SD	D	N	A	SA
1.	I believe that Turn-It-In software enhances my research experience.	[]	[]	[]	[]	[]
2.	I can easily upload my assignments on the Turn-It-In software	[]	[]	[]	[]	[]
3.	Using the Turn-It-In software has enabled me to gain extra confidence in my research activities					
4.	I can access the Turn-It-In software with my smart phone anywhere and at any time.					
5.	Using Turn-It-In software increases my academic performance					
6.	Turn-It-In contributes tremendously to my course of study					

7.	The interface of the Turn-It-In is user friendly and flexible to use					
8.	I find it easy to use the Turn-It-In software					

Preference of other means of checking plagiarism

9. I prefer other means of checking plagiarism rather than the use of the Turn-It-In software.

(I) Yes [] (II) No []

10. What options do you prefer?

(I) Filtering [], (II) Blocking [], (III) Rating system [], (IV) Filtering and Blocking

(V) Filtering and Rating System [], (VI) Filtering, Rating system and Blocking []

11. Please give reasons for your choice in (I) above

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PART 6: COMPUTER LITERACY SKILLS AND PERCEIVED EASE OF USE OF TURN-IT-IN 1. SOFTWARE

1. How often does your college provide training on how to use the Turn-It-In software?

(I) Very often [], (II) Often [], (III) Once a while [], (IV) Not at all [], (V) Not sure []

2. Please rate your knowledge in navigating on Turn-It-In software

Very Bad (VB), Bad (B), Average (A), Good (G), Very Good (VG).

No.	Item	VB	B	A	G	VG
1.	Your ability to retrieve the report of your work after submitting it to the Turn-It-In software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Your ability to submit an assignment through the Turn-It-In software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	The Turn-It-In software does not require any special computer literacy skills in order to use.					

PART 7: CHALLENGES IN THE USE OF THE TURN-IT-IN SOFTWARE

Please indicate the challenges you face when using the Turn-It-In software. **Tick (√) all that apply**

No.	Items	
1.	There is inadequate training on how to use the Turn-It-In software.	<input type="checkbox"/>
1.	Difficult to get access to the internet.	<input type="checkbox"/>
2.	Sometimes I experience system error and unable to access the Turn-It-In software.	<input type="checkbox"/>
3.	Power outages sometimes deny me of accessing the Turn-It-In software.	<input type="checkbox"/>

4. In your own opinion, what do you think should be done to improve the effectiveness and efficiency of use of the Turn-It-In software?

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Thank you for your kind cooperation and time

APPENDIX B: INTRODUCTORY LETTER



UNIVERSITY OF GHANA
DEPARTMENT OF INFORMATION STUDIES
SCHOOL OF INFORMATION AND COMMUNICATION STUDIES

December 18 2018

Ref. No.:.....

The Dean
School of Graduate Studies
University of Ghana
Legon

Dear Sir/Madam,

INTRODUCTORY LETTER

I write to introduce to you Miss Vera Ohene Gyemfah, an M. Phil student of the Department of Information Studies, University of Ghana, Legon.

She is researching on the topic “**The perception of students towards the use of Turn-It-In software in detecting plagiarism among public Universities in Ghana**”.

Please assist her with the necessary information that will be needed to undertake the research.

Thank you.

Yours faithfully,

Dr. Emmanuel Adjei
Head of Department



INTEGRI PROCEDAMUS

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