

**An investigation of the perceptions and attitudes of postgraduate students interacting with  
Turnitin: The case of the University of Stellenbosch Business School**

**By**

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## DECLARATION

I, Nombulelo Magwebu-Mrali, hereby declare that the work contained in this thesis is my own and that it has not been submitted before for any other degree at any other university. The sources consulted or cited have been indicated in full.



Nombulelo Magwebu-Mrali

October 2021



## **DEDICATION**

This thesis is dedicated to my late parents, Mr Tununu Henry Magwebu and Mrs Nobuntu Thelma Magwebu, for their love and guidance throughout my life. Thank you for the gift you instilled in me, the spirit of not giving up, chasing my dreams and the greatest gift of all, education. I extend my appreciation to my eldest sisters, Thobisa Magwebu-Bester and Doris Magwebu-Sedibe, who are my role models and pillars of strength.



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## ABSTRACT

Globally there is growing concern around increased levels of plagiarism. Gullifer and Tyson (2010, p. 463) claim that plagiarism is growing at a rapid rate, and universities are now required to devote enough time and resources to combating it. South African universities have also found themselves to be victims of plagiarism. To prevent increased levels of plagiarism in South Africa, Stellenbosch University (SU) promotes the use of Turnitin. The study described in this thesis investigated postgraduate students' and lecturer's perceptions and attitudes regarding plagiarism and interacting with Turnitin at the University of Stellenbosch Business School to fill a research gap, as up to this point, this topic has not been studied. The study adopted a mixed methods approach, which combined both quantitative and qualitative methods. Moreover, the theory of planned behaviour informed the study.

The results show that a majority of the students and lecturers in the study were aware of plagiarism and anti-plagiarism software, particularly Turnitin. However, the majority of students still plagiarised intentionally, owing to factors that influenced their intention to plagiarise, such as laziness and poor time management, and unintentionally, owing to poor language, writing and referencing skills. The majority of students (98%) agreed that they made use of anti-plagiarism software. Moreover, 80% of the students indicated that the use of anti-plagiarism software contributed to the promotion of academic integrity. Similarly, all lecturers interviewed indicated that anti-plagiarism software helped to promote and improve academic integrity.

The study recommendations include: university instructors needing to teach students continuously about plagiarism at all levels; plagiarism policies and guidelines to be updated all the time in higher education institutions; lecturers inviting librarians when educating students about plagiarism, and also ensuring that students have easy access to plagiarism information; lecturers inspecting Turnitin reports closely because some word similarities picked up by the system are unavoidable when dealing with subject-specific academic topics.

**Keywords:** plagiarism, Turnitin, universities, postgraduate students, Stellenbosch University

## LIST OF ACRONYMS

BI	behavioural intention
HEI	higher education institution
IL	information literacy
LH	Learning Hub
MDEV	MPhil (Development Finance)
MMR	mixed methods research
PBC	perceived behavioural control
SN	subjective norms
SU	Stellenbosch University
TPB	theory of planned behaviour
USB	University of Stellenbosch Business School
TRA	theory of reasoned action



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# CHAPTER 1

## INTRODUCTION

### 1.1 Background and rationale for the study

Plagiarism, which according to Singh and Remeny (2016, p. 2), “refers to the use of other people’s ideas and words without giving the original author appropriate acknowledgement”, is becoming an issue of concern on a global scale amongst university students. This trend has led to numerous studies being undertaken to explore strategies that could be used to enhance students’ skill sets, with the hope of improving their academic writing and the image of higher education institutions (Louw, 2017, p.116). The increase in plagiarism is blamed on increasing access to digitised information (Sutherland-Smith, 2008, p.75). Gullifer and Tyson (2010, p.463) postulate, “Plagiarism is perceived to be a growing problem and universities are being required to devote enough time and resources to combating it”. In addition, Wilkinson’s (2009) study shows that plagiarism is a significant concern in higher education.

Many students have poor writing skills, which results in them directly copying from the Internet and using it as a source of information for assignment writing, without proper acknowledgement or citation of their sources. However, as stated by Nabee et al. (2020, p.276), “students [understand] that plagiarism involves copying directly from printed or online work without proper attribution to the source”. Some students plagiarise because of pressure from family and friends to pass, and thereby mitigate the high costs of studying at a tertiary institution (Sentleng & King, 2012, p. 65).

Plagiarism is a complex phenomenon, which is often misunderstood by many students. Therefore, there needs to be increased awareness of it, and explanations should be given to students why it is unacceptable (Sentleng & King, 2012). Various study findings have confirmed that students plagiarise unconsciously, as they do not understand what constitutes plagiarism and that some students have not been taught to acknowledge sources.

Researchers agree that students need to be educated about plagiarism (Guraya & Guraya, 2017; Hu & Sun, 2017; Glendinning, 2014; Bakhtiyari et al., 2014; Okoro, 2011; Dahl, 2007). In the same way, various South African universities, Stellenbosch University included, have been promoting the use of Turnitin as a tool to counter increased levels of plagiarism. To date, there has been no study conducted to investigate how South African postgraduate students and lecturers perceive the use of Turnitin. This gap in the research motivated the study at

Stellenbosch University that examined students' perceptions of using Turnitin as the standard way for them to detect plagiarism themselves and rectify it.

## **1.2 Brief literature review**

Although, plagiarism is a considerable challenge for universities and continues to receive a lot of attention in academic discussions, it is not a new phenomenon (Elander et al., 2010, p. 157; Lau et al., 2013). As it is perceived as a growing problem, higher education institutions are required to devote more time and resources to combating it (Gullifer & Tyson, 2010, p.463). Hodgkinson et al. (2016, p.1) maintain in their study that plagiarism is a widespread concern and a problem in all universities across the world and that at least three-quarters of university students in the United States (US) were found to engage in academic dishonesty.

There are several definitions of academic dishonesty. Symaco and Marcelo (2003, p. 2) define it "as a contravention of rules and regulations amongst most tertiary education". Similarly, Roberts (2002, p. 1) argues that "plagiarism is another form of academic dishonesty in which authors often manipulate the information in favour of what they want to gain".

Although the increase in plagiarism is blamed on increasing access to digitised information (Sutherland-Smith, 2008, p.75), higher education institutions need to investigate further and discover why students plagiarise and how it can be avoided. An answer to the first question is provided by Prescott (2016, p.152), who postulates that the task of new students in higher education is to develop academic writing skills, particularly the principles and practices of referencing, which can be daunting. East (2006, p. 16) suggests an answer to the second question by indicating that "for new students in Australian academic culture, emphasis on avoiding plagiarism can carry a new concept and a new way of using source material and constructing text, hence higher education institutions should ensure that students have basic referencing and writing skills". Sentleng (2010) is of the view that if students are able to summarise from information sources, synthesise other people's ideas into their own work in their own words and acknowledge these sources, this will lessen unintentional plagiarism.

A study conducted by Okoro (2011) revealed a strong concern for students' academic writing skills in the Howard University School of Business. Okoro (2011) argues that owing to students' lack of competence in academic writing, they end up committing plagiarism, which academics and support staff see as a common challenge in higher education institutions and tasks communication lecturers with teaching appropriate referencing skills. Okoro (2011) highlights that the Howard University School of Business developed strategies for students'

critical thinking, analytical reasoning and effective referencing, such as written assignments involving case analyses on topics that included the effective use of the Internet; evaluating sources for relevance; and using in-text citation and references. Through these assignments, students were encouraged to share their specific problems about academic writing. Academics conducted writing sessions to assist students with the assignments and met with them weekly on a one-to-one basis, which yielded positive results, as written assignments showed signs of improvement.

Prescott (2016, p. 153) conducted a study at the Open University in the United Kingdom to identify opportunities through collaborative work to help students approach referencing with greater clarity and confidence. First year Arts students were engaged in collaborative writing and were encouraged to record and write up reference sources. The strategy resulted in students developing and being confident about their academic writing skills. Moreover, they developed study habits conducive to effective self-monitoring. However, in the same study, Prescott (2016) maintains that once students had submitted their assignments, time and resources had to be spent in what were referred to as 'plagiarism checks', using text-comparison software, which indicated the use of plagiarism detection in an educational context.

Glendinning (2014), Okoro (2011) and Dahl (2007) argue that when students continue to plagiarise, whether intentionally or unintentionally, effective strategies need to be adopted to address the problem. Sentleng and King (2012) as well as Okoro (2011) are of the view that despite the rules, policies and penalties for failing to acknowledge sources, plagiarism remains a challenge in higher education institutions, with complaints about inadequate documentation, the inability to evaluate sources, and failure to cite them (Foltynek, 2014). Studies have pointed out that students are aware that plagiarism is unethical, but most higher education institutions claim that a majority of students plagiarise anyway because they find it difficult to paraphrase and reference sources (Sentleng, 2010).

According to Sentleng and King (2012), students might be unaware of the different types of plagiarism and do not understand its nature and components. Moreover, they might not have been adequately taught to paraphrase, cite and acknowledge sources. Stapleton (2012, p. 132) observes that non-native English speakers might find it difficult to express ideas in the literature in their own words and avoid plagiarism, and thus need extra attention and instruction. However, some students plagiarise because they complete assignments in haste and under

pressure, which means that they do not have time to assimilate the contents of sources, paraphrase them and provide adequate references.

Ferree and Pfeifer (2011, p. 286) believe that students commit plagiarism not only because of ignorance about plagiarism but because they wait until the last minute to complete assignments, and thus copy the words of sources to obtain a good pass because they do not have the time to formulate their own words. Guraya and Guraya (2017); Gunnarsson et al. (2014) as well as Okoro (2011) suggest that students should be given instructional writing lessons to improve their academic writing skills, especially in the case of those who struggle with academic writing because of language barriers. Moreover, first year students struggle with academic writing, regardless of their home language, because they have yet to learn academic literacies.

Prescott (2016, p. 152) maintains, “It is acknowledged that the arrival of the Internet has impacted both on students’ assignment-writing behaviour and on institutions’ methods for policing plagiarism, and the Internet challenges notions of authorship and textual stability”. Idiegbeyan-Ose et al. (2016), Singh and Remenyi (2016) as well as Van Heerden (2014) agree that although the Internet has made information more easily available and accessible without any geographical barriers as well as becoming a common tool for academic research, it has caused the increase of plagiarism in higher education institutions.

Dahl’s (2007, p. 173) study found that an academic community at a business school in London discouraged plagiarism by means of training interventions and plagiarism detection tools, such as anti-plagiarism software. Hu and Sun (2017, p. 58) recommend a punitive approach that views plagiarism as a moral crime, which should be detected by means of text-matching software and punished ruthlessly.

### **1.3 Theoretical framework**

The theoretical framework of the study was the theory of planned behaviour (TPB) developed by Ajzen in 1985 to predict human social behaviour (Ajzen, 2011, p.1113). It was an extension of the theory of reasoned action (TRA) developed by Fishbein and Ajzen in 1967 to deal with “behaviours over which people have incomplete volitional control” (Meng et al., 2014, p. 128).



### 1.3.1 Theory of planned behaviour

In the study, the TPB was used to explain why plagiarism occurs, its intention and the behaviour associated with it. According to the TPB, not only are intention and behaviour interlinked but also antecedents to intention can be identified (Stone & Kisamore, 2010). Mavrinac et al. (2010) confirm that TPB is a relevant predictive model of academic dishonesty that explains plagiarism behaviour as a final act anticipated by logical thinking.

According to Powell (2012), the TBP explains how a student's awareness of plagiarism, their attitude to it and peer influence are crucial to establishing a student's intention to plagiarise. Passow et al. (2006) suggest that human behaviour is guided by rational decisions that are influenced by both the intention to perform the behaviour and a perception of control over the behaviour.

According to McCuen (2008), as cited in the study by Camara et al. (2017), whether an intentional act on the part of the plagiariser or behaviour influenced by access to technology, plagiarism committed with intent is considered a decision-making process that requires an individual to take a series of rational and intentionally planned steps.

#### 1.3.1.1 Intention

Ajzen (1991, p.181) states, "Intention is an indication of how hard individuals are willing to try, how much of an effort they are planning to exert, in order to perform the behaviour". Furthermore, intention "is a mediating precedent to the behaviour and is regarded as a central factor in the model of TPB which informs the motivation for behaviour" (Beck & Ajzen, 1991, p. 286). According to Ajzen (1991, p.188), the more a person's is driven to engage in a behaviour, the greater the likelihood of the particular behaviour being drawn out.

Intention is determined by the following:

- Attitudes towards the behaviour
- Subjective norms
- Perceived behavioural control

Meng et al.'s (2014, p.126) study analysed the relationship amongst the above variables of TPB in academic dishonesty.

### *1.3.1.2 Attitudes towards the behaviour*

In line with TPB, attitudes towards plagiarism would be significantly related to behavioural intention (BI). Favourable or non-favourable perceptions of plagiarism would be associated with the intention to engage in plagiarism or not.

According to Ajzen (1991, p. 193) “Attitude is a disposition to respond favourably or unfavourably to an object, person, institution or event” and “is an individual’s appraisal of how much he/she approves or disapproves of a specific behaviour”. Beck and Ajzen (1991, p. 288) add that attitude “is the extent to which students condone or condemn academic dishonesty which is most likely to inform their intentions for plagiarism or other academic dishonesty”. This observation is consistent with Simon et al.’s (2003) suggestion that students with favourable attitudes towards academic integrity policies are more likely to demonstrate academic dishonesty than those who regard the policies as unfair.

### *1.3.1.3 Subjective norms*

A subjective norm “is the individual’s perception that other individuals important to the respondent believe the respondent should perform the behaviour of interest” (Ajzen, 1991, p. 195). Stone et al. (2009, p. 224) are of the following view:

People’s behaviour is influenced by the behaviour of others which may put pressure on them to conform to the behaviour of members of a group or may convey either what most people do in a given situation (i.e., descriptive norms) or behaviour that is associated with approval or sanctions (i.e., injunctive norm) by others.

Meng et al. (2014, p. 129) state as follows:

It is a normative expectation of other people regarding the type of behaviour one should exude in given situations and the norm is described as informed normative beliefs, which are a person’s thoughts about the likelihood that important referent individuals or groups approve of their performing a given behaviour.

Camara et al. (2017) assert that subjective norms (SNs) about plagiarism would be significantly related to the behavioural intention (BI). Therefore, perceptions that people who are considered important agree or disagree with the act of plagiarism would be associated with the intention to engage in it or not.



#### *1.3.1.4 Perceived behavioural control*

An intention to plagiarise would be predicted by perceived behavioural control (PBC). In other words, an intention to engage in plagiarism or not would be associated with a perception of the competency to do so.

According to Meng et al., (2014, p.130) “perceived behavioural control is added to TPB to enhance prediction in situations where behaviour may be constrained and violates rules, such as academic integrity policies”. Furthermore, perceived behavioural control “refers to the perceived ease of performing the behaviour based on past experiences and anticipated impediments and has impact on the intentions and actions” Ajzen (1991, p. 196). Stone et al., 2009 and Passow et al. (2006) indicate several academic integrity studies that have tested perceived behavioural control and confirmed that the variable enhances the prediction of behaviour when it is not completely under a person’s volitional control. As observed by Ajzen (1991, p. 183), perceived behavioural control determines a particular behaviour.

#### *1.3.1.5 Moral obligation*

The TPB was modified by Beck and Ajzen (1991) to add a fourth variable (moral obligation) influencing behavioural intention. Shaw (2008, p. 12) suggests that ethical and unethical behaviour is learnt from the socio-cultural environment, where moral obligation might be embedded. Thus, the intention of students to engage in academic dishonesty or not might be because of their attitude; peer groups norms and expectations; the ease or difficulty of carrying out unethical behaviour; and the presence or lack of moral obligation (Meng et al., 2014, p. 134).

Ahmad et al. (2008, p. 149) maintain, “Students are aware of academic integrity guidelines, but they do plagiarize more for their personal gain than the moral values”. This is an indication that students are conscious of the ethical requirements of academic writing, but lecturers and universities need to help students through training and a code of conduct to develop ethical attitudes and norms as well as control of strategies to avoid plagiarism so that they aim for academic honesty in academic writing.

### **1.4 Statement of the research problem**

Plagiarism is a global challenge; therefore, higher education institutions should reduce the incidences of plagiarism by making sure that students understand the concept of plagiarism and avoid it. Understanding the concept of plagiarism students need to know what the causes of

plagiarism are, what the consequences of plagiarism are and how they can avoid plagiarism. Although Turnitin is a generally accepted tool for detecting plagiarism, it is unclear how effective it is in preventing plagiarism. Therefore, the study was conducted to discover whether it is effective by understanding students' perceptions of and attitudes towards it and plagiarism in general.

## **1.5 Aim and objectives of the study**

The aim of the study was to investigate postgraduate students' and lecturers' perceptions of, as well as attitudes towards, plagiarism and the use of Turnitin software at the University of Stellenbosch Business. By achieving this aim, the researcher planned to contribute to understanding of the concept of plagiarism in the academic community, finding strategies to discourage plagiarism and encouraging the use anti-plagiarism software. To achieve this aim, specific objectives were formulated.

### **1.5.1 Objectives of the study**

The objectives are to:

- Establish masters students' understanding of plagiarism
- Explore the attitudes and perceptions of master's students regarding anti-plagiarism software
- Gain insight into academics' understanding of the concept of plagiarism
- Consider the effectiveness of anti-plagiarism software training intervention amongst masters students
- Determine academics' ways of addressing plagiarism or academic dishonesty
- Examine Stellenbosch University policies regarding academic dishonesty and anti-plagiarism software

### **1.5.2 Research questions**

The following research questions have been developed from the above-mentioned research problem, objectives, literature review and the theoretical framework.

- How do masters second year students understand plagiarism?
- What are the attitudes and perceptions of second year master's students regarding anti-plagiarism software?
- What do academics understand by the concept plagiarism?

- How effective are anti-plagiarism software training interventions?
- In what ways have academics addressed plagiarism in their classes?
- Are there any policies at Stellenbosch University regarding academic dishonesty and the use of anti-plagiarism software?

## **1.6 Research Methodology**

The study followed a pragmatic paradigm and a mixed methods research (convergent parallel) design. According to Leedy and Ormrod (2010, p. 97), mixed methods give a more holistic picture of the phenomenon that is being investigated. According to Leedy and Ormrod (2019, p. 261), “a researcher collects both quantitative and qualitative data within the same general time frame and with respect to the same general research problem or question”. Creswell (2010, p. 4) shows that the overall strength of a study is much greater when mixing qualitative and quantitative approaches.

A pilot study was conducted to determine the reliability and dependability of the research instruments (a questionnaire and interviews) and identify possible weaknesses and gaps in them. Leedy and Ormrod (2010) assert that a pilot study is an excellent way to determine the feasibility of a study.

### **1.6.1 Population and Sample**

The study focused on the 2019-2020 intake of students studying for the MPhil in Development Finance in their second year and on academic staff at the University of Stellenbosch Business School (USB). The reason for choosing the Development Finance students and lecturers was convenience, as the researcher is the librarian who introduced the students to the library and trained them in the use of resources. The study population was planned to be about 130 master’s students in Development Finance (based on 2017 intake figures), which also formed the sample for the quantitative study. The total number of academics in Development Finance was ten, although four were part-time. Thus, it was planned that six full-time academics would be purposively selected for interviews that would provide the qualitative data.

### **1.6.2 Data collection tools**

The study used both interviews and a questionnaire as data collection techniques. The advantage of a questionnaire is that it can be sent to large number of people, although the disadvantage is that people may not return it completed (Leedy & Ormrod, 2013, p. 201). The

self-administered questionnaire, which contained both closed- and open-ended questions, was sent via email to participants. Face-to-face structured interviews were conducted with the selected academic staff. According to Leedy and Ormrod (2013, p.190), face-to-face interviews have the advantage of enabling the researcher to establish a rapport with participants, gain their cooperation, thereby gathering rich data because the participants feel free to express themselves.

### **1.6.3 Data analysis**

Data analysis refers to the process of developing meaning and understanding from the various data sets collected during a research project as a basis for action and theory building (Rowley, 2014, p. 2). The responses of the Development Finance academics interviewed were transcribed and analysed by organising, intensively reading, understanding, classifying, coding, interpreting and presenting them, according to themes and using appropriate verbatim quotes to illustrate the findings. The responses to the questionnaire provided by the master's students were analysed using the Statistical Package for the Social Sciences (SPSS). The findings of the research are presented in tables and graphs in Chapter 5.

### **1.7 Ethics statement**

The researcher adhered to the ethical research guidelines of the Research Committee of the University of the Western Cape and obtained permission from Stellenbosch University to distribute the survey questionnaires to the above-mentioned students and conduct interviews with academics. In addition, the researcher obtained permission from the interviewees to record the interviews. The purpose of the study was explained to all participants, and respondents were assured of their anonymity during data collection, analysis and presentation. Participation was voluntary, and participants had the freedom to withdraw from the process at any stage. Participants were required to sign consent forms.

### **1.8 The limitations and delimitations of the study**

The investigation was carried out in one department of a higher education institution. There was no comparison between departments or different higher education institutions. The participants were limited to second year masters' students and lecturers in Development Finance.

## **1.9 Chapter Outline**

The thesis is structured as follows:

Chapter 1 introduces the study and explains the rationale behind the study.

Chapter 2 reviews the literature on plagiarism in higher education.

Chapter 3 explains the TPB, the theoretical framework.

Chapter 4 describes the research design and methodology.

Chapter 5 presents the analysis of the data collected from the questionnaire and interviews.

Chapter 6 interprets and discusses the research findings.

Chapter 7 summarises and concludes the thesis as well as providing recommendations.

## **1.10 Summary of the chapter**

This chapter provided a background to the study, the context to the research problem, and the research objectives and questions. A brief literature review relevant to the study is discussed and key concepts associated with the perceptions and attitudes of students interacting with Turnitin towards plagiarism are listed. The theory of planned behaviour and its concepts as a theory are expounded. A brief introduction to the research methodology is described along with the ethics statement, scope and limitations of the study, and lastly the chapter outline.

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## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Introduction

The main aim of this chapter is to explore and review related literature, such as scholarly articles, books and other sources relevant to the area of the research study. Machi and McEvoy (2016, p.3) indicate that a literature review serves different purposes, depending on its nature. For example, a simple literature review would aim to support an argument based on current knowledge of a topic, whereas a complex literature would aim to uncover insights about a research problem under study.

There are number of reasons why a thesis should have a literature review. According to Babbie (2016, p.119), Leedy and Ormrod (2013, p.51) and Mouton (2001, p.87), the following are the reasons for and roles of a literature review:

- To ensure that one does not merely duplicate a previous study
- To discover the most recent and authoritative theorising about a subject
- To discover the most widely accepted empirical findings in the field of study
- To identify available instrumentation with proven validity and reliability
- To ascertain the most widely accepted definitions of key concepts in the field

This chapter discusses the research gap and then present the literature findings on the following topics: the concept of plagiarism, reasons for plagiarism; types of plagiarism; plagiarism in higher educational institutions and perceptions of plagiarism. Moreover, it presents findings about language, culture and geographical context as factors in plagiarism, the consequences of plagiarism, strategies to prevent plagiarism; university policies on plagiarism; and the pressure to publish or perish, which leads to plagiarism.

##### 2.1.1 Research gap

Studies have investigated plagiarism in developed countries (Ewing et al., 2017; Gunnarsson et al., 2014; Hu & Sun, 2017; Miller et al., 2017), and scholars in developing countries have explored it in the context of higher education institutions (Husain et al., 2017; Lamula, 2017). However, the literature has not explored the perceptions and attitudes of postgraduate students and lecturers regarding plagiarism and anti-plagiarism software in a South African higher education context. The current study aimed to fill this gap in the literature.

## 2.2 The concept of plagiarism

Plagiarism is a “modern Western construct, which arose with the introduction of copyright laws in the eighteenth century” (Sentleng & King, 2012, p. 57). The concept of plagiarism, as indicated by Pecorari and Petrić (2014), emerged in response to the economic, social, and technological conditions unique to eighteenth century England. Therefore, it has historical and cultural connotations that may not be applicable to all cultures.

Definitions of plagiarism, according to Foltýnek and Čech, (2012), are immersed within Western cultural traditions that stress possession of ideas and words and emphasise individual efforts. Mohammed et al. (2015) confirmed this view by pointing out that the English word “plagiarism” was first used in 1601 by the dramatist, Ben Jonson, to describe literary theft. However, the Latin term for plagiarism was initially used in the first-century A.D. by poet, Marcus Valerius Martial, who referred to literary theft as *plagiarius* (Van Heerden, 2014).

The concept of plagiarism is important in the academic community because the publishing of research requires originality and the acknowledgement of secondary sources (Bakhtiyari et al., 2014, p. 52). Thus, as Ison (2015) and Mphahlele and Mckenna (2019) point out, plagiarism is considered a tremendous challenge for institutions of higher learning around the world. Ewing et al. (2017) confirm that academic institutions come across dishonest behaviour specifically in the form of plagiarism.

According to Lamula (2017, p. 1) definitions of plagiarism include notions of a lack of integrity, morality and ethics, which can be interpreted in various ways by different individuals coming from different contexts. Dictionary.com (2013) defines plagiarism as “an act or instance of using or closely imitating the language and thoughts of another author without acknowledging the sources”. Guraya and Guraya (2017, p. 767) define it as “using someone’s intellectuality, for example ideas, texts and figures [that they] ... pretend to be their own”. In the academic context, where plagiarism is a growing problem, Singh and Remenyi (2016) argue that if ideas from the published work of another author are used in an essay or thesis, it is academic misconduct not to specifically acknowledge the original source.

## 2.3 Reasons for plagiarism

According to Bakhtiyari et al., (2014, p. 53), Guraya and Guraya (2017, p. 768), Idiegbeyan-Ose et al. (2016, p. 5) and Tripathi Tiwari and Nithyanandam (2015, p. 276) the following factors are possible explanations for plagiarism:



- Lack of ethical awareness and poor understanding of the principles of scientific writing
- Unawareness of the consequences and gravity of plagiarism
- Weak language proficiency and writing skills

Miller et al. (2017) and Price (2014) maintain that factors, which contribute to plagiarism, are personal standards of performance, pressure to succeed and social comparison.

Guraya and Guraya (2017), Idiegbeyan-Ose et al. (2016), Meng et al. (2014) and Prescott (2016) argue that writers may use the original text because they do not feel confident enough to express their views in English or because they doubt their ability to convey the essence of the original publication. Moreover, they might have insufficient skills to cite information, or lack knowledge about the scholarly traditions of Western writers. In addition, “the faculty, researchers, and eminent writers are under pressure to increase their publications” (Guraya & Guraya, 2017, online).

Miller et al.’s (2017, p. 122) study shows that goal-orientated students are less prone to plagiarise than those who are not clear of what they are writing and simply aim for good marks. Alleyn and Phillips (2011) as well as Ferree and Pfeifer (2011) agree that although students know that plagiarism is wrong, they commit it to obtain the grades they want. However, scholars like Okoro (2011) maintain that plagiarism is committed because students might not know the referencing conventions of in-text citations and reference lists.

## **2.4 Types of plagiarism**

Idiegbeyan-Ose et al. (2016), Mohammed et al. (2015), Okoro (2011) and Sentleng (2010) point out that plagiarism can be either intentional (deliberate) or unintentional (accidental). Unintentional plagiarism is commonly seen amongst students and young researchers. However, Walker (cited in Camara et al., 2017) maintains that there is no reliable data on whether plagiarism is, in fact, neither intentional nor unintentional but simply due to laziness.

### **2.4.1 Intentional plagiarism**

According to Sentleng (2010, p. 5), “intentional plagiarism occurs when students use the ideas and words of others without acknowledging the source, because they want the plagiarised work regarded as their original work”. To Mohammed et al. (2015, p.7), intentional plagiarism is “deliberate plagiarism which usually takes the form of intentionally copying others’ work and presenting it as if it is one’s own”. Furthermore, “copying large pieces of an article with the

deliberate intent of deceiving the reader into thinking they are original is intentional plagiarism” (Mohammed et al., 2015, p. 6).

Shashikiran (2014, p. 10) regards intentional plagiarism as copying large amounts of text, without any acknowledgment and failing to use quotation marks, when the exact words of sources are included in a document, which reveals an intention to cheat. In addition, Bakhtiyari et al. (2014) maintains that authors who plagiarise their own work, without acknowledging and quoting the source, commit direct plagiarism as much as any author who copies verbatim from a source.

#### **2.4.2 Unintentional plagiarism**

According to Mohammed et al. (2015, p.7), “unintentional plagiarism is mainly caused by a lack of awareness of the limits of taking data and pieces of writing from other sources”. Furthermore, unintentional plagiarism could be the result of not knowing how to acknowledge and quote other authors’ works. Powell (2012) believes that unintentional plagiarism may occur when a student is genuinely unaware that copying someone else’s words is undesirable and that copied text should be either indicated with inverted commas or paraphrased and referenced in the text and in the reference list (Sentleng 2010, p. 67). Nevertheless, even if plagiarism is unintentional, it still has to be prevented, and thus it is important to inform authors about it

Unintentional plagiarism, according to Shashikiran (2014, p. 1), might arise when the author has no intention to cheat, and although this may be due to ignorance, penalties might still be imposed (Okoro, 2011; Bakhtiyari et al., 2014; Shashikiran, 2014). However, Mohammed et al. (2015, p. 8) believe that there is no difference between intentional and unintentional plagiarism because they both have serious legal and sometimes financial consequences.

#### **2.4.3 Forms of plagiarism**

Sentleng (2010, p. 7-9) and Lamula (2017, p. 5) identify various forms of plagiarism:

***Plagiarism of ideas*** is not easy to identify, as there is no proof. This is when someone hears an interesting idea and presents it as his/her own (Mohammed et al., 2015, p. 7).

***Plagiarism of text***, which is common in academic writing, is also known as “copy-cut-paste” or “word-to-word” writing. In this form of plagiarism, authors use other writers’ exact words, do not use quotation marks or paraphrase and think it is sufficient to reference the work (Mohammed et al., 2015, p. 8).

*Self-plagiarism* is committed when an author uses words from his/her own previously published work without paraphrasing, using quotation marks or references. Halupa and Bolliger (2015, p. 92) describe self-plagiarism in two ways: (a) when an author has used his previous work without following referencing conventions; and (b) when authors publish the same work in two different journals.

*Collusion* “is allowing others, such as professionals or agencies, with or without paying money, to write a piece of work, which the plagiarist presents as his/her own” (Mohammed et al., 2015, p. 8).

*Patch writing* “is presenting an argument that is the combination of your own and a significant percentage of copied words of the original author, without acknowledging the source” (Colin, 2007, p.7 29).

## **2.5 Plagiarism in higher education institutions**

This section discusses how lecturers deal with plagiarism, plagiarism in higher education, students’ perceptions of plagiarism, language, culture and geographical context as factors in plagiarism, consequences of plagiarism, and the key role players in promoting academic integrity and discouraging plagiarism.

### **2.5.1 Academics and plagiarism**

Husain et al. (2017, p. 169) claim that most studies on plagiarism show that students in higher education institutions do not understand what constitutes plagiarism. However, Ewing et al. (2017) agree that students do not admit that they commit plagiarism, although they have done so, because they are unaware of what it means and are unaware of the consequences (Ferree & Pfeifer, 2011, p. 286). This argument has drawn the attention of researchers to look at how students perceive plagiarism.

Students in higher education institutions might commit plagiarism because of poor and undeveloped writing skills (Guraya & Guraya, 2017; Meng et al., 2014). Mohammed et al. (2015) postulate that students’ writing skills can be developed by constant reading of literature and practising academic writing. Students need to be taught academic language and writing skills, which is the responsibility of academicians.

According to Mohammed et al. (2015) as well as Shaghghi and Vasfi (2019), one of the overwhelming reasons for plagiarism in higher education institutions is the enormous pressure on postgraduate students and academic staff to publish their studies (publish or perish). Bakhtiyari et al. (2014, p. 53) assert that plagiarism has increased along with the proliferation of publications and suggest that authors need assistance in improving the integrity of their articles.

Guraya and Guraya (2017, p. 768) confirm that “researchers find themselves obliged to publish research articles to get funds, prove academic competency, maintain their career and obtain better positions in the hierarchy of their jobs”. In other words, even established academics are under pressure to publish and obtain research grants, despite possible discreditation.

### **2.5.2 Plagiarism and the Internet in higher education**

It is widely acknowledged that the arrival of the Internet has affected both students’ assignment-writing behaviour and institutions’ methods for policing plagiarism (Prescott, 2016, p.152). According to Shrivastava (2017) as well as Singh and Remenyi (2016), the Internet has become a common tool for academic research, which has enabled plagiarism to flourish on a large scale.

It is argued, “With the rapid rise in the use and availability of the internet, both the research literature and media have raised the notion that the online environment is accelerating the decline in academic ethics” (Ison, 2015, p. 151). Foltynnek (2014), Tripathi et al. (2015) and Van Heerden (2014) believe that the Internet is causing a rise in plagiarism, which is because it is so easy to access information through it. Shrivastava (2017) supports the view that high-speed search engines are facilitating access to multiple sources from which students can copy and paste material on any subject.

The Internet allows information to be accessed easily, anytime and anywhere. Ison (2015) observes that researchers are under pressure to publish their work in good journals and resort to plagiarising from the Internet. In addition, students who leave assignments until the last minute and lack time as well as research skills commit plagiarism by copying easily obtained information from the Internet. According to Eret and Ok (2014), although plagiarism has been a challenge in higher education institutions for long, the Internet has made this increasing problem more uncontrollable.



Sentleng's (2010, p. 68) study conducted at a higher education institution in South Africa found that 73% of students use the Internet for their assignments and research projects. Scanlon and Neumann's (2002) study conducted in Dubai at the Rochester Institute of Technology reported that 67.4% of students admitted cheating at least once in a test or major assignment, using the Internet to copy and paste text without following the rules of referencing

It has been reported in some research studies that the Internet influences students to use online material dishonestly (Eret & Ok, 2014; Ison, 2015; Sentleng, 2010). Worsening the issue of Internet plagiarism is the availability of online writing services, which allow students to buy papers, theses and dissertations on any subject of their choice easily (Sentleng, 2010, p. 17). Therefore, Ison (2015, p. 155) admits, "As the next generation has increasing easy access to the internet in their lives, in recent years, more and more young people at school are practicing cheating, and things are getting worse each year".

The arrival of the Internet has increased plagiarism to the extent that universities are now viewing the Internet as a threat to academic writing. As a result, universities have started taking firm measures including adopting "data-sifting tools that can cross check billions of digital documents" (Shrivasta, 2017, p. 1). Eret and Ok (2014, p. 1002) illustrate that "while plagiarism has been a growing problem in higher education for a long time, the use of the internet has made this increasing problem more unmanageable".

### **2.5.3 Students' perceptions of plagiarism**

Students' perceptions of plagiarism influence whether they commit it or not. If they perceive it as a means of obtaining better marks or grades, even if they know it is dishonest, they will plagiarise (Alleyne & Phillips, 2011), especially if they are under time pressure owing to poor time management skills. Thus, students might perceive plagiarism as justifiable because of time constraints, uncaring instructors, laziness, peer pressure, poor role models, fear of failure and technology advancement, which allows copying to be done with ease (Roberts, 2002; Okoro, 2011; Tripathi et al., 2015; Price, 2014, p. 45; Meng et al., 2014, p. 128; Ferree & Pfeifer, 2011, p. 286).

Camara et al. (2017) emphasise that students might perceive plagiarism as appropriate behaviour because of laziness and time constraints. Miller et al. (2017, p. 121) explain that students perceive plagiarism as acceptable because of pressure to succeed, social comparison, competition and personal standards of performance. Meng et al. (2014) confirm that students perceive plagiarism as suitable when competing with their peers for scholarships. Ahmad et al.

(2008) point out that competitiveness eliminates all perceptions of academic dishonesty in plagiarism. However, Idiegbeyan-Ose et al. (2016, p. 5) observe that students may perceive plagiarism as acceptable because they are unable to paraphrase or reference sources.

The study that Ewing et al. (2017, p. 79) conducted at Andrew Taylor Still University in the USA, in the Department of Health Sciences Education, revealed that doctoral health sciences students did not perceive plagiarism as unethical. However, a study has found that amongst online students, there is more knowledge about plagiarism than amongst campus-based students (Ryan et al., 2009, p. 2).

In a study conducted by Rathore et al. (2015) at the University of Pakistan, the perceptions of medical faculty members and medical students of plagiarism were explored. Both faculty members and students did not believe that they worked in a plagiarism free environment. Therefore, training in medical writing and research ethics was proposed as part of the under and postgraduate medical curriculum.

Ibegbulam and Eze (2015) investigated the knowledge, perceptions and attitudes of Nigerian students regarding plagiarism. The findings revealed that knowledge of plagiarism was very low prior to their being taught the subject. Nigerian students' perceived plagiarism as being undesirable because it might lead to being scored poorly or expulsion. Therefore, students favoured corrective measures over punitive measures. Students preferred to attend training on plagiarism to receiving poor grades or being expelled from the university. Ibegbulam and Eze (2015) emphasise that plagiarism is not a recent occurrence nor a problem peculiar to Nigerian universities but a major cause for concern to the academic community the world over. In support of this view, Rathore et al. (2015) observe that it is on the rise in Western countries.

Looking at the perceptions of students of plagiarism as reported by various literature sources globally, provides insight into what is lacking that has made plagiarism a challenge in higher education institutions. For example, some studies reveal that students should master academic writing skills and the language requirements, which would reduce plagiarism and change the perception that it is acceptable. Husain et al. (2017, p. 168) emphasise that perceptions of and attitudes towards plagiarism can affect the judgment and actions of postgraduate students, which necessitate strategies to combat it.

#### **2.5.4 Language, culture and geographical context as factors in plagiarism**

Plagiarism might be influenced by factors, such as language, culture and geographical contexts, (Husain et al., 2017; Miller et al., 2017). In reference to language, Rathore et al. (2015, p. 7) note that the inability to write and communicate ideas in English may lead to copy pasting whereby students reproduce text from sources verbatim. In addition, Pecorari (2003) and Stapleton (2012) maintain that not only do non-native English speakers of English struggle with the language, but they also might not know that it is unacceptable to copy from a source. Moreover, they might not know that treating sources critically is laudable and not a sign of disrespect towards the author of the source. Pecorari (2003) argues that in some circles, it has become conventional wisdom for second-language writers to plagiarise frequently. However, Husain et al. (2017) reveal that academic writing in English is not only a challenge for non-mother tongue English speakers but also for those for whom it is a first language. This shows that academic language is a challenge for native and non-native English speakers.

Miller et al. (2017, p 124) specify the academic culture as a factor leading to plagiarism in high-achieving students, who are expected to obtain the best grades and gain entry to the best institutions to maintain their status and standard. A country's culture might also influence attitudes towards plagiarism. According to Lamula (2017), European countries are more sensitive to the issue of plagiarism than some countries in Eastern Europe that do not consider it a serious issue (Foltynek, 2014, p. 22).

Husain et al. (2017) conclude that perceptions of and attitudes towards plagiarism are influenced by geographical context, which means that plagiarism may be seen as an unethical practice in some regions, while being accepted in other regions.

#### **2.5.5 Consequences of plagiarism**

Plagiarism whether intentional or unintentional has negative consequences for higher education institutions and those who commit it, especially students. This is confirmed by Powell (2012) who states that plagiarism has been widely condemned by academics largely because of its negative impact on student learning. Resorting to plagiarism and submitting unoriginal work indicate that students do not extract meaning from the information they read and do not use higher-level cognitive skills (Abdolmohammadi & Baker, 2007).

Plagiarism discredits the image of higher education institutions. According to Powell (2012), if plagiarism is left unchallenged, it will have a negative impact on a university's reputation, thereby devaluing the educational experience of its students and the qualifications of its



graduates. Indeed, researchers, such as Sentleng (2010) as well as Singh and Remenyi (2016), confirm that plagiarism can lower the standard and reputation of an institution, and the integrity of students and academic staff could be undermined.

Sentleng (201, p. 2) point out that “if a higher education institution does not accept that they have a plagiarism problem, they might be denying the sense of responsibility, good study skills and independent learning amongst students”. Unethical behaviour at university, of which plagiarism has been used as an example, has been linked to unethical behaviour in business, thus further undermining a university’s reputation (Powell, 2012). Thus, higher education institutions have no option but to look for solutions to avoid plagiarism, as it could have a negative impact on their image. Mohammed et al. (2015, p. 9) state the following:

Within academia, plagiarism by students, professors or researchers is considered academic dishonesty or academic fraud, and offenders are subjected to academic penalties up to expulsion. Sanctions of plagiarism for undergraduate and postgraduate students include one of the following: to redo the assignment/paper, to fail the assignment/paper, to redo the degree or to fail the degree.

Gullifer and Tyson (2010, p. 464) maintain that when they plagiarise, students deny themselves the opportunity to master academic writing skills. In addition, as Miller et al. (2017) explain, plagiarism means that teachers are unable to assess students’ learning and give them the support they need to make progress. Moreover, the confidence of students who do not plagiarise might be affected because of poor grades, and grade-based awards would be unfairly granted to those were dishonest (Miller et al., 2017, p. 121). Students who witness unchecked cheating may perceive that it is acceptable and will continue to plagiarise. However, students who commit plagiarism are being penalised and expelled from universities. Sentleng (2010, p. 16) confirmed that academic staff members support the exclusion of students guilty of plagiarism.

#### **2.5.6 Key role players in promoting academic integrity and discouraging plagiarism**

Although faculty librarians and student support staff prevent plagiarism through collaborations and outreach programmes (Camara et al., 2017, p. 43), Ewing et al. (2017) support the need for higher learning institutions to promote academic integrity by involving more role players in the academic community. Husain et al. (2017, p. 169) are of the opinion that faculty management should take responsibility for the prevention of plagiarism by drafting policies that guide student behaviour. Thus, preventing plagiarism should be the responsibility of

management, academics and academic support staff in maintaining academic integrity and ensuring that students understand what constitutes plagiarism (Miller et al., 2017).

As students become aware of the problem of plagiarism, they should also play a role in its prevention and the maintenance of academic integrity, although they might see this as the responsibility of teachers (Miller et al., 2017).

## **2.6 Strategies to prevent plagiarism**

Bakhtiyari et al. (2014), Löfström and Kupila (2013) as well as Patel et al. (2011) suggest that the teaching of academic writing in higher education is a solution to the challenge of plagiarism. Gullifer and Tyson (2010, p. 464) indicate that academic writing involves critically assessing sources used as well as paraphrasing, acknowledging authors' ideas and quoting when using exact wordings, would avoid plagiarism.

Husain et al. (2017, p. 167) argue that academic writing should be mastered by both non-English and English speakers, although the former also need special support with coping with English (Bruce, 2008). Ellery (2008, p. 514) recommends teaching students about plagiarism and training them in academic writing skills would reduce in higher education institutions. Ewing et al. (2017, p. 86) advise higher education institutions to increase student awareness of academic integrity and the unacceptability of plagiarism. McGowan (2005) recommends that students should be trained in academic writing skills to maintain the educational integrity of tertiary institutions.

Although plagiarism detection tools are approved by many academics for evaluating and improving academic writing skills and the quality of student learning (Heckler et al., 2013; Lofstrom & Kupila, 2013), Bakhtiyari et al. (2014, p. 57-59) propose the following scholarly techniques to avoid unconscious and accidental plagiarism in manuscripts:

***Reading from many sources*** to avoid unconsciously using the same words and language structure of a particular text

***Writing after a few days of reading*** to avoid using exact words and language of a text, which will no longer be in the memory, and the brain will make new sentences automatically

***Using a thesaurus or dictionary*** as a tool to replace the words in the original text with synonyms, which will decrease similarities between it and the new document

***Proofreading the paper (assignment) as many times as possible***, which will lead to minor changes and improvements in the language, thereby eliminating plagiarism and similarity between the old and new texts

***Using machine paraphrasers*** to write a sentence with the same meaning in several structures, as normal paraphrasing can be time consuming

***Periodic reading of the manuscript*** to find grammatical mistakes or missing words in the text

***Quoting*** using quotation marks around text that has been directly copied and referencing the source at the end of the expression.

Gullifer and Tyson (2010, p. 464) postulate that “when exploring attitudes and beliefs towards plagiarism it is important to gain a better understanding of student perceptions, and then develop appropriate strategies with an increased probability of effectiveness”. This viewpoint challenges academics to understand why students engage in academic dishonesty before developing strategies to promote academic integrity and prevent plagiarism. Ashworth et al. (1997) argue that an understanding of the student perspective on plagiarism can significantly assist academics in their efforts to communicate and inculcate appropriate norms.

The study conducted by Gullifer and Tyson (2014) at the Charles Sturt University in Australia, suggested that after examining students’ perceptions of plagiarism, materials for the learning of paraphrasing and referencing should be developed and embedded within courses. Husain et al. (2017) confirm that there should be educational programmes to assist the academic community in controlling plagiarism and promoting academic integrity. In the study conducted at the Edith Cowan University, Gullifer and Tyson (2010) found that master’s students should be taught skills, such as time management, critical reading, paraphrasing and summarising to prevent plagiarism.

Miller et al. (2017, p. 124) present steps to curb cheating, such as “increasing the likelihood of detection including changing seating arrangements, creating multiple versions of exams, limiting access to technology during testing, and using anti-plagiarism software to fight the proliferation of the electronic dimension”. Miller et al. (2017) add that schools should provide information about and definitions of academic integrity to help students understand the notion of academic dishonesty. Ewing et al. (2017, p. 81) agree that the fundamentals of academic misconduct are not fully understood. Thus, strategies to curb plagiarism amongst students at higher learning institutions should include raising awareness of the consequences of

plagiarism, such as discipline measures and teaching them about integrity together with ethical academic writing (Selemani et al., 2018). However, apart from the above-mentioned strategies, other effective systems for detecting, managing, and discouraging plagiarism can be followed (Glendinning, 2014).

An important strategy is the use of plagiarism-detection tools or anti-plagiarism software as a way of detecting and preventing plagiarism as well as improving academic writing. Therefore, as different authors have suggested this strategy, the current study looked at Turnitin software, which is used at the University of Stellenbosch Business School to reduce and improve academic writing, to discover whether it is an effective tool. However, it is ironical that the Internet, which promotes plagiarism by facilitating access to a multitude of resources, also allows its detection because the software is able to compare the text of an assignment with the vast number of articles, books and other sources available online. In the words of Guraya and Guraya (2017, p. 769):

The instant availability of scientific literature on the World Wide Web appears to be a double-edged sword, allowing plagiarism to be more easily committed, while at the same time allowing its easy detection by the use of plagiarism-detection software.

The next section reviews different perspectives by students and academics on the use of anti-plagiarism software as presented in different studies.

### **2.6.1 Anti-plagiarism software**

Anti-plagiarism software detects and discourages plagiarism, which is useful in the academic environment (Ison, 2015, p. 155). Beekman et al. (2016) emphasise that individuals should become familiar with free online anti-plagiarism software to detect and eliminate plagiarism in their writing, by logging into its website to find instructions on how to conduct a search for plagiarised text.

In the study conducted by Lofstrom and Kupila (2013), a pilot project was initiated at a university in Finland to test plagiarism-detection software, determine how teachers and students viewed it, discover how it taught the students to avoid plagiarism and ascertain whether teachers believed that it could be used as an educational tool. The findings revealed that teachers had decided to use the software in future and that it had developed students' academic writing skills.



Lamula (2017) as well as Lofstrom and Kupila (2013) assert that across the world, many tertiary institutions have adopted plagiarism-detection tools, while several others are considering using them because they appear to be effective in checking for texts plagiarised from the Internet by students (Sentleng, 2010, p. 22). However, the disadvantage of anti-plagiarism software is that it cannot trace information plagiarised from printed sources. Therefore, students who plagiarise from printed materials are more difficult to detect (Sentleng 2010).

#### *2.6.1.1 Types of plagiarism detection software/text-matching tools to detect plagiarism*

There are a number of anti-plagiarism software tools available either free of charge or for a fee, which might be substantial (Tripathi et al., 2015), and thus not affordable for an individual. Beekman et al. (2016) and Glendinning (2014) mention four online software systems for detecting plagiarism:

**Plag Tracker** is free software that uses a three-step online process. Firstly, it allows the user to upload all sections of a document onto its website. Secondly, it scans the text for plagiarism, and thirdly, it produces a report within a few minutes that identifies the plagiarised passages and directs the user to sources to which the information can be attributed.

**Plagiarisma** is software to which a user can subscribe online free of charge. The user can submit a text of up to 2000 words and receive a report by email indicating what percentage of the writing is free of plagiarism.

**Grammarly** is anti-plagiarism software for which users need to pay. It provides an opportunity to try it out first by pasting text into a box, which appears on screen the moment you open its web page. The text is checked instantly for plagiarism, as well as grammar, spelling, punctuation, wordiness and sentence structure, before a report is displayed on screen. The user needs to create an account and select a payment plan. A week's free access is given to this programme before the user decides to subscribe or not.

**Turnitin** is described by Mphahlele and Mckenna (2019, p. 1084) "as an electronic plagiarism detection tool, which is used by a lot of international and national higher education institutions to detect plagiarism". Most South African universities use Turnitin. According to Beekman et al. (2016), this anti-plagiarism software is not free, and institutions need to acquire a licence. Lecturers use it to check students' work to ensure that it is plagiarism free.



However, plagiarism-checking software appears to be constantly evolving. Guraya and Guraya (2017, p. 769) mention the following:

Most popular software tools that are available for the detection of plagiarism, such as iThenticate [<http://ithenticate.com/>] and Turnitin originality checking [<http://turnitin.com/>] software, recently partnered with Cross Ref [<http://www.crossref.org/>] to create a Cross Check, which is a new service that verifies the originality of the scholarly content.

Notwithstanding all this detection software and their common and different services, Guraya and Guraya (2017) perceive Turnitin as a strong deterrent to plagiarism. However, Mphahlele and McKenna (2019, p. 1084) claim that anti-plagiarism tools do not pick up all texts that are similar to sources available on the Internet. Nevertheless, as Batane (2010) and Tripathi et al. (2015, p. 275) point out, plagiarism-detection software benefits academics, researchers and anyone else interested in having writing checked for intentional or unintentional plagiarism.

#### *2.6.1.2 Use of Turnitin software*

According to Dahl (2007), Heckler et al. (2013) as well as Mphahlele and McKenna (2019), higher learning institutions, globally, make use of Turnitin as a way of controlling plagiarism. Turnitin is a popular tool for comparing content with current and archived repositories of students' research reports and massive databases of periodicals, journals and other publications. Most higher learning institutions in South Africa have implemented the use of Turnitin (Mphahlele & McKenna 2019).

Although quite a few types of anti-plagiarism software are available, according to Mphahlele and McKenna (2019, p. 1080), "Turnitin holds the greatest market share" and "is trusted by over 15,000 higher education institutions in over 140 countries)". Furthermore, Mphahlele and McKenna (2019) emphasise that Turnitin and academic writing are well integrated: while teachers focus on teaching academic writing skills, Turnitin focuses on preventing plagiarism. Levine and Pazdernik (2018, p. 1099) indicate that plagiarism is reduced because of the use of Turnitin together with teaching students about the policies and procedures of plagiarism.

In a study conducted by Ison (2015), a sample of 384 dissertations were analysed by Turnitin plagiarism detection software, and similarities between their content and Internet sources were reduced by the tool indicating where students should paraphrase, use quotation marks and reference original text. Therefore, the findings of the study suggested that Turnitin affected the prevalence of plagiarism at an advanced level of higher education.

## 2.7 University policies on plagiarism

Policies and guidelines should be implemented in higher learning institutions to address the issue of plagiarism. However, Sentleng (2010, p. 12) suggests that even before formulating institutional plagiarism policies, staff members' and students' perceptions of plagiarism need to be understood, as this will contribute to student learning and staff development as well as making sure that students are treated fairly by the policies. According to Ewing et al. (2017, p. 81), "even if an institution has academic misconduct policies to promote academic integrity, without consistent institutional enforcement the burden shifts to instructors". This means that academic managers and support staff should make sure that the policies are implemented.

To draw up policies, higher learning institutions need to clarify all forms of academic dishonesty, such as cheating and plagiarism, so that staff members and students understand their implications (Husain et al., 2017, p. 169). In addition, Sentleng (2010, p. 25) suggests that "institutions in their policies should have clear differentiation between the forms of plagiarism, the measurement of plagiarizing, disciplinary actions, fair and consistent disciplinary procedures, and instruction about how the institution deals with plagiarism". In other words, once policies are drawn and implemented, it should be easy for students and staff members to refer to different aspects of the policy.

Gullifer and Tyson (2010, p. 465) see university policy as "an instrument to both define what plagiarism is and the possible consequences if breached as well as having a good understanding of institutional policy reduces the risk of engaging in plagiarism". This clearly shows that policies empower academics and support staff to provide plagiarism awareness amongst students and make sure that academic integrity is always maintained.

In order to create a culture of academic integrity, Ewing et al. (2017, p. 81) advise institutions to draw up clear policies that challenge and confront student misconduct so that students do not engage in academic misconduct because they think that it is acceptable. Ewing et al. (2017) argue that if faculties do not act against academic misconduct through policy, it may appear that they support it. Moreover, policies should support and maintain academic integrity by indicating that students should rewrite tests and assignments when there has been academic misconduct.

Carroll and Appleton (2005), insist that once policies are drafted, they should be circulated to all students and academic staff so that when plagiarism is detected, a student can be punished according to the stipulated procedures. Moreover, it is important for plagiarism policies and

procedures to be transparent to every academic community member. Sentleng (2010, p. 26) maintains that academic staff need to be familiar with the various sanctions that should be applied to different levels of plagiarism.

Although each case should be dealt with on its own merits, discrepancies can be eliminated if the correct penalty is linked to the transgression (Foltynek, 2014; Sentleng, 2010). Therefore, plagiarism policy, guidelines and procedures classified according to the offense should apply to all faculties and departments of an institution.

According to Stellenbosch University's plagiarism policy, all members of the university are responsible for ensuring that they understand and can fully comply with the requirements of this policy at an individual level. No person(s) participating in the academic activities of the university should commit plagiarism or self-plagiarism. Honesty and transparency are two core values that must be upheld when participating in the academic activities of the University. All students, staff and affiliates are obligated to always act ethically and in the best interests of the university. All cases of plagiarism must be handled consistently according to established processes, either at department, faculty, or central management level. All these processes must comply with both policy and the procedure for the investigation and management of allegations of plagiarism. All those engaged in teaching are responsible for establishing mechanisms to create an awareness of plagiarism and to facilitate the detection and consistent reporting of plagiarism (Stellenbosch University, 2021).

### **2.7.1 International policies on plagiarism**

According to Lamula (2017), across nations, academics should always be aware of international conferences, policies and initiatives to promote research integrity. Horn (2013) maintains that research integrity and the promotion of responsible research conduct are important for academic institutions. In addition, Horn (2013, p. 21) mentions four principles of academic integrity: honesty; accountability; professional courtesy and fairness; and good stewardship. These principles, (called the Singapore Statement on Research Integrity), were formulated on the 22nd of September 2010 at the Second World Conference on Research Integrity by 380 individuals from 51 countries across the globe.

Carroll and Appleton (2005) investigated the fairness and consistency of policies and procedures of plagiarism at Oxford Brookes University, in the United Kingdom, because regulations need to outline the principles of academic integrity clearly and to be implemented

in all cases of misconduct. Park (2004) describes how Lancaster University developed a regulatory framework emphasising plagiarism prevention through education, intervention and punishment for violation. The framework also had integrated policy guidelines and procedures to deal with academic misconduct.

Macdonald and Carroll (2006) suggest that punishment for plagiarism should be decided based on the amount of text similar to the original. Furthermore, the number of how many times a student has committed plagiarism should be considered. This means that records of cases of plagiarism should be kept for future reference. Carroll and Appleton (2005, p7) state as follows:

Plagiarism guidelines should include categories of plagiarism, types graded according to the seriousness of the offense, a clear set of procedures for dealing with each type as well as a list of penalties related to the type of plagiarism depending on the seriousness of the offense (2005, p.7).

Hu and Sun's (2017) study at Nanyang Technological University, Singapore, found that higher education institutions have a vital role to play in ensuring academic integrity not only to educate students about plagiarism and its consequences but also in developing institutional policies to prevent it. These institutional policies should inform students about the definition of plagiarism, its consequences and possible penalties (Macdonald & Carroll, 2006).

## **2.8 Publish or perish: academics and plagiarism**

Guraya and Guraya (2017), Idiegbeyan-Ose et al. (2016) and Meng et al. (2014) agree that plagiarism might be due to the pressure felt by faculty researchers and well-known authors to increase their number of publications (publish or perish) to be promoted and to receive research grants. In fact, Thomas and De Bruin (2015) mention that in South Africa, government subsidies paid to the Department of Higher Education and Training (DHET) might be a factor contributing to plagiarism. Government grants DHET funding to generate new knowledge through research that leads to commercial, technological, social, political, educational and other innovations of benefit to national development.

Thomas and De Bruin's (2015) study found that an estimated R 32 400 000 in subsidy was paid by the government for the 317-business management journals, which were reviewed for plagiarism. The review showed that 21.3% of these subsidised journals were excessively plagiarised and represented an estimated R 7 000 000 in subsidy money paid by government to higher institutions. Thomas and De Bruin (2015) point out that the pressure on academics to



publish has led to an academic culture that encourages quantity over quality. Sheikh and Mohamed (2015) agree that academics are reaping the rewards of government subsidies, promotions and recognition, instead of focusing on producing good quality research papers, and the pressure to publish had led to academic dishonesty in the academic community.

## **2.9 Summary of the chapter**

Glenn (2006) acknowledges that South Africa has a long way to go in terms of addressing plagiarism in both the academic sphere and the media. Moreover, that South Africa is not as prepared to dealing with the issues of intellectual property theft and plagiarism, compared to developed countries like the USA. However, plagiarism is a challenge in higher education institutions globally. This chapter has shown how plagiarism has increased throughout the research and academic environment, although higher education institutions have formulated policies and strategies for defining, detecting and decreasing it. Mohammed et al. (2015) suggest that the most important strategy is to raise awareness in the academic community so that plagiarism does not get worse.

In this chapter, factors contributing to the increase of plagiarism were discussed. To maintain and support academic integrity, students should be encouraged to act responsibly and ethically. However, higher education institutions first have to understand the perceptions of and attitudes of students and academic staff towards plagiarism before they draft plagiarism policies. Moreover, institutions and academic staff should ensure that they provide students with copies of these policies and openly talk to students about plagiarism (Lamula 2017).

This chapter has pointed out that whether plagiarism is intentional or unintentional, it has a negative impact on both students and higher education institutions, and therefore needs solutions and strategies to prevent it. Guraya and Guraya (2017) as well as Hu and Sun (2017) suggest that students be educated about plagiarism and given guidance in academic writing and research skills (Gullifer & Tyson, 2010; Lofstrom & Kupila, 2013).

Dahl (2007), Heckler et al. (2013) as well as Mphahlele and Mckenna (2019) maintain that Turnitin is mostly used by universities around the world to manage plagiarism, as it is the preferred commercial web-based text-matching tool. Thus, various South African universities, Stellenbosch University included, have been promoting the use of Turnitin as a tool to counter increased levels of plagiarism. To date, there has been no study conducted in the context of South Africa to investigate the perceptions and attitudes of South African postgraduate students and lecturers regarding plagiarism and the use of Turnitin.



## CHAPTER 3

### THEORETICAL FRAMEWORK

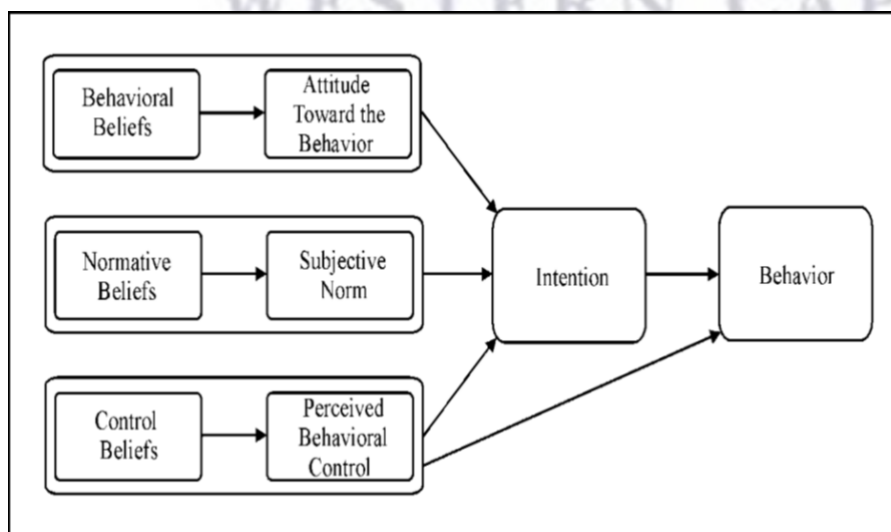
#### 3.1 Introduction

In this chapter, the theory of planned behaviour (TPB) is discussed in relation to the study. Many researchers tie their research studies to a particular theoretical framework to propose a set of concepts and principles that might shed light on cause and effect and other relationships within the phenomenon under investigation (Leedy & Ormrod, 2019). In addition, in some instances, a research problem is formulated to find support for a particular theory. A theoretical framework is applied to limit the scope of data by focusing on specific variables, for example, those of the TPB that influence behaviour, which in the case of the study, is the act plagiarism.

#### 3.2 Theory of planned behaviour

The TPB is an appropriate predictive pattern for plagiarism committed by students (Salehi & Ghasemzadeh, 2018). The TPB is a social cognition model utilised in social psychology to study behavioural patterns (Ajzen's 1988; 1991; Armitage & Conner, 2001; Conner & Sparks, 2005). Behaviour is defined as an intentional act exhibited by an individual to satisfy personal desires. The underlying characteristics of behavioural intention include attitudes, subjective norms and perceived behavioural control (Ajzen, 1985; 1991). Thus, in the context of plagiarism, these three variables would determine students' intention to commit (Ajzen, 1985). Figure 3.1 depicts the relationship amongst the various constituents of the TPB framework.

**Figure 3.1: The theory of planned behaviour**



Adapted from Ajzen (2004, p.1)

The TPB allows for the prediction of an individual's behaviour, which fundamentally depends on his/her beliefs about behaviour, norms and control, as shown in Figure 3.1 (Ajzen 2004). Thus, understanding an individual's beliefs will lead to insight into his/her attitude towards a particular behaviour, (such as plagiarism), and perception of significant others' acceptance of it and the level of difficulty of it. This insight will indicate the extent to which the individual is motivated to perform a behaviour (Holdershaw et al., 2011; Martin et al., 2010; Rise et al., 2008).

According to Ajzen (2012), the TPB does not indicate other variables that lead to behavioural intention and motivation, such as threats, fear, mood, experience or environmental/economic factors. Thus, in some areas, the theory might not explain behaviour. For example, the TPB has shown more utility in public health than the Health Belief Model, but it is still limiting in its inability to consider environmental and economic influences (Smart, 2012). Over the past few years, researchers have used some constructs of the TPB and added other components from behavioural theory to make it a more integrated model. This has been in response to some of the limitations of the TPB in addressing public health problems. Nevertheless, the theory was appropriate as a framework for the current study.

### **3.2.1 Key concepts of the theory of planned behaviour**

The following key concepts are discussed: past behaviour and the TPB, behavioural intention, attitude towards the behaviour, subjective norms (perceived social pressure), perceived behavioural control, and moral obligation.

#### *3.2.1.1 Past behaviour and the TPB*

The TPB explains how past behaviours may determine future behaviour by evaluating patterns and trends (Ajzen, 2010; Fishbein & Ajzen, 2010). In other words, the elements informing behaviour are determined by prior experience of it (Fishbein & Ajzen, 2010). According to Beck and Ajzen (1991), perceived behavioural experience predicts behaviour in the future. Burnkrant and Page (1988) maintain that individuals develop notable trends in responses, which correspond to different but specific situations over time, which determine the individual's beliefs, attitude, subjective norms, perceived behavioural control and intention that ultimately influence future behaviour (Ajzen & Fishbein, 1980).

### *3.2.1.2 Behavioural intention*

Behavioural intention is the will to act exhibited by individuals and determines behaviour and its outcome. Alleyne and Phillips (2011, p. 326) suggest that according to the TPB, “the determinant of a behaviour is an individual’s intentions to perform or not to perform the behaviour”. Thus, committing plagiarism is determined by a student or academic’s will to do so, which is, in turn, due to their attitude towards it, their peers’ perception of it and its perceived level of difficulty. In other words, favourable or unfavourable perceptions and attitudes regarding plagiarism will determine whether to engage in it or not.

The purpose of the TPB model is to understand what motivates individual actions, and as stated above, this could be influenced by past behaviour (Fishbein & Ajzen, 2010). Behavioural intention is the motivation and level of commitment to perform a behaviour. Beck and Ajzen (1991) researched the intentions of students to commit academic dishonesty in terms of “cheating on a test or exam” (Beck & Ajzen, 1991, p. 292). However, it could be researched in the context of plagiarism by measuring it in terms of likelihood of performance of the behaviour and self-fulfilling prophecy whereby an individual expects to behave in a certain way and he/she ends up by doing so, almost without being able to control the process (Warshaw & Davis 1985). The intention to commit plagiarism amongst students might also be influenced by a tendency to perform other forms of academic misconduct (Stone et al., 2009), a lack of motivation to avoid it and inadequate resources to do research in an appropriate way (Ajzen, 1985; Beck & Ajzen, 1991).

### *3.2.1.3 Attitude towards the behaviour*

An attitude is defined by Fishbein and Ajzen (2010, p. 76) “as a tendency to respond with some degree of ‘favourableness’ or ‘unfavourableness’ to a psychological object and can be any discriminable aspect of an individual’s world including behaviour”. Attitude towards a particular behaviour is described by Alleyne and Phillips (2011) as the most important factor in the TPB, which influences an individual’s intention or motivation to engage in a behaviour. This implies that the likelihood of an individual to engage in a behaviour is determined by a positive attitude towards it and a negative attitude would discourage it

Ajzen (2004) points out that the attitude variable depends on a person’s belief about the behaviour, which might be connected to the envisaged outcome of it. Thus, attitude might be influenced by the factors of the perceived outcome and the value of the action (Armitage & Conner, 2001). According to Alleyne and Phillips (2011), students justify their positive attitude

towards unethical actions and academic dishonesty by saying that they have insufficient time to prepare for exams and are under pressure to obtain good grades.

According to Stone et al. (2009), when individuals have a positive attitude towards a behaviour, they are likely to form an intention to perform it. However, once students develop a negative attitude towards plagiarism, which they believe might bring about an undesirable outcome, they might not commit it. However, Beck and Ajzen (1991) as well as Stone et al. (2009) find that a positive attitude towards plagiarism is a significant predictor of its occurrence.

The study conducted by Grimes (2004), which evaluated students' attitudes towards academic dishonesty, revealed that several students viewed it as being acceptable. However, despite the positive attitude towards academic dishonesty, such as plagiarism, students feared the consequences of being caught performing the behaviour, which might have deterred them from it.

#### *3.2.1.4 Subjective norms (perceived social pressure)*

Subjective norms determine behavioural intention and are formed by social pressure to perform a particular behaviour (Ajzen & Fishbein, 1980; Alleyne & Phillips, 2011). Subjective norms in the TPB refer to an individual's perception of what is right and wrong, which is influenced by significant others and the immediate social environment (Fishbein & Ajzen, 2010). Social influence is "the process whereby people directly or indirectly influence the thoughts, feelings, and actions of others" (Turner, 1991, p.1).

Students' intention to commit plagiarism is influenced by whether others in the academic environment accept it or not. Moreover, a student might be motivated to comply to his/her normative beliefs and emulate what his/her peers do (Ajzen, 2010). Thus, the current study associated normative beliefs and subjective norms with others' expectations, desire for acceptance and the possible loss of the respect of significant others, which are indicative of perceived social pressure felt by individuals seeking to belong to a certain social group.

According to Fishbein and Ajzen (2010) families and friends who support a particular behaviour can influence intentions to act or not to act. Stone et al. (2009) maintain that students are more likely to engage in dishonest behaviour, when they perceive those significant others would support the practice, consider it normal and have been observed performing it (Smart, 2012).



### 3.2.1.5 Perceived behavioural control

In the TPB, perceived behavioural control, the third determinant of intention, according to Ajzen (1991), contributes a great deal to an intention to perform a behaviour. Perceived behavioural control is the individual's perception of his/her capacity to behave in a particular way, which will determine the intention to do so. Perceived behavioural control is defined as the "perceived ease of use of performing the behaviours based on past experiences and anticipated impediments" (Ajzen, 1991, p. 132). Thus, the individual's perception of the degree of difficulty in performing a behaviour, can be used to predict it (Ajzen, 1991; Ajzen, 2004). In addition, Beck and Ajzen (1991) describe perceived behavioural control as a predictor of cheating. In other words, as found by Whitley's (1998) and Stone et al.'s (2009) studies, research, students who found cheating easy were more likely it to do so.

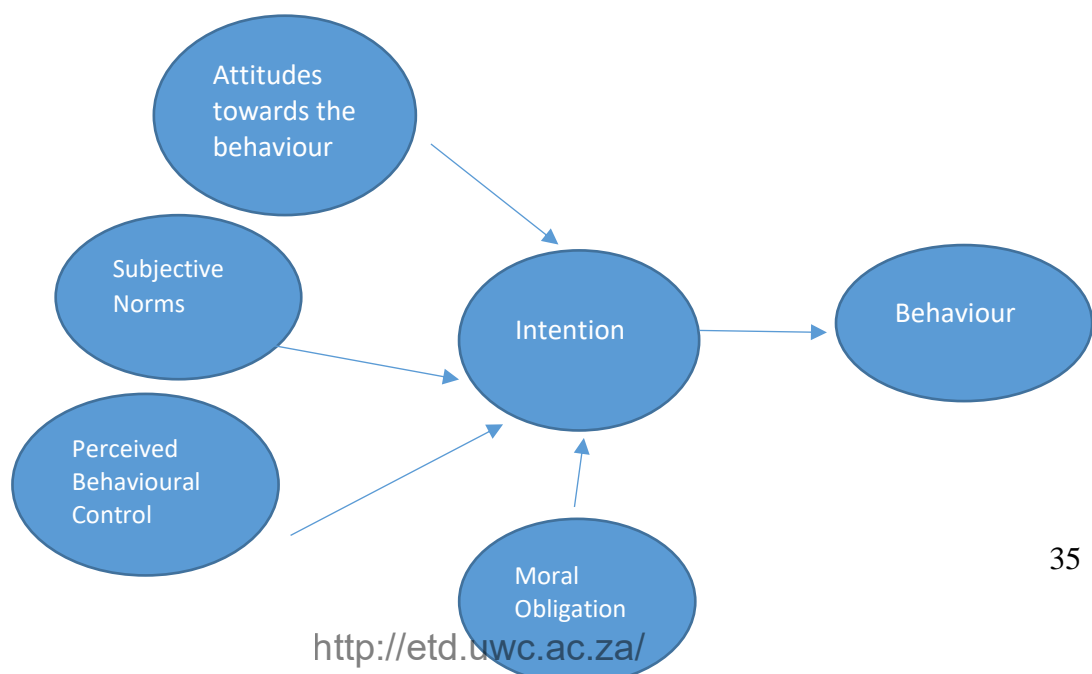
Wallston (2001, p. 24) states, "Perceived behavioural control refers to people's perceptions of their ability to perform a given behavior and it is often assessed by the ease or difficulty of the behaviour".

### 3.2.1.6 Moral obligation

According to Alleyne and Phillips (2011, p. 332), Beck and Ajzen (1991) extended the TPB to explain the influence on behavioural intention of a fourth variable: moral obligation, which might be embedded in the individual's society or culture (Shaw, 2008, p. 12). This suggests that how strong or weak an individual's sense of being obliged to behave in a certain way would affect intention to perform the behaviour. Figure 3.2 depicts the new TPB.

**Figure 3.2: A modified version of the theory of planned behaviour**

(Adapted from Alleyne and Phillips (2011, p. 332))





### **3.3 Rationale for applying the theory of planned behaviour**

The application of the TPB in a study contributes to understanding the relationship between intention and behaviour, as well as the influence of variables such as attitude (Armitage & Christian, 2004). In the context of a study of plagiarism, the TPB can be used to understand the variables that influence students to perform the behaviour or avoid it. For example, if a student exhibits a positive attitude towards compliance with the academic regulations and he/she is influenced by a moral obligation to adhere to ethical academic norms, it would be expected that there would not be any motivation to commit plagiarism. However, if a student perceives that it is not only easy and acceptable to plagiarise but others do it and receive high grades, there is a high probability of non-compliance to plagiarism policies.

### **3.4 Application of the TPB to the study**

The TPB and its modified version were applied to the study, as its primary objective was to be able to predict and explain the behaviour of students, in terms of their attitudes and perceptions regarding plagiarism detection software. Attitude and perception are variables of the TPB, which influence behavioural intention. According to Alleyne and Phillips (2011, p. 329), “the determinant of a behaviour is a person’s intentions to perform (or not to perform) the behaviour”. Various studies have adopted the TPB to understand and predict students’ motivations for engaging in plagiarism (Chudzicka-Czupala et al., 2016, p. 638) and highlight the factors that influence their decision to behave in this way (Khathayut et al., 2020, p. 2), although it may attract punishment (Chudzicka-Czupala et al., 2016).

Alleyne and Phillips (2011) conducted a study to explore academic dishonesty amongst university students in Barbados by applying the TPB. A survey questionnaire was used to test 363 undergraduate students at the University of the West Indies. It was found that attitude, perceived behavioural control and moral obligation, were significant predictors of students’ intentions to perform academic dishonesty in the form of cheating. In addition, in the same study, it was found that the TPB proved to be an appropriate model for explaining intentions to perform unethical academic practices (Alleyne & Phillips, 2011, p. 334).

According to Khathayut et al. (2020), the TPB is a suitable framework for understanding plagiarism, as it explores the relationship between attitude, intention and behaviour. Similarly, Powell (2012, p. 10) contends that students’ intent to plagiarise are influenced by attitude and perception, for example, perceived behavioural control. The current study, conducted at the Stellenbosch University, South Africa aimed to explore students’ and lecturers’ attitudes

towards and perceptions of plagiarism and Turnitin in light of the TPB framework and the literature findings.

### **3.5 Theory of planned behaviour and academic dishonesty**

The TPB and the modified version are often used to explain the predisposition of students or academics to engage in academic dishonesty, such as plagiarism, ghost writing or cheating (Beck & Ajzen, 1991). Academic dishonesty is defined as an intentional action that benefits students with an unfair advantage over their academic peers in a test or an assignment (McCabe, 2005). The TPB has the potential to explain factors affecting academic dishonesty in higher education institutions and highlights intention, attitudes, perceived behavioural control, subjective social norms and moral obligation.

The TPB is useful for explaining the intention of an individual such as a student to engage in dishonest behaviour such as intellectual theft (Meng et al., 2014). Similarly, Alleyne and Phillips (2011) point out that the TPB explains the factors that influence an individual's choice of exhibiting specific behaviour. These factors have been used to explain academic dishonesty and misconduct.

Apart from the factors influencing behaviour outlined by TPB, two factors have been identified as leading causes of plagiarism: a lack of language proficiency and inadequate writing skills. A lack of language proficiency in language may lead to plagiarism because of poor reading skills and the inability to express ideas, which might lead to students lifting chunks of text from the original source of information (Salehi & Ghasemzadeh 2018; Lamula, 2017).

In several higher academic institutions, plagiarism is described as a practice that entails collusion, contractual cheating and ghost writing, with the intent to subvert academic honesty (Bretag et al., 2019). It is important to indicate that although many students understand the implications of academic cheating and know that it is wrong, peer pressure tends to influence students to cheat with the intention to obtain better academic grades (Alleyne & Phillips, 2011) and avoid failure (Salehi & Ghasemzadeh 2018). The TPB model explains this peer pressure in terms of subjective norms (Salehi & Ghasemzadeh, 2018).

### **3.6 Summary of the chapter**

This chapter has explained the TPB variables and the way that they explain behaviour, which in the context of the study is academic dishonesty in the form of plagiarism. The chapter discussed how beliefs influence attitude, perceived behavioural control and subjective norms,

which, in turn, determine intention and, ultimately, behaviour. The chapter explained that the TPB was modified to include the variable “moral obligation” to explain behaviour that has ethical dimensions.

Studies using the TPB have shown its predictive validity, especially in studies that test research hypotheses. The current study examined the perceptions and attitudes of students and lecturers regarding plagiarism and using Turnitin as a plagiarism prevention strategy, with a view to understanding plagiarism behaviour in the academic community. Alleyne and Phillips (2011) conclude that TPB provides a wealth of information for understanding factors that influence intentions to act ethically or unethically.



## CHAPTER 4

### RESEARCH DESIGN AND METHODOLOGY

#### 4.1 Introduction

In the previous chapter, the theory used in the study, Ajzen's (1991) TPB, was outlined, its origin, development and main concepts; moreover, the justification for using it was explained. The TPB's main concepts, which are attitudes towards behaviour, subjective norms, perceived behavioural control and moral obligation formed a framework for the study and informed the research design and methodology, especially the data collection methods and analysis.

A research design is the general plan of a study and comprises the specific strategies for conducting it, which make up the methodology. The study followed a convergent parallel research design by using both quantitative and qualitative methods (mixed methods) in collecting and analysing data. This chapter will explain the elements of the research design and methodology: the paradigm, mixed methods research; data collection and analysis; and research ethics. In the course of the explanation of these features of the research design and methodology, the rationale for choosing them will be discussed in light of the research aim, which was to investigate lecturers and postgraduate students' perceptions of, as well as attitudes towards, plagiarism and interacting with Turnitin (Kallet, 2004).

#### 4.2 Paradigm

The paradigm of pragmatism (a practical approach) was chosen for the study, which, according to Creswell and Plano Clark (2011), can be followed in both quantitative and qualitative research. Furthermore, Tashakkori et al. (2015) maintain that pragmatism can provide a philosophical framework for mixed methods research (MMR). Creswell and Plano Clark (2007) describe pragmatism as pluralistic, which means that researchers collect data according to "what works", which includes combining both quantitative and qualitative data. Nevertheless, although Tashakkori et al. (2015) support the use of multiple paradigms when conducting MMR, pragmatism was used as the overarching worldview informing the study. Pragmatism focuses on the production of actionable knowledge, in this study plagiarism and anti-plagiarism tools, which is beneficial to the university. Pragmatism was also a relevant paradigm as both qualitative and quantitative methods were integrated.



### 4.3 Mixed methods research

The study conducted MMR in line with its convergent parallel design and paradigm of pragmatism. The term “mixed methods” has become an umbrella concept of applying more than one method in combination with another, with some qualitative and quantitative elements (Bazeley, 2008, p. 133). However, according to Halcomb and Hickman (2015, p. 42), “mixed methods research involves the use of qualitative and quantitative data in a single research project, and it represents an alternative methodological approach, combining qualitative and quantitative research approaches”. Creswell (2014, p. 4) adds, “Mixed methods involve the collection and ‘mixing’ or integration of both quantitative and qualitative data in a study”. According to Hayes et al. (2013, p. 8), “quantitative research involves the collection and analysis of numerical data, whilst qualitative research considers narrative or experiential data”. Therefore, MMR integrates quantitative data expressed in numbers and qualitative data expressed in words, within a single study (Wisdom et al., 2012, p. 727).

In the words of Halcomb and Hickman (2015, p. 43), “the reader should explore the positivistic (quantitative) and naturalistic (qualitative) paradigms in more detail in order to understand the scope of quantitative and qualitative research”. Moreover, according to Maudsley (2011, p. 93), “a key aspect of the definition of mixed methods research is the ‘mixing’ of the qualitative and quantitative components within the study”. Zhang and Creswell (2013, p.6) perceive “[the term] ‘mixing’ as a process whereby the elements of both qualitative and quantitative are interlinked to produce a fuller account of the research problem”.

Confusion remains around the meaning and clarity of the terms “mixed methods research” and “multi-method research. However, according to Johnson et al. (2007, p. 119), “there is a level of agreement that mixed methods research is slightly different to multi-method research”. Andrew and Halcomb (2009) clarify that MMR combines qualitative and quantitative methods in a single study. However, MMR involves data collection using two methods within the same paradigm. The advantage of MMR is that the combination of qualitative and quantitative data strengthens the research outcomes (Andrew & Halcomb, 2009). In contrast, “multi-method research has only an advantage of collecting data using multiple methods” (Wisdom et al., 2012, p. 731).

Creswell and Plano Clark (2007, p. 5) describe MMR as a methodology based on philosophical assumptions that guide the mixture of qualitative and quantitative data collection and analysis as well as other phases of the research process in a single study or series of studies. Its central



premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of the research problem and realisation of the research aim than either approach alone would do (Creswell & Clark, 2011). Each type of data was collected and analysed separately and independently. Their results were merged as both approaches addressed the same concepts.

#### **4.3.1 Rationale for conducting mixed methods research**

According to Creswell (2015), mixed methods rationales are the explicit arguments for and reasons that researchers advance using MMR to address their research problems and purposes. In the study, the rationale for choosing MMR was to collect and analyse a variety of data to arrive at a deeper understanding of the research problem and balanced findings that could address the research questions and objectives (Kallet, 2004). Ngulube (2010, p. 255) highlights that “the use of both qualitative and quantitative methods to gather and analyze data about the same phenomenon assisted in eliminating the inherent biases associated with using only one method”. Ngulube (2010) maintains that MMR improves the quality of data interpretation and allows the researcher to increase the number of participants, the validity and the reliability of the research instruments.

Halcomb and Hickman (2015, p. 44) advise the researcher to select the approach that speaks directly to the research questions and that “applying a mixed method design in a study should be based on the fact that combining qualitative and quantitative methods of data collection is the best than a single method in answering the research question”. Although, according to Halcomb and Andrew (2009, p. 157), “undertaking a mixed research study...requires a range of skills”, the blending of data gives more clarity to the problem than using a single method (Creswell, 2014; Creswell & Garrett, 2008).

Bryman (2006) explains the following characteristics of MMR that were reasons for the researcher choosing it:

- “Corroboration is using the results of one method to corroborate the findings of the other about a single phenomenon” (Bryman, 2006, p. 105)
- “Complementarity is the use of one method to elaborate, illustrate, enhance, or clarify the results from another” (Bryman, 2006, p. 105)

- “Instrument development – qualitative research is employed to design a quantitative instrument, and then the instrument tested” (Bryman, 2006, p. 105)
- “Sampling – one approach facilitates sampling for the other approach” (Bryman, 2006, p. 105)
- “Confirmation is when quantitative tests qualitative generated hypotheses” (Bryman, 2006, p. 105)
- “Development: the results of one method are used to inform the other method” (Bryman, 2006, p. 105)
- “Initiation is when one method is used to uncover the paradoxes and contradictions in findings from the other method” (Bryman, 2006, p.105)
- “Expansion is when the depth and breadth of the study is expanded by using different methods for various components of the research” (Bryman, 2006, p. 105)

#### **4.3.2 Advantages of mixed methods research**

According to Creswell (2015, p. 12), “mixed methods research provides more evidence for studying a research problem that is either quantitative or qualitative research alone”. All available data collection tools can be used by researchers who are not restricted to those specific to quantitative or qualitative research. Moreover, MMR answers questions that cannot be answered by either quantitative or qualitative approaches alone and encourages the use of multiple paradigms (beliefs and values), rather than those typically associated with quantitative and qualitative research (Creswell & Plano Clark, 2011, p. 13). Thus, both numbers and words can be used by researchers to record people’s behaviour, and inductive as well as deductive thinking can determine findings and understand the phenomenon under study. Furthermore, according to Bryman (2006, p. 106) “both quantitative and qualitative research methods have their own strengths and weaknesses and combining them allows the researcher to set off their weaknesses and to draw on the strengths”.

In addition to the above-mentioned advantages, the following features of MMR encouraged the researcher to choose this method:

- “Completeness...when a researcher can fully address a research problem and its sub-problems only by collecting, analysing, and interpreting both quantitative and qualitative data (Leedy & Ormrod, 2019, p. 260)
- “Hypothesis generation and testing...when qualitative data often provide insights that help a researcher form hypothesis about cause-and effect relationship – hypotheses

that the researcher can subsequently test through controlled, quantitative research” (Leedy & Ormrod, 2019, p. 260)

- “Development of appropriate research tools and strategies...when one type of data can inform and guide the subsequent collection of another type of data – For example, unstructured interviews (yielding qualitative data) can guide the construction of appropriate questions for a survey (which will yield quantitative data)” (Leedy & Ormrod, 2019, p. 260)
- “Resolution of puzzling finding ...when in a quantitative study, various results can sometimes seem inconsistent or contradictory; qualitative data may reveal underlying nuances and meanings that can help the researcher make sense of the numbers” (Leedy & Ormrod, 2019, p. 261)

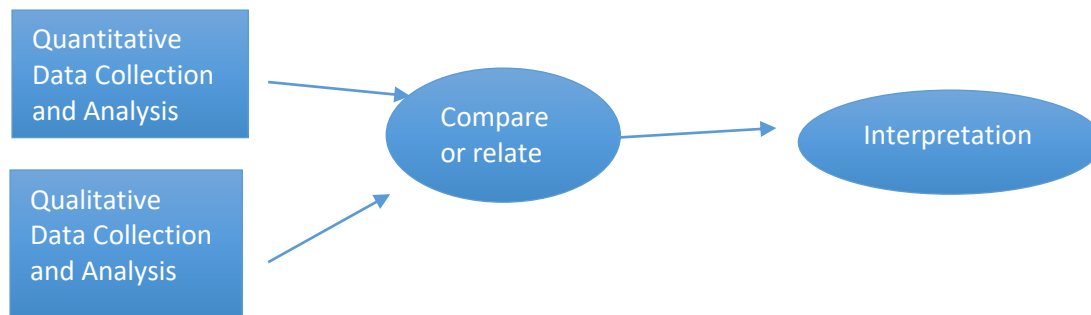
#### **4.3.3 Disadvantages of mixed methods research**

Although as Creswell and Plano Clark (2011, p. 13) and Creswell (2015, p. 24) point out, MMR strengthens the value of a study, as opposed to conducting either quantitative or qualitative research, it requires skills, time and resources for data collection/analysis. Moreover, the researcher needs to educate and convince other researchers to conduct MMR design so that it can be accepted by the scholarly community.

#### **4.3.4 Mixed method designs**

Creswell and Clark (2011, p. 69) propose four mixed methods designs, which are convergent parallel design, explanatory sequential, exploratory sequential and the embedded design. The current study preferred the convergent parallel design, which according to Creswell and Plano Clark (2011, p. 70), “occurs when the researcher uses concurrent timing to implement the quantitative and qualitative strand during the same phase of the research process”. Moreover, it involves “collecting and analysing two independent elements of qualitative and quantitative data in a single phase: merging the results of the two elements” (Creswell & Plano Clark, 2011, p. 116). Creswell and Zhang (2009, p.613) maintain, “Both quantitative and qualitative data are collected simultaneously in the study and both forms of data are then analysed separately, and the results are merged in the interpretation”. The prototype of an MMR design is shown in Figure 4.1.

**Figure 4.1: Prototypical version of the MMR design – The convergent parallel design**



Creswell and Plano Clark (2011, p. 69)

#### *4.3.4.1 The purpose of the convergent parallel design*

According to Creswell and Plano Clark (2011, p. 77), the convergent parallel design obtains different but complementary data on the same topic to best understand the research problem. Furthermore, “this design is used when the researcher wants to compare and contrast quantitative statistical results with qualitative findings for corroboration and validation purposes” (Creswell & Plano Clark, 2011, p. 77). In the words of Leedy and Ormrod (2019, p. 261), “this design includes illustrating quantitative results with qualitative findings, combining complementary quantitative and qualitative results”. Additionally, it prioritises the methods equally, keeps the strands independent during analysis and then mixes the results during the overall interpretation. In this study the mainly quantitative data was collected from students using a questionnaire and the qualitative data was collected from interviews with the lecturers.

#### **4.4. Data collection**

To Teddlie and Yu (2007, p. 77), the purpose of data collection is to develop answers to the research questions. Data collection consists of the following key components: sampling; gaining permission; collecting and recording the data; and preparing the gathered data for analysis. Data can be gathered through a survey, email, telephone, the Internet, and personal or focus group interviews (Creswell, 2014, p. 157). In qualitative research, information is gathered from a small sample. However, in quantitative research a large number of participants are needed to conduct meaningful statistical tests (Creswell, 2014). A Microsoft Excel 2016 spreadsheet can be used to organise the data and SPSS to analyse them.

In the study, data were collected from the 2019-2020 intake of students studying for the MPhil in Development Finance and academics. There were 130 students in the sample. Permission for the research was granted by the University of Stellenbosch research committee to use



academics for interviews and students from the Development Finance department for the questionnaire. The support of all the academics of the Development Finance department was gained. The head of department was informed about the interviews of the lecturers in the department.

#### **4.4.1 Target population and sample**

In the current study, Development Finance masters' full-time students in their second year were the target population. In addition, part of the target population was full-time academic staff in Development Finance at the University of Stellenbosch Business School (USB). The reason for choosing this department was convenience, as the researcher is the librarian who trains these students by introducing them to the library and assists them with the use of library resources during their entire course. The study population of 130 students studying for the MPhil in Development Finance (MDEVs) was the sample for the quantitative aspect of the study, which meant that the total population sampling method was used. The total number of academics in Development Finance was ten, although two were part-time. Eight full-time academics were purposively selected for interviewing. The interviews contributed to the qualitative aspect of the study.

#### **4.4.2 Quantitative data collection**

A survey questionnaire was the technique used for quantitative data collection. Frey (2018) highlights that, owing to the development of information technology, participants are able to respond to questionnaires electronically and remotely. Thus, the questionnaires were distributed by email together with a letter of information, which introduced the study and the researcher to the second-year masters' students in the Development Finance department.

Brynard et al. argue (2014, p.48) that "the most used form of self-administered questionnaires is the email survey" because it can be sent to many people who stay at a distance. In addition, the email survey allows respondents time to think about answers to the questions. However, according to Creswell (2015, p. 5), the disadvantage of questionnaires is that the words of participants are not audio recorded and they might have limited understanding of the context of the study, as only a little information is provided in the covering letter.

Leedy and Ormrod (2010, p. 185) are of the opinion that "those who participate in the study respond based on their own understanding of the questions" because the researcher is not on hand to address uncertainties, which may result in biased or distorted answers by a participant



(Brynard et al., 2014, p. 48). Other disadvantages are that the administration of the questionnaires cannot be controlled by the researcher (Maree & Pietersen: 2007, p. 157), and participants' responses might be affected by poor reading/writing skills and possible misinterpretation of questions.

The researcher used mostly closed-ended questions in the questionnaire, although there were a few open-ended questions. Closed-ended questions “are presented with multiple answers or options”, from which participants make a choice (Terre Blanche, et al., 2014, p. 487), such as selecting a five-point Likert scale rating. Creswell and Plano Clark (2011, p. 177) state, “Quantitative data are collected on closed-ended questions based on predetermined response categories”, thus making responses quick and easy to administer, record and code. The open-ended questions required participants to explore responses to closed-ended questions.

The questionnaire included the following sections of closed-ended questions:

- Demographic information
- Students' understanding of plagiarism
- Policies, use and usefulness of anti-plagiarism software
- Training in Turnitin
- Perceptions of Turnitin as facilitating academic success
- The effectiveness of Turnitin in students' academic career
- Students' awareness of Stellenbosch University's policies regarding anti-plagiarism
- Marketing, promotion and communication strategies used by the University to promote awareness of Turnitin
- University policy and implementation
- Students' perceptions of the success of Turnitin
- The effect of Turnitin on academic excellence
- Challenges experienced by students in accessing Turnitin
- Students' confidence in making use of Turnitin
- Reasons for students plagiarising academic work

In the open-ended questions, students could comment on their Turnitin experience and usage. Moreover, they could indicate any changes they would like to see based on their experience on the use of Turnitin.

### 4.4.3 Qualitative data collection

According to Terre Blanche et al. (2014, p. 297), an “interview is seen as a natural form of interacting with people more closely and an opportunity to understand how they think and feel”. Therefore, an interview would allow a researcher to probe more deeply following a respondent’s answer to a question. Terre Blanche et al. (2014, p. 299) add that the researcher “as an interviewer...should listen more than the talking, hear what the response of the participant is” before asking further questions. The participant should speak without interruption and be asked to rephrase his/her words if the interviewer has not understood a response.

A disadvantage of interviews is that they can be very time consuming. In addition, scheduling the interview time requires time and patience. Another disadvantage is that a researcher might be biased, and therefore needs to be very careful not to lead the respondent on. Moreover, participants might fear to commit themselves to telling the truth (Brynard et al., 2014).

Three types of interviews used to gather data in qualitative research are unstructured, semi-structured and structured interviews. An unstructured interview might resemble an informal conversation, with a researcher and a participant interacting whilst being guided but not restricted by a few set questions. The interviewer lets the participant speak freely and asks questions based on responses. An unstructured interview leads to a more natural exchange that may go in multiple directions (Durdella, 2020, p.8)

Semi-structured interviews balance a set of structured questions related to a study’s research questions with the informal dynamic of unstructured interview. Participant responses to questions are explored with prompts and follow-up or probing questions. Semi-structured interviews are a mix of questions, prompts, probing and topics that inform the process but allow opportunities to follow hunches and intuitive directions (Durdella, 2020, p. 8-9).

Structured interviews privilege interview questions over interview dynamics that allow interviewers to follow new directions emerging in a natural exchange. A structured interview follows a prepared interview guide, which lists each question, follow-up question, transition question and instruction to be followed, all of which reduce variability (Durdella, 2020, p. 9).

In the current study, research data were collected using semi-structured interviews with three academics of the Development Finance department. Five academics were supposed to be interviewed, but this was not possible as explained in Chapter 5. The interviews each took

approximately 40-50 minutes in the lecturers' offices. Before the interviews, the lecturers were sent an information letter comprising a short summary of the aim and objectives of the study to ease possible anxiety and promote an atmosphere of trust and openness. Terre Blanche et al. (2014) advise researchers to be transparent, as this will encourage research participants to feel free and open to expressing themselves. In addition, the lecturers were asked to sign a consent form. The researcher made an appointment with each lecturer before conducting an interview to avoid any disturbance, as they may have had lectures and student appointments.

#### **4.4.4 Pre-testing the questionnaire and interview questions**

Pre-tests were conducted to determine the reliability and dependability of the instruments (the questionnaire and interview questions) as well as any weaknesses and gaps. A pre-test for the questionnaire was given to two colleagues, one from the IT department and the second one from the library. It helped in determining how long the participants would take to complete the questionnaire and in addressing problems. For example, some of the questions were not clear and had to be rephrased or changed. Some statements were changed for questions to be more meaningful to respondents. The repetition of statements and questions across different categories were deleted. Some changes were made to clarify the meaning of terms.

A pre-test for the interviews was done with two lecturers from the School of Public Leadership via Zoom, since they were working remotely. Some network problems were experienced, and the interview pre-test took longer than expected. Another challenge was the arrangements for a time slot, since they had to accommodate the researcher outside of their busy schedule. The pre-test went well, as the questions were clear, and it assisted in determining the completion time of the interview.

#### **4.4.5 Ensuring integrity**

Heale and Twycross (2015) define validity "as the extent to which a concept is accurately measured in a quantitative study and involves procedures of checking members, while reliability relates to the consistency of a measure and ensuring accuracy of data". As mentioned above, a pre-test was conducted to determine the reliability and validity of the research instruments as well as the weaknesses and gaps in the questionnaire and interviews. Leedy and Ormrod (2010) assert that a pre-test or pilot study is an excellent way to determine the feasibility of a study.

The pre-test enabled the researcher to ensure validity by assessing whether the trial participants gave relevant answers, which would indicate whether the concepts were being “accurately measured”. Moreover, by checking that the questions were consistent in the way that they were asked would ensure that the participants would clearly understand them and answer appropriately, thereby ensuring “accuracy of data and reliability”.

The researcher made sure the data were collected from a large population of the study, which is usually the highest concern in a survey. Thus, all areas of uncertainty were identified in both the questionnaire and interviews.

## **4.5 Data analysis**

Data analysis refers to the processes associated with developing meaning from the various data sets collected as a basis for understanding the phenomenon under study and theory building (Rowley, 2014, p. 2).

### **4.5.1 Quantitative data analysis**

The quantitative data were analysed statistically to arrive at findings that would provide answers to the research question. According to Terre Blanche et al. (2014, p. 188) “once the researcher has measured the relevant variables, the scores on these variables get transformed statistically to help the researcher and they describe the data more briefly”. In the words of Frey (2018, p. 6), “...descriptive statistics [are] used to summarize and organize large numbers of observations to describe the data and make sense of them”.

Firstly, the data collected from questionnaires were entered on Microsoft Excel spreadsheets, which were checked manually for accuracy. Once the data were verified as accurate, they were imported into a Statistical Package for Social Science (SPSS) file for analysis. Descriptive statistics, which described and summarised the data in a meaningful way, are presented as tables and figures in the next chapter of this thesis.

### **4.5.2 Qualitative data analysis**

Data collected from each Zoom-recorded interview were transcribed manually and then analysed word for word. According to Terre Blanche et al. (2014, p. 323) “data transcription is a process where the recorded interviews are presented in a text form”. The advantage of manual transcription was that whilst the researcher was converting the spoken words into text format,



she was allowed the opportunity to familiarise herself with the data during the process as well as making notes and diagrams to find meaning and manage the data.

Uncertainties from the recorded interviews were cleared up by replaying the recordings. The main goal of the interview transcription was to capture the exact statements of the participants and to examine their responses carefully. Transcription took roughly one and a half to two hours for each interview. In Chapter 5 of this thesis, participants' words are presented as quotations in the explanation of the findings.

When the data were transcribed, the researcher read, analysed and coded them. Coding is defined as "breaking up the data in analytically relevant ways" (Terre Blanche et al., 2014, p.324). Analysing the data led to the development of themes that brought together participants' remarks that were far away from one another in the transcribed text. These themes contributed to managing, interpreting data and coming to conclusions about them. Terre Blanche et al. (2014, p. 324) describe thematic analysis as bringing together sections of text, which when compared, appear to belong together, into single themes.

#### **4.6 Research ethics**

Ethical clearance is needed before any research can be conducted with humans. Firstly, ethical clearance was obtained from the University of the Western Cape to undertake the study. Then, a letter was sent to the Research Committee of Stellenbosch University to obtain permission to conduct the research at the Business School. "The Research Committee ... [encouraged] ... the researcher to consider ethical issues that may arise to protect participants from getting harmed" (Piper & Simons, 2005, p. 57). A request for institutional permission to conduct the study was sent to the Division for Information Governance for authorisation to work with the students and lecturers in the Development Finance department at the University of Stellenbosch Business School. After permission from the Research Ethics Committee was received, the researcher contacted the head of the Development Finance department for permission prior to conducting the research with students and lecturers. Students and lecturers were guaranteed that their rights would be respected in every way. The participants were advised to participate in the study voluntarily. In addition, they were informed that they were allowed to withdraw any time during the research process and that all the responses and participants' names were to be kept anonymous.



#### **4.7 Summary of the chapter**

In this chapter, the components of the research process (design) were indicated, and the way the study was conducted (methodology) was explained. Quantitative and qualitative methods were chosen to acquire data from the students and lecturers about their attitudes towards and perceptions of plagiarism and interacting with Turnitin and plagiarism. Data collection instruments were a questionnaire and interviews, and their reliability as well as their validity was discussed in the chapter. The quantitative data from the questionnaires were analysed statistically and the qualitative data were analysed in terms of themes. In addition, the chapter discussed the steps followed in ensuring that the research was ethical.



## CHAPTER 5

### RESULTS OF THE STUDY

#### 5.1 Introduction

The current chapter reveals the results of the analysis of the quantitative data gathered through a self-administered questionnaire, which was distributed to second-year Development Finance masters' students of the 2019-2020 intake via email, and qualitative data collected during interviews with three lecturers from the Development Finance department. Of the students who were sent the questionnaires, 83 responded, although approximately 49 (59%) of the students completed it, and 38 (41%) students did not; therefore N=49. The response rate is therefore 64%.

#### 5.2 Results of questionnaire data analysis

The questionnaire gathered data on the students' demographics as well as their understanding of plagiarism, plagiarism policies, anti-plagiarism strategies and Turnitin.

##### 5.2.1 Demographic profile of respondents

The respondents' demographic profile was based on answers to four personal questions about their background (age, year of study, first year of registration at Stellenbosch University) and education level.

##### 5.2.1.2 Age of respondents

Figure 5.1 represents the age of the research participants. Their ages ranged from 26 (youngest) to 53 (oldest). The average age was 35, with a mean age of close to 39 years.

**Figure 5.1: Age of respondents**

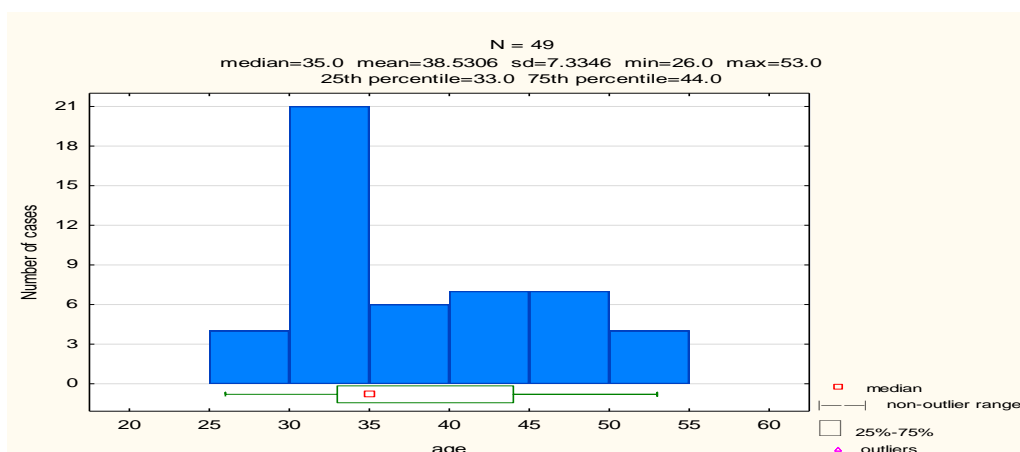


Figure 5.1 above shows that the median score for the age of participants was thirty-five years. This suggests that the average age of students who register for the master's in Development Finance are generally older than many students.

#### 5.2.1.2 Year of study

Of the 49 students who completed the questionnaire, only 24(62%) indicated that they had started their masters in 2019 and were in their second year in 2020. Only 15 (38%) indicated that they had started their masters in 2020 and were in their second year in 2021. This suggests that more advanced students had completed the questionnaire.

### 5.2.2 Understanding of plagiarism

In this section of the questionnaire, students were required to select the option that best described plagiarism.

**Table 5.1: Description of plagiarism**

Description	Percentage
Presentation of another person's intellectual property as one's own	84%
Writing another person's work without a proper citation	73%
Intellectual theft	61%
Literacy piracy	37%
Borrowing other people's words or ideas	27%

As presented in Table 5.1, the highest percentage of participants (84%) described plagiarism as presenting another person's intellectual property as one's own. The second highest percentage (73%) described it as writing another persons' work without a proper citation. A relatively low percentage (27%) described it as borrowing other people's words or ideas. This suggests that the majority of the participants grasped the most comprehensive definition of plagiarism.

### 5.2.3 Awareness of policies

To establish whether students were aware of plagiarism policies at SU, they were asked to respond to a simple yes/no question. Of the 49 participants, 47(96%) agreed that that they were aware of SU's policies on plagiarism and only two (4%) were not aware, which suggests general awareness.

## 5.2.4 Anti-plagiarism software

This section of the questionnaire established whether participants were aware and made use of the anti-plagiarism software “Turnitin”.

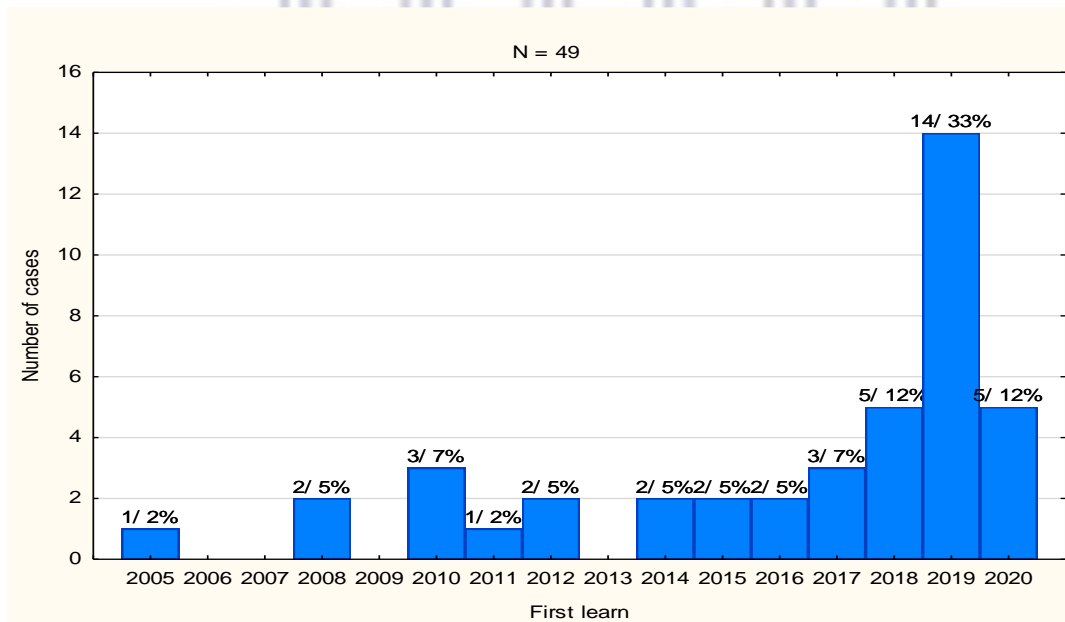
### 5.2.4.1 Awareness of Turnitin

All of the participants (100%) agreed that they were aware of SU’s Turnitin software.

### 5.2.4.2 First introduction to Turnitin

As per Figure 5.2, 1(2%) first learned about Turnitin in 2005, 2(5%) in 2008, 3(3%) in 2010, 1(2%) in 2011, 2(5%) in 2012, 6(15%) between 2014 and 2016, 3(7%) in 2017, 5(12%) in 2018 and 2020, respectively, and the highest number first exposed was 14(33%) in 2019. Of the 49 participants, seven did not respond.

**Figure 5.2: First introduction to Turnitin**



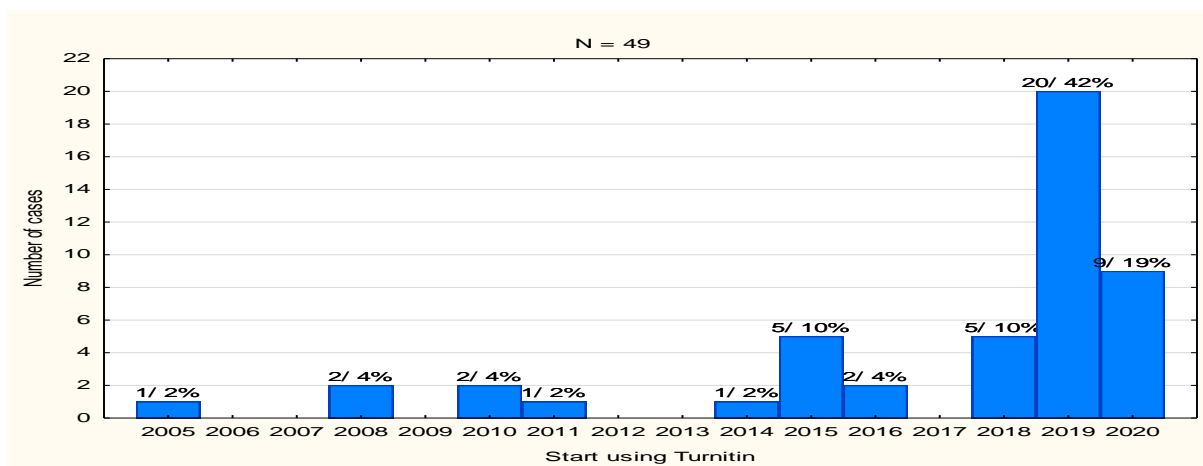
### 5.2.4.3 Use of Turnitin

All (100%) participants agreed that they were making use of Turnitin.

#### 5.2.4.4 Starting to use Turnitin

As per Figure 5.3, 1(2%) participant started using Turnitin in 2005, two (4%) in 2008, 2(4%) in 2010, one (2%) in 2011, eight (16%) between 2014 and 2016; five (10%) in 2018, 20(42%) in 2019 and nine (19%) in 2020. The highest number of participants 20 (42%) started in 2019. Only one participant did not respond.

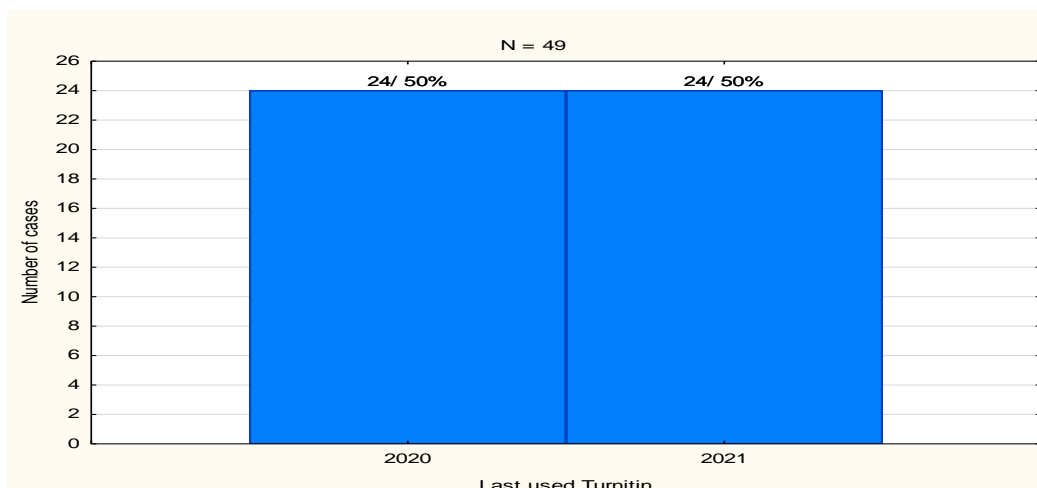
**Figure 5.3: Start to use Turnitin**



#### 5.2.4.5 Last time Turnitin used

As per Figure 5.4, of the 49 participants who responded to the questionnaire, 24(50%) last used Turnitin in 2020 and 24(50%) in 2021. Only one participant did not respond.

**Figure 5.4: Last used Turnitin**

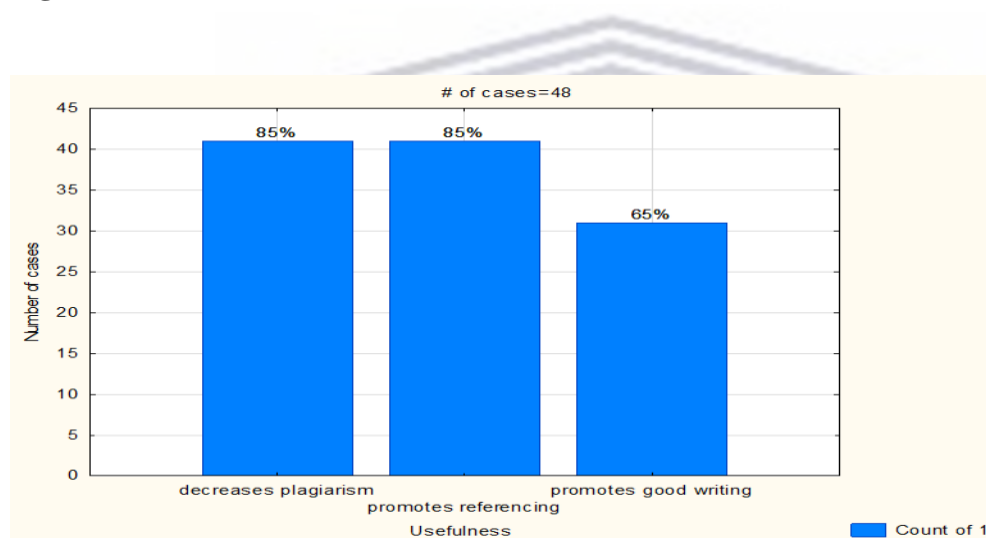




### 5.2.5 Usefulness of anti-plagiarism software for academic work

One of the questions sought to establish how useful anti-plagiarism software was to students for their academic work. Figure 5.5 shows that 34(85%) of the participants believed that the software was useful in terms of decreasing plagiarism and promoting referencing, respectively. Also, 65% perceived the software as contributing to good writing skills. However, one participant did not respond, therefore N=48 in this question.

**Figure 5.5: Usefulness of Turnitin for academic work**

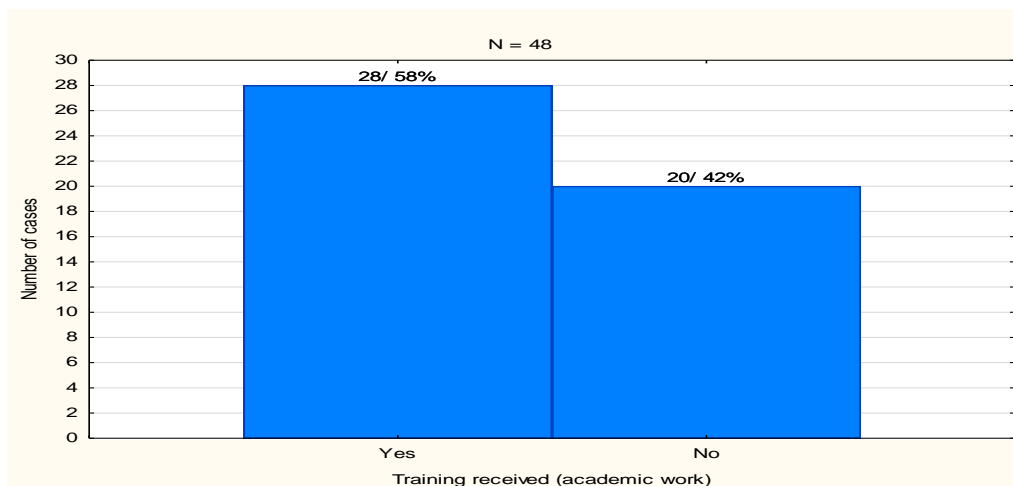


### 5.2.6 Training in the use of Turnitin for academic work

#### 5.2.6.1 Training received

This section of the questionnaire aimed to establish whether students received training on how to use Turnitin to check the plagiarism similarity index for their academic work. As per Figure 5.6, 28(58%) of the participants agreed to having received training and 20(42%), which is quite a large number, disagreed. However, one participant did not respond, therefore: N=48.

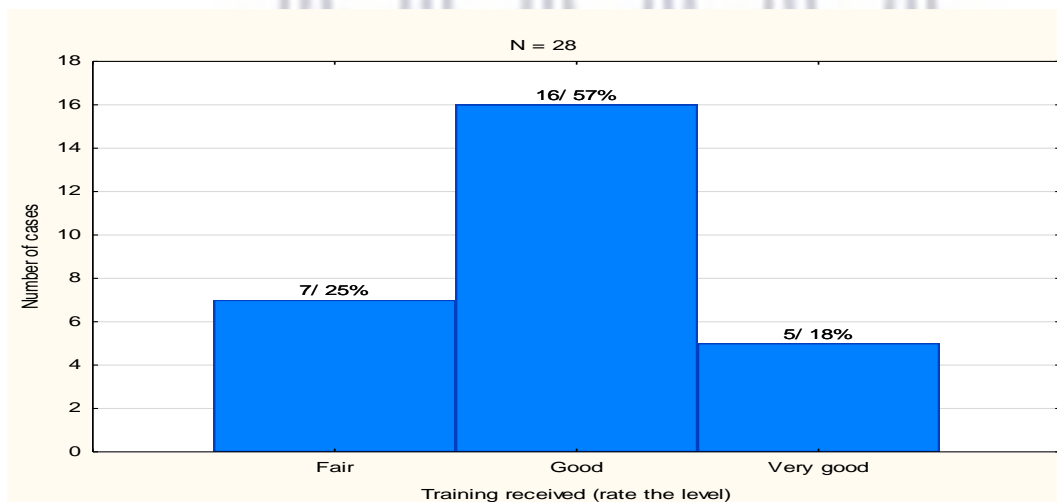
**Figure 5.6: Training received (academic work)**



### 5.2.6.2 Level of training received

Based on data presented in Figure 5.7, no participant believed training received was poor or very poor. The majority rated the training as either good/very good (75%). There were 21 participants who did not respond. Therefore, N=28 for this question.

**Figure 5.7: Training received (rate the level)**

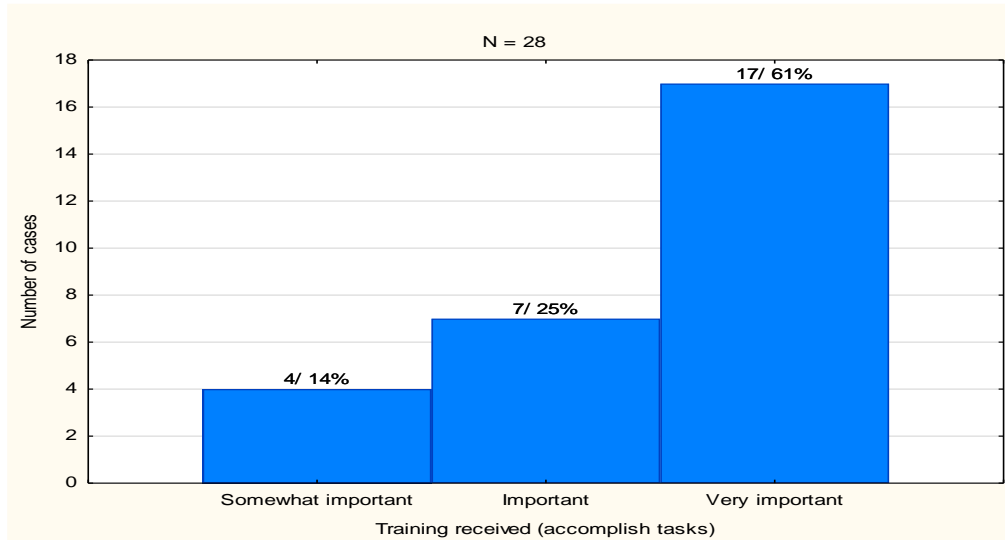


### 5.2.6.3 Training received led to accomplishment of academic tasks

Regarding training received and how this enabled participants to accomplish their tasks, Figure 5.8 indicates that four (14%) of the participants found the training programme somewhat important, seven (25%) found the training important, and 17(61%) agreed that the software

training was very important for accomplishing their tasks. There were 21 participants who did not respond. Therefore, N=28 for this question.

**Figure 5.8: Training received (rate the level)**



### 5.2.7 Students' perceptions of Turnitin with regard to access and use

In order to establish the perception of master's students of Turnitin as being easy to access and usable, students were asked to either agree or disagree with two statements.

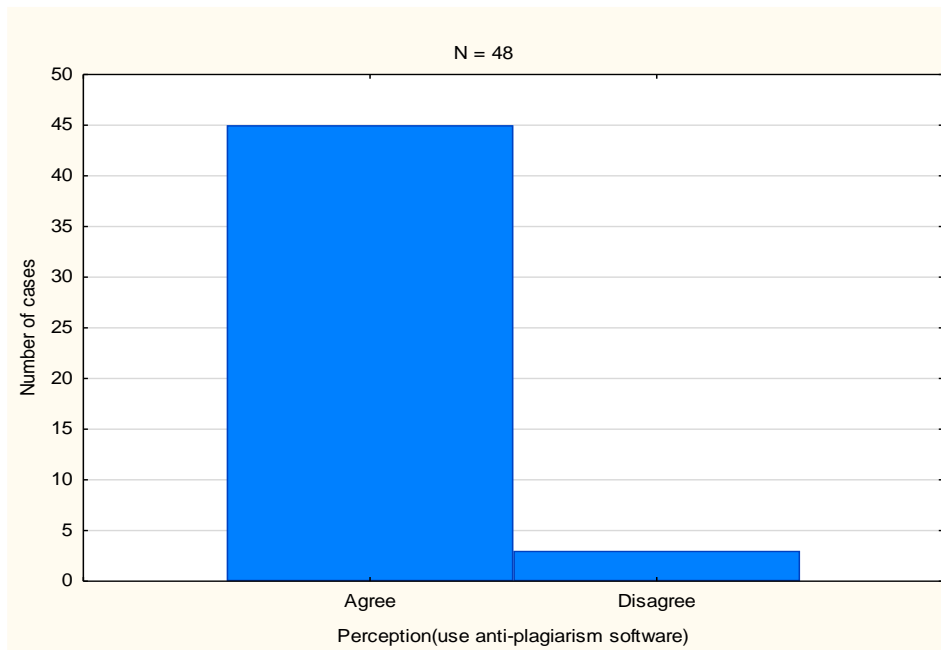
#### 5.2.7.1 Easy access to Turnitin

In terms of easy access to Turnitin, 48 participants agreed that the application was easily accessed. However, one person did not respond in this section.

#### 5.2.7.2 Use of anti-plagiarism software

The majority (47 or 98%) of the participants, as shown in Figure 5.9, agreed that they used anti-plagiarism software. Only one participant did not respond. Therefore, N=48.

**Figure 5.9: Perception (use of anti-plagiarism software)**



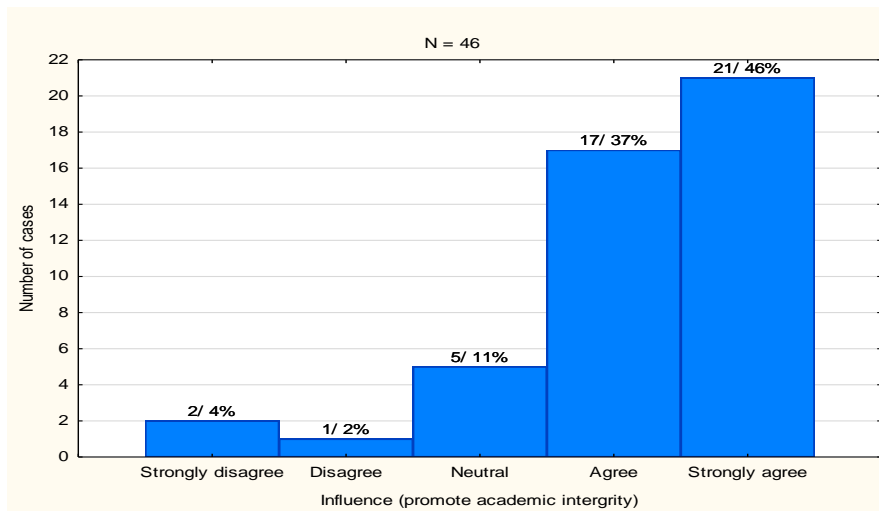
### 5.2.8 Influence of Turnitin on studies

This section of the questionnaire established how Turnitin influenced the participants' studies.

#### 5.2.8.1 Promotes academic integrity

Students were asked whether the use of Turnitin promoted academic integrity and eliminated plagiarism. As per Figure 5.10, 21(46%) of the participants strongly agreed that the use of anti-plagiarism software promoted academic integrity, 17 (37%) agreed, five (11%) were neutral, one (2%) disagreed and two (4%) strongly disagreed. However, three participants did not respond to the question. Therefore N=46.

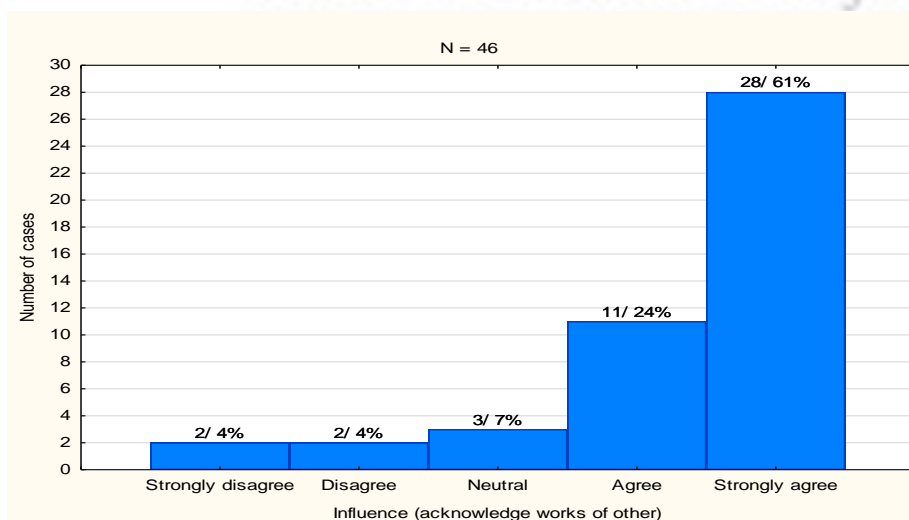
**Figure 5.10: Influence (promotes academic integrity)**



#### 5.2.8.2 Encourages acknowledgement of works of others

Participants were asked whether the use of Turnitin encouraged them to acknowledge the works of others. Figure 5.11 shows that 28(61%) strongly agreed, 11(24%) agreed, three (7%) were neutral and two (4%) disagreed/strongly disagreed, respectively. However, three participants did not respond. Therefore, N=46.

**Figure 5.11: Influence (encourages acknowledgement of works of others)**

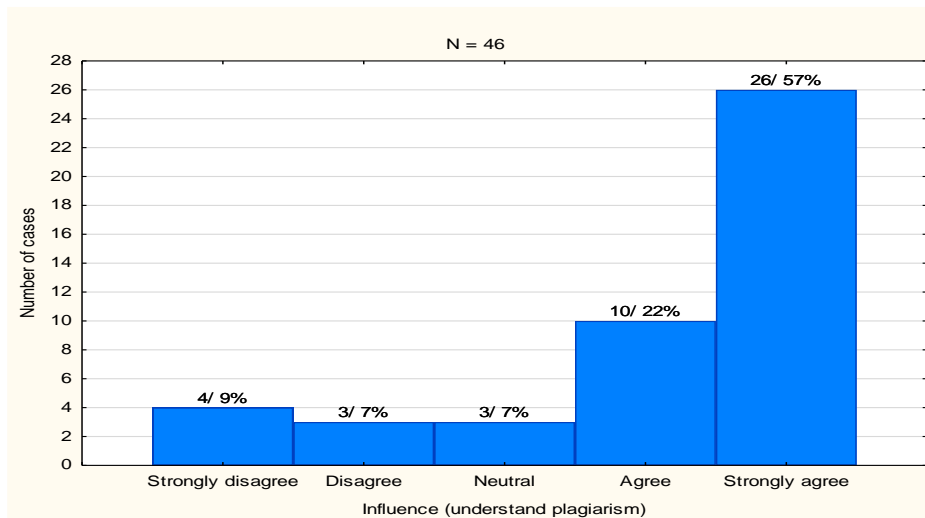




### 5.2.8.3 Enables understanding of the consequences of plagiarism

Participants were asked if the use of anti-plagiarism software had enabled them to understand the consequences of plagiarism. Of the 46 participants who answered the question, 26(57%) strongly agreed, 10(22%) agreed, three (7%) were neutral, three (7%) disagreed and four (9%) strongly disagreed. However, three participants did not respond. See Figure 5.12.

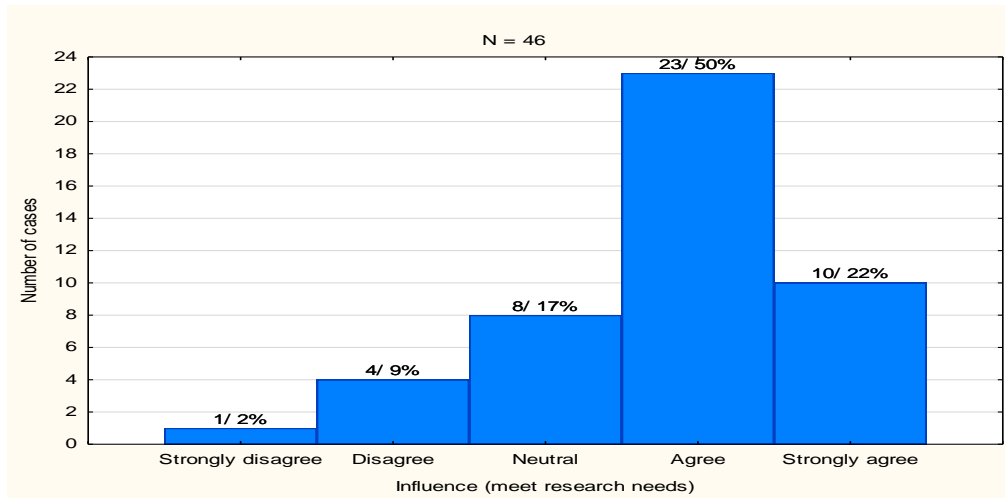
**Figure 5.12: Influence (enables understanding of plagiarism)**



### 5.2.8.4 Helps with meeting research needs

Based on data analysis results shown in Figure 5.13, most participants believed that the use of anti-plagiarism software had enabled them to meet their research needs. In other words, 23(50%) agreed, 10(22%) strongly agreed, eight (17%) were neutral, four (9%) disagreed and one (2%) strongly disagreed. However, three participants did not respond.

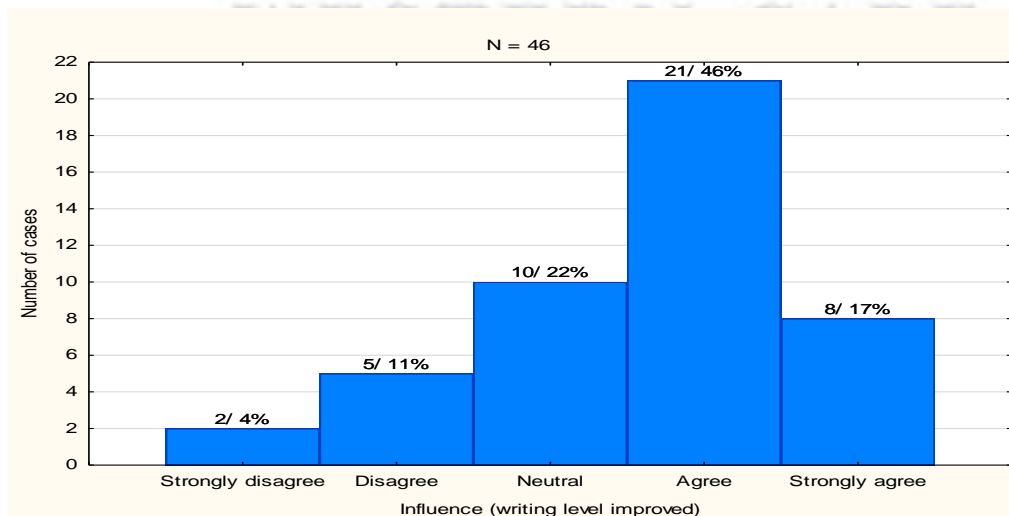
**Figure 5.13: Influence (helps with meeting research needs)**



#### 5.2.8.5 Improves academic writing level

Data in Figure 5.14 below shows that most participants believed that the use of anti-plagiarism software had improved their level of writing. In other words, 21(46%) agreed, eight (17%) strongly agreed, 10(22%) were neutral, five (11%) disagreed and two (4%) strongly disagreed. Three participants did not respond.

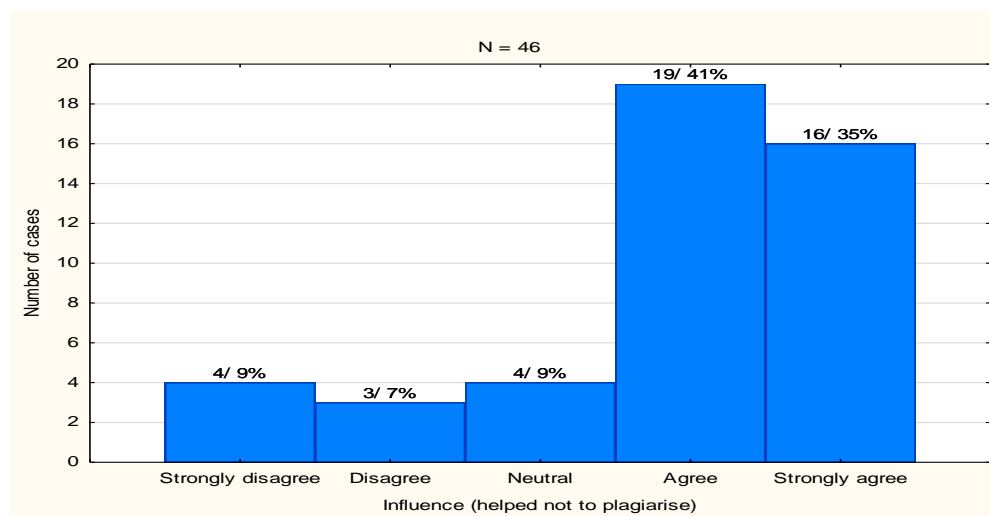
**Figure 5.14: Influence (writing level improved)**



#### 5.2.8.6 Develops ability not to plagiarise

Data in Figure 5.15 presents students' perceptions as to whether the use of anti-plagiarism software developed their ability to avoid plagiarism. In answering this question, 19 (41%) agreed, 16(35%) strongly agreed, four (9%) were neutral, three (7%) disagreed and four (9%) strongly disagreed. However, three participants did not respond.

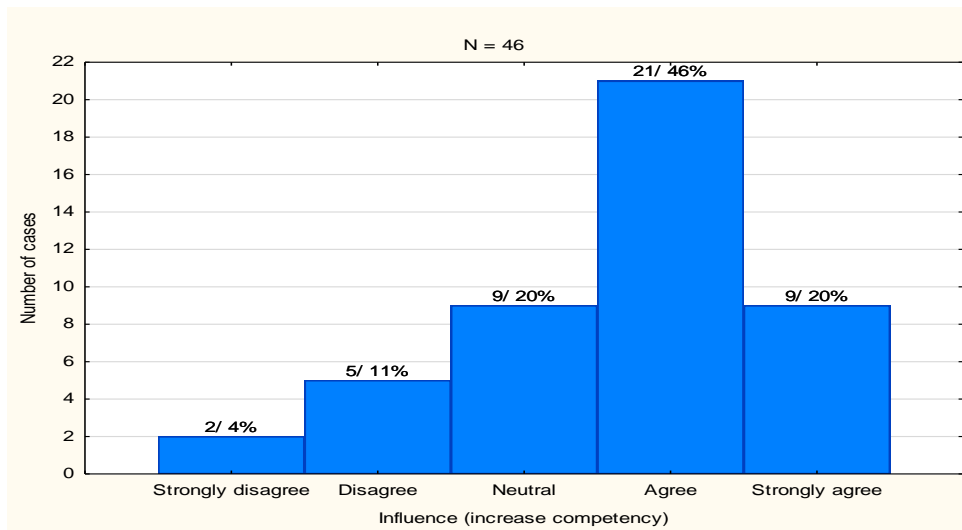
**Figure 5.15: Influence (helped not to plagiarise)**



#### 5.2.8.7 Increases research competency

Figure 5.16 presents the students' perceptions as to whether the use of anti-plagiarism software increased research competency. In answering this question, 21 (46%) agreed, nine (20%) strongly agreed, none (20%) opted for neutral, five (11%) disagreed and two (4%) strongly disagreed. However, three participants did not respond.

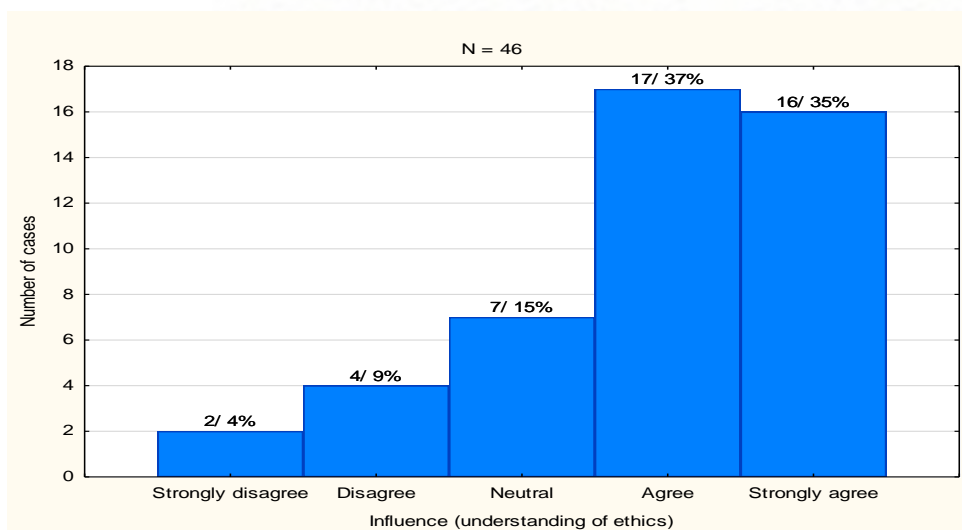
**Figure 5.16: Influence (increases research competency)**



#### 5.2.8.8 Increases understanding of ethics

Most participants were of the view that the use of plagiarism software increased their understanding of ethics. Figure 5.17 shows that 17(37%) agreed, 16(35%) strongly agreed, seven (15%) opted for neutral, four (9%) disagreed and two (4%) strongly disagreed with the statement. However, three participants did not respond.

**Figure 5.17: Influence (understanding of ethics)**



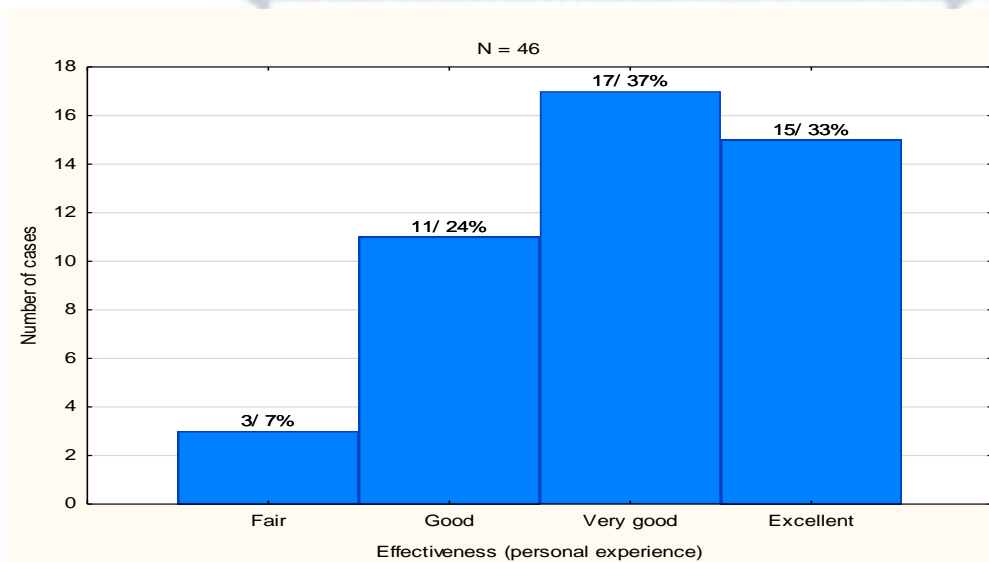
## 5.2.9 Students' views on the effectiveness of Turnitin

This section of the questionnaire established students' views on the effectiveness of Turnitin.

### 5.2.9.1 Personal experience

In terms of the effectiveness of plagiarism software, Figure 5.18 presents the participants' personal experience of the application. The figure shows that 17(37%) experienced it as very good, 15(33%) experienced it as excellent, 11(24%) as good and three (7%) as fair. However, three participants did not respond.

**Figure 5.18: Effectiveness (personal experience)**

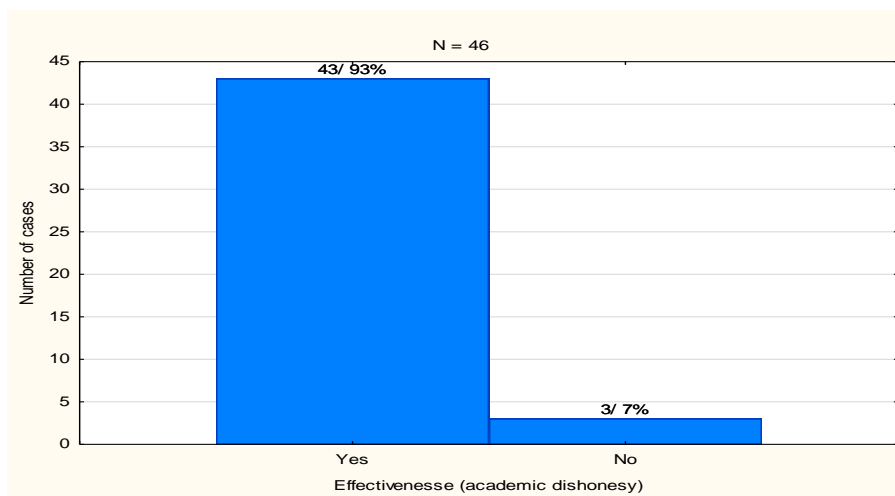


### 5.2.9.2 Academic dishonesty

Participants were asked if they believed that investing in Turnitin helped SU to deal effectively with the crisis of academic dishonesty. As shown in Figure 10, in response, 43(93%) agreed and three (7%) disagreed. However, three participants did not respond.



**Figure 5.19: Effectiveness (academic dishonesty)**



### 5.2.10 Marketing, promotion and communication mediums in relation to creation of awareness of Turnitin

This section established how anti plagiarism software was promoted amongst undergraduates and postgraduates at SU and indicated seven communication platforms that the University uses (see Table 5.2). Four participants did not respond.

**Table 5.2: Promotion of anti-plagiarism (N=45)**

Communication platforms	YES		NO		DON'T KNOW	
	Count	%	Count	%	Count	%
Voice calls	1	2	12	27	32	71
E-mail	29	64	0	0	16	36
SMS	4	9	14	31	27	60
WhatsApp	5	11	16	36	24	53
Facebook	3	7	13	29	29	64
E-learning	37	82	1	2	7	16
Library website	33	73	0	0	12	27
None of the above	0	0	28	62	17	38

Most participants, (32 or 71%), were unsure if the anti-plagiarism software was marketed using voice calls, while 12 (27%) said an emphatic no, and only one (2%) said yes.

The responses indicated that 29(64%) participants had been informed about the application via e-mail, but 16(36%) were unsure.

Most participants, (27 or 60%), were unsure if SU marketed the application via SMS, 14(31%) claimed definitely not, and four (9%) said yes.

The majority of the participants, (24 or 53%), were unsure of the marketing of the application via WhatsApp, 16(36%) were not aware, and five (11%) were aware.

The majority of the participants, 29(64%), were unsure of the marketing of the application via Facebook, 13(29%) were not aware, and three (7%) were unsure.

Most participants, (37 or 82%), were aware of the marketing of the application via e-learning, one (2%) had not experienced the promotion of Turnitin via e-learning, and seven (16%) were unsure.

Quite a few participants, (33 or 73%), had learnt about the application via the library website, but 12(27%) were unsure.

All participants experienced some form of marketing promotion of Turnitin on the library website, with eLearning and email being the most selected communication mediums.

#### **5.2.11 Policy design and implementation**

This section of the questionnaire was to establish whether the participants agreed, disagreed or did not know in response to statements about plagiarism policy design and implementation indicated in Table 5.3.

**Table 5.3: Policy design and implementation (N=45)**

Design and implementation	YES		NO		Don't know	
	Count	%	Count	%	Count	%
When SU introduced Turnitin I was informed	15	33	7	16	23	51
SU leadership involves students in discussing ways to stop plagiarism	23	51	1	2	21	47
Undergraduate and postgraduate students receive regular workshops on the use of TII	15	33	8	18	22	49
The communication strategies that were used to inform students about TII intervention were detailed	23	51	5	11	17	38
Many of my friends and I are thankful to SU for the TII intervention	39	87	1	2	5	11
Many students at SU now pay attention to intellectual integrity owing to TII	37	82	0	0	8	18
I am aware of a policy and strategies that SU has put in place to discourage plagiarism	39	87	2	4	4	9

In terms of exploring whether students were informed when SU introduced the anti-plagiarism policy, the findings in Table 5.3 showed that 15(33%) agreed, seven (16%) disagreed, and the majority of students (23 or 51%), were unsure.

In terms of exploring whether students were involved in discussing ways to stop plagiarism, the findings in Table 5.3 showed that 23(51%) agreed, one (2%) disagreed, and 21(47%) were unsure.

In terms of exploring whether students received regular workshops on the use of TII, the findings in Table 5.3 shows that 15(33%) agreed, eight (18%) disagreed, and the majority of students, (22 or 49%), were unsure.

In terms of exploring whether the communication strategies used to inform students about TII were detailed, the findings in Table 5.3 shows that the majority of students, (23 or 51%), agreed, five (11%) disagreed, and 17(38%) were unsure.

In terms of exploring whether students were thankful for the TII intervention, the findings presented in Table 5.3 shows that the majority of students, (39 or 87%), agreed, one (2%) disagreed, and five (11%) were unsure.

In terms of exploring whether students paid attention to intellectual integrity due to TII, the findings presented in Table 5.3 showed that the majority of students, (37 or 82%) agreed, eight (18%) were unsure, and nobody disagreed.

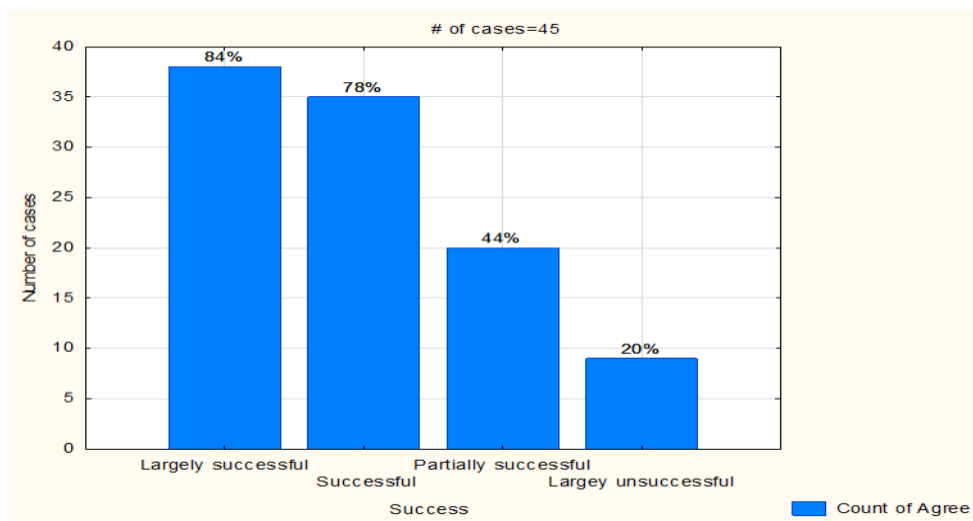
In terms of exploring whether students were aware of a policy or strategy that SU had put in place to discourage plagiarism, the findings presented in Table 5.3 showed that the majority of students (39 or 87%) agreed, two (4%) disagreed, and four (9%) were unsure.

#### **5.2.12 Students' perceptions of the success of Turnitin**

The aim of this section of the questionnaire was to establish whether the students considered that the use of Turnitin led to successful outcomes.

The results of the data analysis presented in Figure 5.20 revealed that of the 45 participants who answered this question, 84% perceived that the use of the application contributed to a largely successful outcome, 78% participants perceived it as contributing to a successful outcome, 44% viewed it as contribution to a partially successful outcome, and 20% believed that it contributed to a largely unsuccessful outcome.

**Figure 5.20: Success**



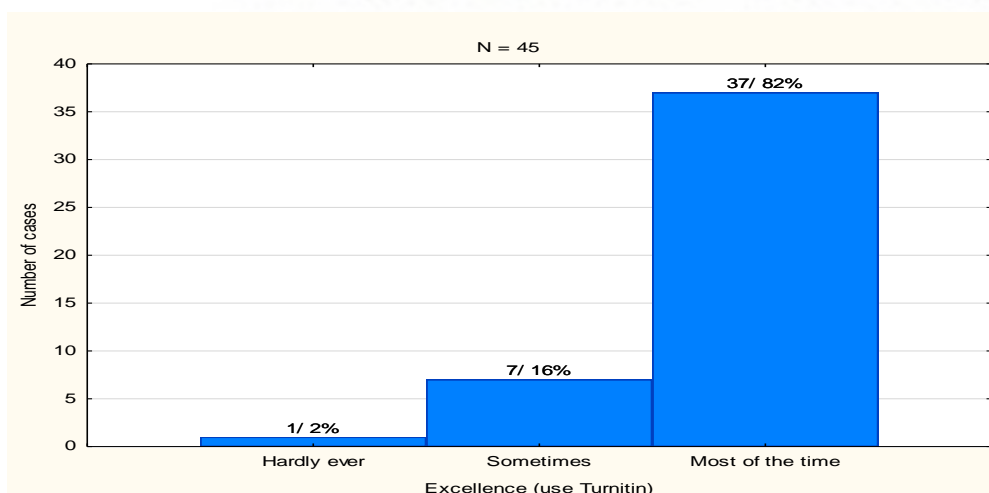
### 5.2.13 The effect of Turnitin on academic excellence

The aim of this section of the questionnaire was to explore the effect of Turnitin on academic excellence.

#### 5.2.13.1 Use of Turnitin

In terms of exploring students' views on how often they use Turnitin, the findings in Figure 5.21 indicated that 37(82%) of the participants chose 'most of the time', seven (16%) chose 'sometimes', and one (2%) chose 'hardly ever'. However, four participants did not respond.

**Figure 5.21: Excellence (use Turnitin)**

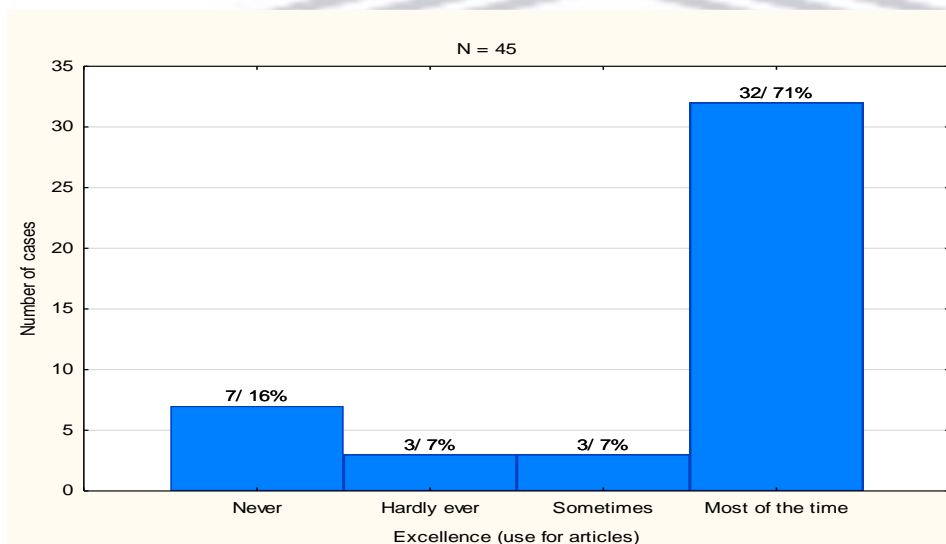




### 5.2.13.2 Use of Turnitin for articles

In terms of exploring students' views on how the use of Turnitin had contributed to academic excellence in the area of writing articles/papers, the findings presented in Figure 5.22 indicated that 32(71%) of the participants opted for “most of the time”, three (7%) of the respondents chose “sometimes”, three (7%) of the students chose “hardly ever” and seven (16%) of the participants declared that they never associated Turnitin with writing articles. However, four participants did not respond.

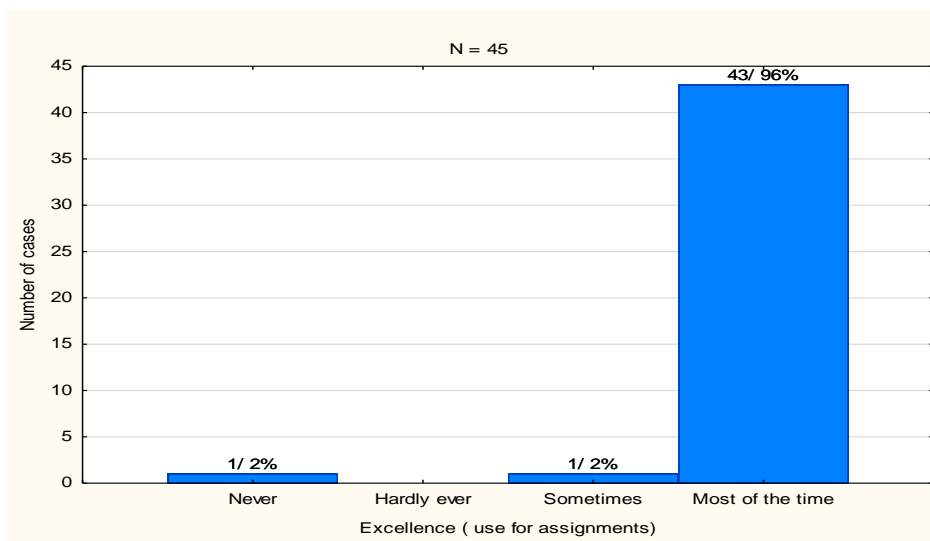
**Figure 5.22: Excellence (use for articles)**



### 5.2.13.3 Use of Turnitin for assignments

In terms of exploring the students' perceptions of how the use of Turnitin had contributed to academic excellence in the area of assignments, the findings presented in Figure 5.23 indicated that 43(96%) of the participants opted for “most of the time”, one (2%) of the respondents chose “sometimes”, and one (2%) of the students chose “never”. However, four participants did not respond.

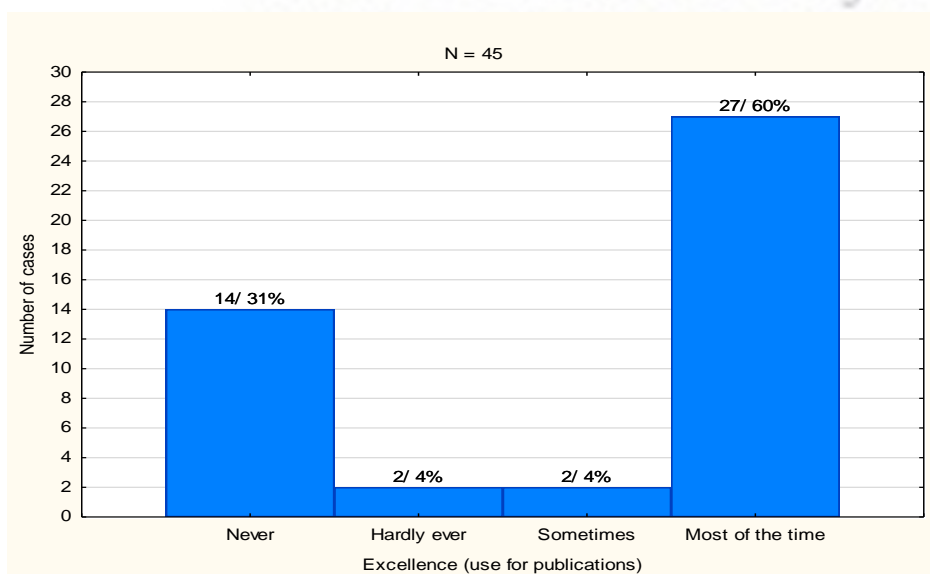
**Figure 5.23: Excellence (use for assignments)**



#### 5.2.13.4 Use of Turnitin for publications

In terms of exploring students' views on how the use of Turnitin had contributed to academic excellence in the area of publications, the finding in Figure 5.24 indicated that 27 (60%) opted for “most of the time”, two (4%) chose “sometimes”, two (4%) chose “hardly ever”, while 14(31%) chose ‘never’. Four participants did not respond.

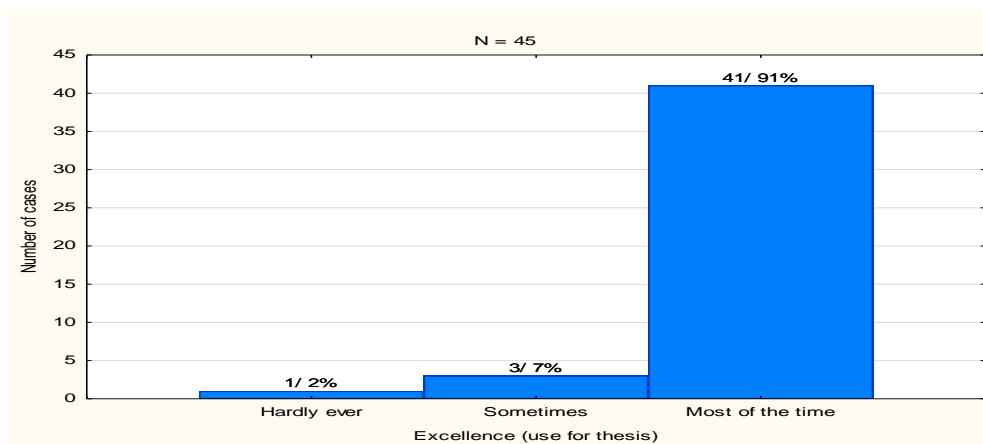
**Figure 5.24: Excellence (use for publications)**



### 5.2.13.5 Use for thesis writing

In terms of exploring students' views on how the use of Turnitin had contributed to academic excellence in the area of thesis writing, the findings in Figure 5.25 indicated that 41(91%) opted for “most of the time”, three (7%) chose “sometimes”, and one (2%) chose “hardly ever”. However, four participants did not respond.

**Figure 5.25: Excellence (use for theses)**

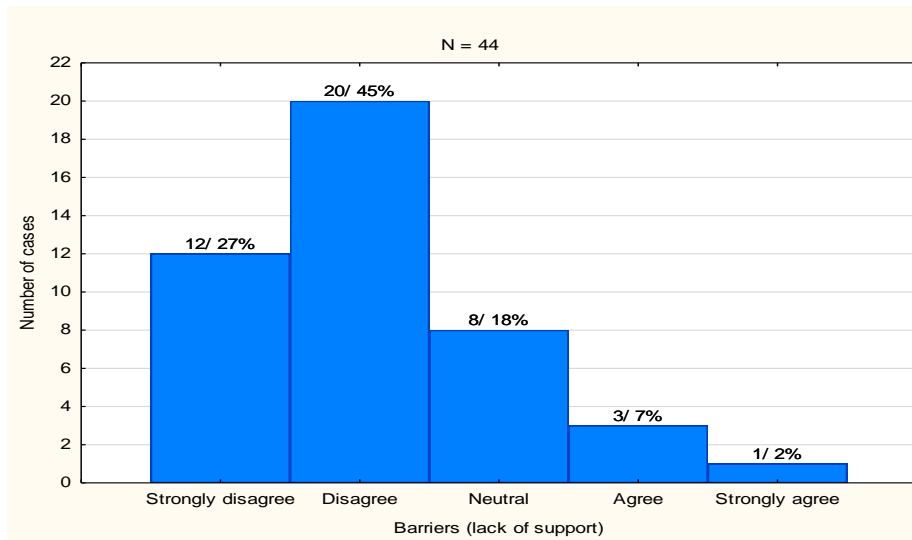


## 5.2.14 Major barriers faced by students when they want to make use of Turnitin

### 5.2.14.1 Lack of support

As indicated in Figure 5.26, only three (7%) students agreed that a lack of support was a major barrier, one (2%) strongly agreed. The vast majority (20 or 45%) either disagreed or strongly disagreed (12 or 27%), eight (18%) were neutral. However, five participants did not respond.

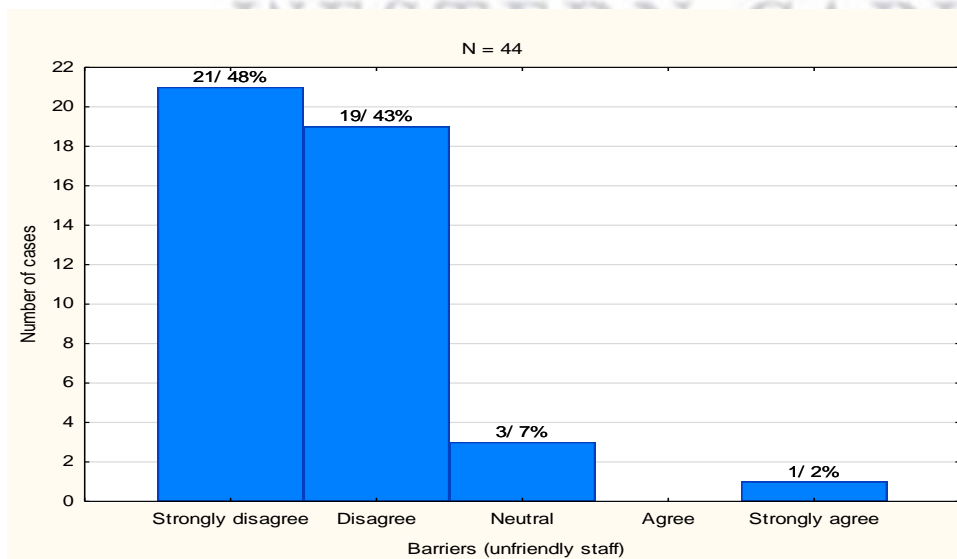
**Figure 5.26: Barriers (lack of support)**



#### 5.2.14.2 Unfriendly IT staff

In relation to IT staff being friendly or unfriendly to students whilst making use of TII, the findings presented in Figure 5.27 indicated that only one student was of the view that staff were unfriendly. The vast majority either strongly disagreed (21 or 48%) or disagreed (19 or 43%), while three (7%) were neutral. However, five participants did not respond.

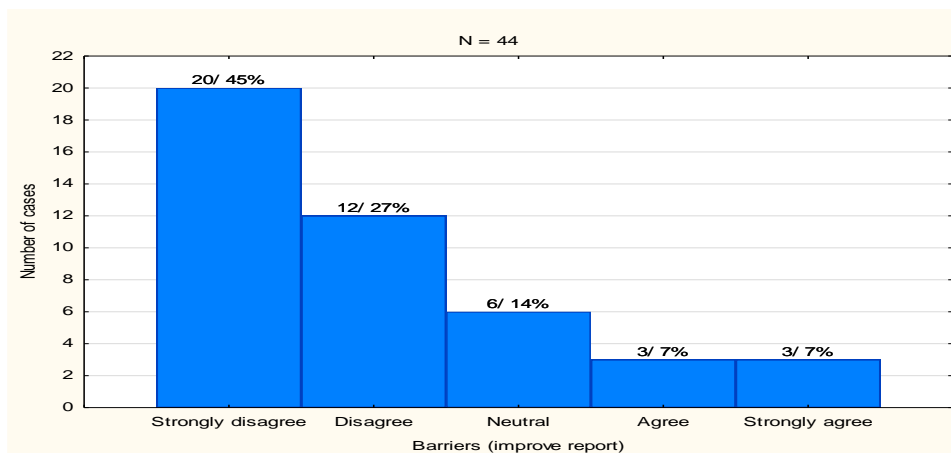
**Figure 5.27: Barriers (unfriendly staff)**



### 5.2.14.3 *Not knowing how to improve academic writing using a Turnitin report*

The data analysis findings presented in Figure 5.28 revealed that the highest number of students, (20 or 45%), strongly disagreed that they did not know how to improve their academic writing using a TII report, 12 (27) disagreed, six (14%) were unsure, three (7%) strongly agreed and 3(7%) agreed. However, five participants did not respond.

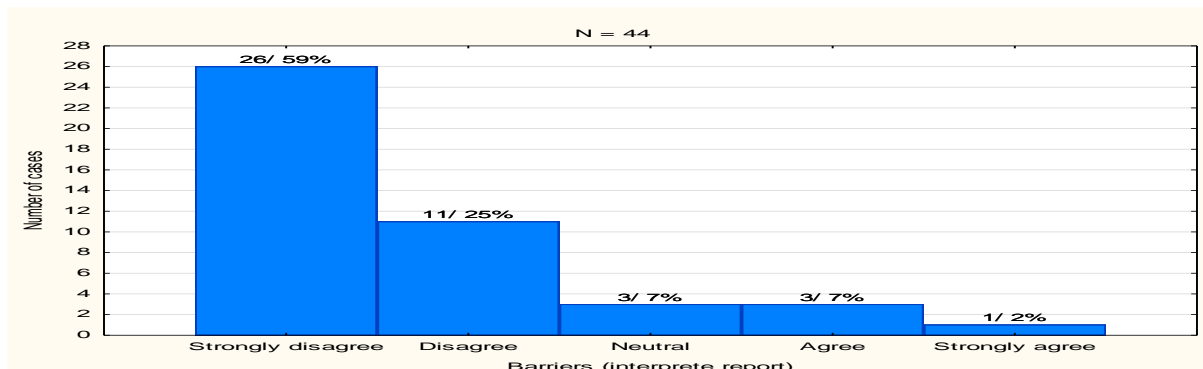
**Figure 5.28: Barriers (not know how to improve academic writing)**



### 5.2.14.4 *Not knowing how to interpret a Turnitin report*

The data analysis finding presented in Figure 5.29 revealed that the highest number of students (26 of 59%) strongly disagreed that they did not know how to interpret a Turnitin report, 11 (25%) disagreed, three (7%) were neutral, three (7%) agreed, and one (2%) strongly agreed. However, five participants did not respond.

**Figure 5.29: Barriers (not know how to interpret report)**





### 5.2.15 Confidence improvement

The aim of this section of the questionnaire was to establish whether using Turnitin software improved the students' level of confidence in doing their academic work independently and, in particular, in academic writing. Table 5.4 shows the findings of the analysis.

**Table 5.4: Student level of confidence (N=43)**

Student level of confidence	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	Count	%	Count	%	Count	%	Count	%	Count	%
The use of Turnitin has enabled me to do my academic work with confidence	14	33	20	47	4	9	1	2	4	9
Turnitin has enabled me to become less dependent on proof readers and other students	10	23	14	33	11	26	4	9	4	9
Turnitin has improved my academic writing	9	21	19	44	7	16	3	7	5	12

Table 5.4 shows that the majority of the participants (14 or 33%) strongly agreed or agreed (20 or 47%) that the use of Turnitin had enabled them to do their academic work with confidence. Most students, (10 or 23%), strongly agreed and 14(33%) agreed that Turnitin had enabled them to become less dependent on proof-readers and other students. Moreover, nine (21%) of the students strongly agreed and 19(44%) agreed that Turnitin had improved their academic writing.

Of the students who answered this question, four (9%) were neutral that the use of Turnitin had enabled them to do their academic work with confidence. Moreover, 11(26%) of the students were neutral that Turnitin had enabled them to become less dependent on proof-readers and other students, and seven (16%) of the students were neutral that Turnitin had improved their

academic writing. Only one (2%) student disagreed and four (9%) strongly disagreed that the use of Turnitin had enabled them to do their academic work with confidence. However, four (9%) disagreed and four (9%) strongly disagreed that Turnitin had enabled them to become less dependent on proof-readers and other students. Moreover, three (7%) students disagreed or five (12%) strongly disagreed that Turnitin had improved their academic writing. However, six participants did not respond.

### 5.2.16 Reasons why students plagiarise

As there are various reasons why students plagiarise, the aim of this section of the questionnaire was to identify the participants' perceptions of the reasons why postgraduate student plagiarise. The analysis of their responses is shown in Table 5.5.

**Table 5.5: Reasons for plagiarism amongst postgraduate students (N=43)**

Reasons for plagiarism	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	Count	%	Count	%	Count	%	Count	%	Count	%
Poor research skills	11	26	21	49	5	12	4	9	2	5
Lack of support from SU librarians	2	5	1	2	19	44	16	37	5	12
Academic pressure	10	23	22	51	6	14	3	7	2	5
External influence (influence from friends)	4	9	8	19	15	35	12	28	4	9
Ignorance of ethical conduct	11	26	15	35	12	28	4	9	1	2
Poor time management	14	33	22	51	6	14	1	2	0	0
Poor academic writing skills	16	37	16	37	6	14	3	7	2	5

The data analysis revealed that 36(84%) of the students agreed/strongly agreed that postgraduate students plagiarise because of poor time management. However, 32(74%) of the students agreed/strongly agreed that postgraduate students plagiarise because of poor research skills; poor academic writing; and academic pressure. In addition, 26(61%) of the participants agreed/strongly agreed that postgraduate students plagiarise because of ignorance of ethical conduct. As indicated in the table above, 12(28%) of the respondents agreed/strongly agreed that postgraduate students plagiarise because they are externally influenced by friends, while the lowest percentage of participants (three or 7%) agreed/strongly agreed that postgraduate students plagiarise because of a lack of support from SU librarians.

The data analysis revealed that 19(44%) of the students were neutral that postgraduate students plagiarise because of a lack of support from SU librarians. A fair number of students (15 or 35%) were neutral that postgraduate students plagiarise because they are externally influenced by friends. In addition, 12(28%) were neutral that postgraduate plagiarise because of ignorance of ethical conduct. However, six (14%) of the students were neutral that postgraduate plagiarise because of academic pressure; poor time management; and poor academic writing, while the lowest percentage of participants (five or 12%) were neutral that postgraduate plagiarise because of poor writing skills.

The data analysis revealed that 21(49%) of the students disagreed/strongly disagreed that postgraduate students plagiarise because of a lack of support from SU librarians. A few students 16(37%) disagreed/strongly disagreed that postgraduate students plagiarise because they are externally influenced by friends, while six (14%) of the students disagreed/strongly disagreed that postgraduate students plagiarise because of poor research skills. However, five (12%) disagreed/strongly disagreed that postgraduate students plagiarise because of academic pressure; ignorance of ethical conduct; and poor academic writing skills. The lowest percentage one (2%) disagreed/strongly disagreed that postgraduate students plagiarise because of poor time management. However, six participants did not respond.

### **5.3.17 Students' perceptions of and attitudes towards the Turnitin intervention**

Figure 5.30 presents an analysis of the students' perceptions and attitudes as expressed in their responses to Questions 7 and 8 of the questionnaires (see Appendix 5), which referred to their perceptions of and attitudes towards the Turnitin intervention.

**Figure 5.30: Perceptions of and attitudes towards the Turnitin intervention**

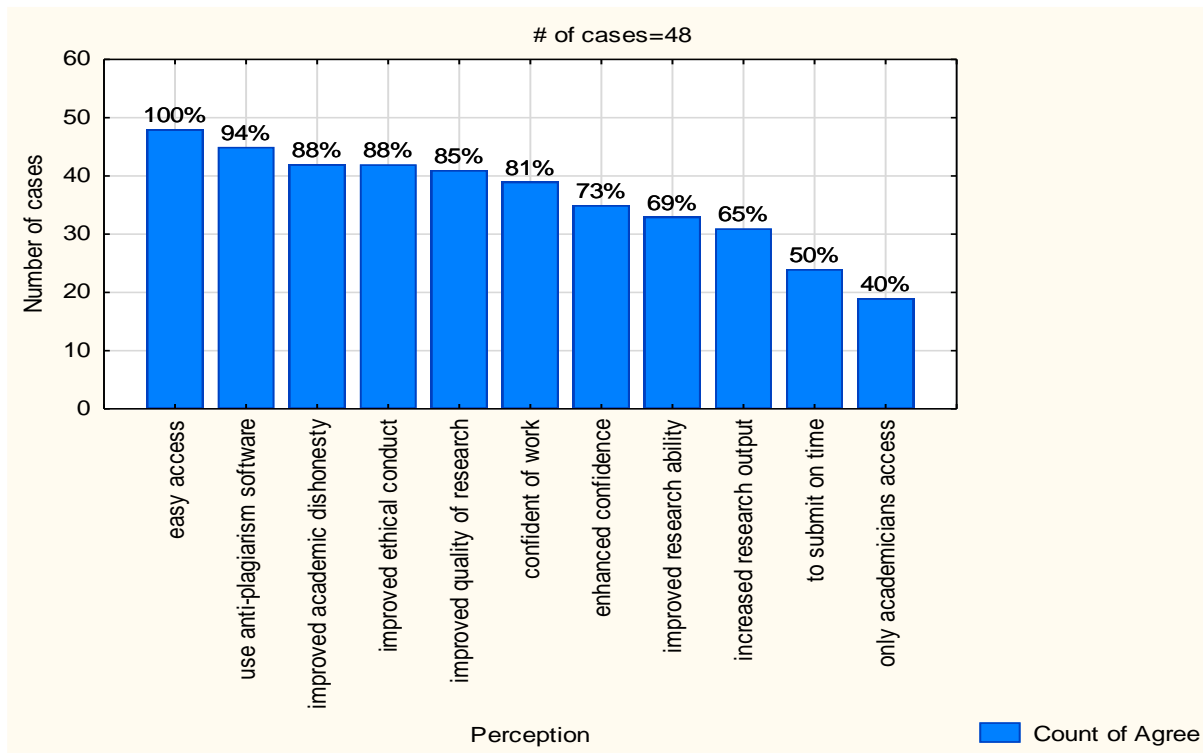


Figure 5.29 shows that all the participants had easy access to Turnitin. This was followed by 94% of students who made use of anti-plagiarism software. According to the findings, the intervention of Turnitin had improved 88% of the students' understanding of academic dishonesty and ethical conduct. The figure above shows that the quality of research submitted by 85% of the participants had improved because of Turnitin intervention. The majority (81%) of the participants were confident with their own work as a result of Turnitin, which had enhanced the level of the confidence of 73% of the respondents. Moreover, the research ability of 69% of the respondents had improved because of the Turnitin intervention. This was followed by 65% of students being helped by Turnitin to better their studies and increase their research output. Turnitin had helped 50% of the participants to submit their academic work on time. The lowest percentage (40%) of the students indicated that only academicians have access to or benefited from Turnitin. This shows a contradiction with the perception of 100% of the students who maintained that they had easy access to Turnitin.

### 5.3 Results from the interviews

A letter of information was sent to six Development Finance lecturers with follow up reminders, but only three lecturers responded and accepted the invitation, and thus three

interviews were conducted. The questions, selected responses and a summary of answers follow in this section of the findings of the data analysis. The focus of the interview questions was lecturers' understanding of plagiarism, plagiarism policies, anti-plagiarism software, Turnitin and follow-up questions. Original interview questions are marked in italics, while follow-up interview questions are in bold font.

### **5.3.1 Lecturers' understanding of plagiarism**

a) *What is your understanding of plagiarism?*

Respondents 1, 2 and 3 understood plagiarism as presenting or copying someone's work as one's own or without acknowledging the source, which is theft in the academic world.

Respondent 3: "Somebody uses somebody's work without acknowledging it or without giving the proper attribution to the original person the idea is coming from."

Respondent 2 explored the concept and explained that to avoid plagiarism an individual needs to internalise information and paraphrase it, but still acknowledge the original source.

b) *What in your mind constitutes plagiarism?*

Respondent 1: "What I consider as plagiarism is using someone else's statements, someone else's findings, conclusions as if they are one's own tokens or one's own findings, it can arise due to many reasons."

Two respondents thought that plagiarism is committed when an individual uses somebody's work, ideas and findings without giving acknowledgement to the owner. Sometimes students source a paragraph or a couple of sentences from an online article and submit it as their own writing without proper citation.

The third respondent did not exactly explain what constitutes plagiarism, but did explain the procedure followed by the Development Finance department when dealing with plagiarism. Moreover, this respondent mentioned that once a student obtains a similarity index of 15% or more after submitting work to Turnitin, it becomes a problem.

### **5.3.2 Plagiarism policies**

a) *Are you aware of any policies or strategies the university has put in place to discourage plagiarism?*



Respondent 2: “Yes, there is a document that has been shared to all departments, and even before the beginning of each session when students are on campus, they are given a lecture on plagiarism which has been done by plagiarism committee.”

All respondents were aware of the university policies for discouraging plagiarism in the form guidelines to avoid it and measures to be taken if it is committed. All the interviewed lecturers stipulated that the policies apply to both students and lecturers. The document containing the guidelines is shared with everyone at the beginning of each year to discourage plagiarism. All the interviewees mentioned that plagiarism workshops are conducted on campus.

**Do you give a second chance to students to rectify his/her work after you have detected plagiarism?** This follow-up question was directed to Respondent 1.

Respondent 1: “Yes, at the moment what happens is, when a lecturer detects plagiarism then we have to log in to ethics committee, the USB has ethics committee that will look at it and will immediately contact a student to rectify.”

According to Respondent 1, students are given a second chance to rectify or to decrease the similarity index generated by Turnitin. Once plagiarism is detected in a student’s assignment, he/she is reported to the University of Stellenbosch Business School’s (USB’s) Departmental Ethical Screening Committee. After the Committee has held a discussion with a student, a second chance to rectify is given to the student.

**Is the Committee made up of lecturers?** (Follow up question to Respondent 1).

Respondent 1: “The Committee is made of lecturers, research coordinators, research managers and other staff as well.”

**Are there any punitive measures in place that are mentioned in the policy?** (Follow up question to Respondent 2).

Respondent 2: “Yes, the second level of similarity index is a warning to the student. Third Level the student is sanctioned with a penalty of 50% so the work will be kept at 50% no matter how good is the student and the 4th Level the student will appear before the USB plagiarism committee.”

According to the lecturer there are punitive measures: the first-time a student is given a chance to fix or rectify plagiarism. If the student receives a high similarity index for the second time

(level two), a warning is given to the students. The third time (3rd level), the student is sanctioned by being given 50% for the assignment no matter how good the student is in the assignment. The fourth time (4th level) the student appears before the USB plagiarism committee.

**Who made those policies?** (Follow-up question to Respondent 3).

Respondent 3: “There are two levels here, there is a bigger university policy and committee that looks at any violation of the policy and who handle that. Some policy will be dealt at the school level at USB we have a committee that handles that and if the matter becomes more serious that it cannot be handled by Business school then will be referred to main university plagiarism committee.”

A SU policy committee formulates plagiarism policies takes care of policy violations. This means the University’s plagiarism policy is applied to all its campuses. However, there is also USB plagiarism committee that handles the policy at faculty level, but if there is a problem that it cannot solve, the issue is handled by the University plagiarism committee. This means that both committees work hand in hand.

### 5.3.3 Anti-plagiarism software

a) *Have you previously used or are you currently using anti-plagiarism software for academic purposes?*

Respondent 3: “Yes, we have been using TII for a very long time. There was a similarity word check we used before at USB before TII (Drop) around 2004 to check similarities.”

All three lecturers indicated that they had been and were still using anti-plagiarism software for their own and students’ academic work. For example, before submitting their articles to journals, they submitted their work to Turnitin to check similarity index scores. Moreover, they used Turnitin to check the similarity index of students’ assignments.

One of the lecturers mentioned that there was a similarity word check that was used at USB before the implementation of Turnitin but could not remember the name of the software, since the university had been using Turnitin for a long time.

b) *Did you receive any training in the use of anti-plagiarism software at Stellenbosch University?*

Respondent 1: “No, I have not received any training on the use of TII. But we have an online plagiarism training module that we have all attended sometime last year. It’s just broadly on plagiarism not specifically on TII. In fact, it covers areas like how to use TII score as a guidance in accessing plagiarism instances.”

All respondents had not received formal training in the use of anti-plagiarism software or Turnitin. They had all only attended training and workshops on a plagiarism module. Lecturers had followed training guidelines on the learning hub on using Turnitin and checking similarity scores for students’ academic work. These plagiarism workshops are conducted from time to time at the USB.

While the interviewer was asking Respondent 3 the above question during a Zoom interview, the Internet became disabled. Therefore, the interviewer had to go to the respondent’s office to finalise the interview. Cell phone recording was used for the rest of the interview.

**Are you telling me you do not need this kind of training? Are you comfortable learning it in your own ways, by attending online workshops?** (Follow-up question to Respondent 1).

Respondent 1: “I think at the moment I know how to check for plagiarism using Turnitin. We already have Turnitin embedded into the Learning Hub.”

All respondents were comfortable with following guidelines online on how to use Turnitin and with the knowledge that they have acquired about checking the similarity index, as the software can be accessed through the USB Learning Hub, which meets their academic needs.

c) *How effective are anti-plagiarism training interventions?*

Respondent 2: “I can say it’s effective, because before you submit your document you need to check whether there is plagiarism or not.”

All respondents saw anti-plagiarism training interventions as being very effective. They argued that they teach students that they cannot get away with plagiarism in their academic. Students learn that they learn that after Turnitin returns a low similarity index, they can submit work with confidence knowing that there is no plagiarism in it. The training teaches students and lecturers how to submit their work on Turnitin.

d) *What is your attitude towards and perception of anti-plagiarism?*

Respondent 2: “I have a positive attitude towards it. It is a good software to avoid cheating. It is very possible for somebody to get away with if such software was not there.”

All respondents had a positive attitude towards Turnitin that they perceived as a deterrent to plagiarism. They mentioned that if it were not for the software students and academics would get away with plagiarism because of the amount of information available online. However, one of the respondents maintained that although the software detects similarity, it does not give a full answer as to what exactly has been plagiarised. Furthermore, the participant claimed that lecturers need and are able to use their own judgement when deciding whether an assignment is plagiarised or not.

***So, when you receive assignments, do you first submit them to Turnitin before looking at them?*** (Follow up question to Respondent 1).

Respondent 1: “This is how it works, when students upload and submit their assignment on Learning Hub, few hours Turnitin similarity score appear on our side. I can see the assignment and the Turnitin score.”

A few hours after students upload and submit their assignment on the Learning Hub, the lecturers’ marking their work are able to see their Turnitin similarity score along with the submitted assignment.

**Do students have a chance of submitting their assignments and checking plagiarism before submitting to Learning Hub?** (Follow-up question to Respondent 1:

Respondent 1: “Yes, they have Turnitin playground, they can submit and see the Turnitin score before they submit on learning hub.”

Thus, students have a chance to rectify any plagiarism if they submit their assignment to Turnitin playground on the Learning Hub. This means that they could improve their Turnitin similarity score before final submission to the lecturer.

e) *How often do use anti-plagiarism software for academic purposes?*

Respondent 2: “Very often especially when it comes to the research assignments because no research is submitted without checking it. And sometimes when you write a paper you will need to check before you submit.”

All respondents frequently made use of Turnitin, not only when receiving students’ similarity indexes but when checking their own work before submitting it for publication.

f) *Do you think anti-plagiarism software helps in improving academic integrity?*



Respondent 1: “Yes, in my view it does improve integrity.”

All respondent’s perceived anti-plagiarism software as improving academic integrity. One of the respondents referred to a university overseas, where a PhD was revoked because it was later discovered that someone else’s thesis had been copied and submitted. The respondent maintained that without plagiarism software that would not have been discovered.

#### 5.3.4 Turnitin

a) *Can you tell me how you interpret the similarity index on Turnitin?*

Respondent 1: “Turnitin does not give you an answer or whether there is plagiarism or not. It just gives you the extent of similarity between a submitted work or other papers or chapters. It’s up to the lecturer to use his/her own judgment to decide whether there is an offence. It’s beautiful as a tool to detect plagiarism, use it with your own judgment for the decision.”

Although guidance is given by the university policy, the interviewees had different interpretations of the similarity index.

Respondent 1 pointed out that Turnitin does not give all answers, and therefore it depends on lecturers to use their own judgement whether there is an offence. According to the respondent, Turnitin gives an estimate of the similarity between a submitted work and others, and is a useful tool to detect plagiarism in combination with the lecturer’s judgement.

Respondents 2 was guided by the University policy’s policy: if a student obtains a similarity index in the 0%-15% range, the work is accepted. If the index is 15% or above, the student needs to address the problem. The respondent highlighted that in some departments 16%-20% is considered mild, and a student can be given a second chance to rectify the plagiarism. However, the respondent maintained that once the similarity index is over 20%, the student has committed a serious offence.

Respondent 3 indicated stated that lecturers ignore a similarity index of 2% in an assignment. However, if it is 50%, the assignment is not accepted. In addition, if Turnitin highlights a whole paragraph, students are alerted to the problem.

Respondents 2 and 3 supported Respondent 1, who highlighted that the lecturer’s judgement determines whether a student is penalised for plagiarism or allowed to improve his/her work.

b) *Do you encourage students to use Turnitin for remedial purposes (to improve their writing) or more for punitive measure?*



Respondent 1: “Yes, we encourage them to use Turnitin to improve their writing. The reason why we have plagiarism online training introduced by the Business School a couple of years ago is just to assist the student. We are not here to punish a student. This is a learning institution, as a learning institution we need to coach them.”

All respondents encourage students to make use of Turnitin as an opportunity to improve their academic writing, although, in fact, it is mandatory, as no document is accepted without a Turnitin report. The respondents emphasised that as the University is learning institution, lecturers should coach students not punish them.

c) *In your own opinion, are the pamphlets, policies and various strategies the university have in place enough to discourage students from plagiarising?*

Respondent 1: “In my view the policies on the information that we share at the beginning of every program is enough for our students to strictly adhere to the plagiarism policy. When we have offenders, we do not just punish them, we also give them opportunity to get training on plagiarism, over and above the orientation.”

All respondents believed that the University’s policies, and strategies should discourage students from committing plagiarism. They maintained that always encouraged students to attend plagiarism workshops not only during orientation but throughout the year.

The third respondent highlighted that student sometimes do not take plagiarism seriously until they are given their first assignment, when they learn a hard lesson about the significance of plagiarism.

#### **5.4 Summary of the chapter**

The analysis of both the questionnaire and interview data revealed the participants’ understanding of plagiarism, plagiarism policies and anti-plagiarism software (Turnitin). The participants who completed the questionnaire were second-year masters’ students, who had begun their studies in 2019, and first-year students, who were part of the 2020 intake. This chapter presented the results of the analysis of the data in the form of figures and tables together with explanations. In the next chapter, the findings will be discussed in light of the study objectives.

## CHAPTER 6

### DISCUSSION OF THE FINDINGS

#### 6.1 Introduction

In this chapter, the findings presented in the previous chapter will be interpreted and discussed. The convergent design of the study required both quantitative and qualitative data, which were collected and analysed separately. However, in this chapter, the results of the quantitative and qualitative data analysis will be merged in the discussion. According to Creswell (2015, p. 36), “the interpretation drawn from the two databases can be brought together in a discussion where they are arrayed side-by side”. In addition, (Creswell & Creswell, 2018) point out that the quantitative results may be reported first, followed by the qualitative results, and a follow-up discussion then occurs, comparing their results by displaying them concurrently, which is a side-by-side approach.

The discussion of the findings is based on the aim of the study, which was to investigate postgraduate students’ and lecturers’ perceptions and attitudes regarding plagiarism and interacting with Turnitin at the University of Stellenbosch Business School. In addition, the objectives of the study were to do the following:

- Establish master’s students’ understanding of plagiarism
- Explore the attitudes and perceptions of master’s students regarding anti-plagiarism software
- Investigate the effectiveness of anti-plagiarism software training intervention amongst master’s students
- Gain insight into academics’ understanding of the concept of plagiarism
- Investigate academics’ ways of addressing plagiarism or academic dishonesty
- Examine Stellenbosch University policies regarding academic dishonesty and anti-plagiarism software

In light of the above objectives, the study sought answers to the following questions:

- How do master’s second year students understand plagiarism?
- What do academics understand by the concept plagiarism?
- In what ways have academics addressed plagiarism in their classes?

- What are the attitudes and perceptions of second year master's students regarding anti-plagiarism software?
- Are there any policies at Stellenbosch University regarding academic dishonesty and the use of anti-plagiarism software?
- How effective are anti-plagiarism training interventions?

In the following discussion, the researcher will identify and link the findings with those of the literature reviewed and the theory on which the study was based, taking into consideration the above research aim, objectives and questions. The discussion is organised according to the following headings: plagiarism (awareness and understanding of plagiarism; intentional and unintentional plagiarism); SU's plagiarism policies (awareness of plagiarism policies and procedures; penalties for plagiarism); Turnitin (awareness as well as usefulness of Turnitin and anti-plagiarism software; Turnitin and training; effectiveness of Turnitin); and attitudes and perceptions regarding anti-plagiarism software

## **6.2 Plagiarism**

As part of the main aim of the study was to investigate postgraduate students' and lecturers' perceptions and attitudes regarding plagiarism, the discussion will cover this topic first.

### **6.2.1 Awareness and understanding of plagiarism**

Although the literature shows that plagiarism might be a complex concept, which lacks a universal definition, the study findings revealed that 84% of the students who participated in the study were very much aware of plagiarism and understood it as presenting another person's intellectual property as one's own without proper citation, which is SU's definition. The second highest number of students at 73% understood plagiarism as citing another person's work without a proper citation. This is in line with Nabee et al.'s (2020, p.276) assertion that "students understood that plagiarism involves copying directly from printed or online work without proper attribution to the source". In addition, 61% of the students in the current study defined plagiarism as intellectual theft.

All interviewed academics in the Development Finance department understood plagiarism as presenting or copying someone's work, whether it is a whole paragraph or a few words from an online article, as one's own, without acknowledging the owner. This suggests that students and academics have the same understanding of the concept.

As 27% of the participants indicated that plagiarism is just borrowing other people's words or ideas, it seems that there are quite a few students who are not aware that plagiarism is a serious offence and do not clearly understand its meaning. This suggests that the University perhaps should step up its anti-plagiarism campaign to ensure that all students understand its significance in terms of academic ethics. According to Alleyne and Phillips (2011, p. 325), ethics keep society together and require ethical behaviour from its members, therefore, society should be concerned about promoting ethical conduct amongst its students. Moreover, as in most cases, participants plagiarise because they do not understand and cannot paraphrase the text of the literature sources, language interventions should be considered (Sentleng, 2010).

## **6.2.2 Reasons for plagiarism**

In the study conducted by Selemani et al. (2018) at the Mzuzu University in Malawi, it was found that postgraduate students committed plagiarism for various reasons, even though they might have known it was a serious offence. This is the same at the University of Stellenbosch Business School in the Development Finance department, where the study showed that postgraduate students commit plagiarism for different reasons. However, the study revealed that they could be classified in terms of intentional or unintentional plagiarism.

### *6.2.2.1 Unintentional plagiarism*

According to Sentleng (2010, p.67), unintentional plagiarism is due to an individual not knowing that he/she should not copy the work of another, and that even if the ideas are paraphrased, the source should be acknowledged. However, intentional plagiarism is due to deliberate contravention of the rules of referencing and the requirement to use one's own words, as opposed to using the original text.

As indicated by the TPB (Ajzen, 1991), which formed the theoretical framework for the study, a student's intention to commit plagiarism determines the behaviour. Therefore, in light of the theory, unintentional plagiarism implies a lack of intention to commit plagiarism. Instead, the student might have only intended to include text in an assignment, which was better than he/she could have written it, without knowing that by copying the work of another and not referencing the sources, he/she was committing an offense.

In the study, students indicated that they committed plagiarism unintentionally because they lacked academic writing and research skills, such as paraphrasing, summarising and referencing. According to Lamula (2017, p. 35), "improper paraphrasing and summarising, and



the use of texts without quotation marks” indicates unfamiliarity with academic discourse, or a failure to express oneself. Sentleng (2010, p. 67) also believes that “paraphrasing, summarising, and quoting without acknowledging the source are mostly regarded as unintentional plagiarism”. In the study, 32 students (75%) said that they had plagiarised because of poor research skills and poor academic writing skills. Some students suggested that they would have known better if they had had more support: 3(7%) students blamed the lack of support from the SU librarians.

Other students in the study claimed to be ignorant of ethical conduct, as indicated in the paragraph above on awareness and understanding of plagiarism. In fact, 26(61%) of the students admitted that they committed plagiarism because of ignorance of ethical conduct. Therefore, these students might have committed plagiarism unintentionally. According to Alleyne and Phillips (2011, p.326; Stone et al., 2009), the “TPB is built on the notion that to be able to explain behaviour, one must consider behavioural intentions which are influenced by attitude towards the behaviour, subjective norms, perceived behaviour control and moral obligation”. The fourth variable, which was not included in the original TPB, might explain that some students plagiarise because they lack the moral obligation to avoid plagiarism, and thus do not intend to do it; instead, they intend to produce good writing, although it is not their own.

#### *6.2.2.2 Intentional plagiarism*

The TPB views behavioural intention as determined by the factors of attitude towards the behaviour, subjective norms and perceived behavioural control (Alleyne & Phillips, 2011, p.324). Thus, intentional plagiarism in terms of the TPB implies that a student intends to commit plagiarism, knowing that it is an offense. However, his/her attitude towards the behaviour is that it is acceptable because he/she wants to obtain a good grade and is under time pressure, is influenced by friends (subjective norms) or that it is easily done and difficult to detect (perceived behavioural control).

In the study, students revealed that they committed plagiarism intentionally because they managed their time poorly, felt under pressure and because of the influence of their friends. Students (36 or 84%) plagiarised because of poor time management, 32 (74%) because of academic pressure and 12 (28%) students because they were externally influenced (influence of friends). Lecturers highlighted that sometimes students intentionally source a paragraph or



a few sentences from an online article and write them as if they are their own words without proper citation, thinking that it would never be detected as somebody else's work.

Studies have found that students plagiarise because of poor time management (Idiegbeyan-Ose et al., 2016; Selemani et al., 2018; Sentleng, 2010), which was indicated in the study. According to Fishbein and Ajzen (2010), social norms make up the social component of the TPB, which speaks to a person's perception of how significant others view the behaviour. These can be family members or friends, whose support or lack of a particular behaviour can influence intentions to perform or not. Students in the study indicated that their friends influenced them.

### **6.3 SU plagiarism policy**

The study revealed the way plagiarism has been addressed by SU, in general, and USB, in particular. Academics, who are very much aware of university and departmental plagiarism policies, procedures and guidelines, which promote academic integrity, emphasise them when dealing with students. As, according to the TPB, intention influences behaviour, by encouraging students to attend plagiarism workshops and training, which inform learners about SU's plagiarism policy, lecturers contribute to learners' intention to produce ethical academic writing.

As indicated by the lecturers in the study, the use of Turnitin software is mandatory, as SU's Policy on Plagiarism requires postgraduate students to use it to detect plagiarism in academic work so that they can reduce it before submission and maintain academic integrity. The literature mentions various higher learning institutions that have employed anti-plagiarism strategies, which include raising awareness of the dangers of plagiarism and the need for academic integrity, especially in academic writing, as well as disciplinary actions (Selemani et al., 2018).

#### **6.3.1 Awareness of plagiarism policies**

The revised TPB indicates how moral obligation influences behavioural intention (Alleyne and Phillip, 2011, p. 336). Therefore, awareness of higher education plagiarism policies and procedures that aim for academic integrity will develop students and academics' moral obligation to behave ethically and avoid plagiarism. As stated above, lecturers in the study, who were fully aware of SU's Policy on Plagiarism, emphasised it when dealing with students, and 96% of the students who completed the questionnaire indicated their awareness of it.

However, the study also showed that 4% of the students were not aware or not sure of any university or departmental policies/guidelines on plagiarism. This indicates that the University and lecturers need make sure that all students are fully aware of institutional and departmental policies. From a TPB perspective, by doing so, they will ensure students' behavioural intention to avoid plagiarism, as they will do the following:

- Influence students to have a positive attitude towards academic integrity (influence their attitude)
- Encourage them see that their peers are keen to avoid plagiarism (influence their subjective norms)
- Help them to understand that it is difficult to hide (influence their perceived behavioural control)
- Instill in them a sense of moral obligation to write their own words, quote when using the words of others and reference sources (influence their moral obligation).

### **6.3.2 Penalties for plagiarism**

The literature indicates that at some institutions, penalties are applied to each plagiarism offence, which include making allowing students rewrite assignments, failing the course, withholding the degree or permanent exclusion from graduation (Selemani et al., 2018; Sentleng, 2010). As mentioned above, the TPB indicates that, instead of focusing on punitive measures, institutions could rather influence students' intention to do their work with academic integrity. Moreover, as indicated above, making them fully aware of plagiarism policies will determine the factors that according to the TPB, affect intention. However, not only should institutions make students aware of the contents of policies but also ensure that they are realistic and teach students to master academic writing skills.

Although prevention might be better than punishment, in the study, lecturers in the Development Finance department indicated that there were certain penalties in place for plagiarism. The first time a student receives a high similarity index from Turnitin (1<sup>st</sup> level offence), he/she is given the chance to rewrite the assignment and rectify the plagiarism. If this happens again (2<sup>nd</sup> levels offence), a warning is given to the student. The third time (3<sup>rd</sup> level offence), the student is sanctioned by being given 50% for the assignment, no matter how good it is. A similar approach is described by Sentleng (2010), who indicates categories of penalties

to accommodate types and grades of plagiarism, for example, a student's level of study or the number of offences already committed by a student.

In the study conducted by Batane (2010) at the University of Botswana, plagiarists were punished in various ways, including suspending students from the university, withholding degree certificates, subjecting students to academic probation and giving students a fail grade in the plagiarised course. In addition, according to Batane (2010), students' assignments were first submitted to the software without them knowing and being able to gauge their level of plagiarism. This contrasts with the findings of the current study, which revealed that students at the university under study are allowed to submit their work on their own to Turnitin to check their assignments for plagiarism, before they submit them to their lecturers. The lecturers interviewed indicated that they relied on their own judgment in assessing situations involving plagiarism, and one lecturer pointed out that they were not there to punish students, who were part of a learning institution, and thus needed coaching instead.

## **6.4 Turnitin**

The second part of the aim of the study was to investigate postgraduate students' and lecturers' perceptions and attitudes regarding the anti-plagiarism software, Turnitin. The following sections discuss this topic.

### **6.4.1 Awareness and usefulness of Turnitin**

The lecturers and masters' students in the Development Finance department were aware of and used Turnitin anti-plagiarism software in their academic work. The majority of the students (85%) indicated that Turnitin was useful in decreasing plagiarism and promoting referencing. In addition, 65% of the students perceived that the software contributes to good writing skills. Lecturers found Turnitin not only useful in detecting plagiarism in students' academic writing but also in their own work before submitting it to journals, for example.

Lamula's (2017) and Batane's (2010) studies found that Turnitin was adopted by the University of KwaZulu-Natal, and the University of Botswana, respectively, to fight plagiarism, which has been done by SU, as revealed by the current study. From the perspective of the TPB (Ajzen, 1991), Turnitin could be seen as an effective strategy influencing the variables that determine student behavioural intention to avoid plagiarism.

In Batane's (2010) study, all the lecturers welcomed and made use of the software in fighting plagiarism because they believed it would assist them in quickly identify it. However, in

Batane's (2010) study and the current one, as much as the lecturers made use of Turnitin, they pointed out that they did not believe that the software alone would decrease plagiarism amongst students. In the current study, lecturers believed that learners needed to be taught what to do. In addition, this suggests that all stakeholders should be responsible for empowering students to avoid plagiarism, which included training them.

#### **6.4.2 Turnitin and training**

Although 28 (58%) of the students had received training, 20 (42%) had not, which indicates that efforts should be made to ensure that all students at the University are trained. Moreover, all the lecturers interviewed had not receive training in the use of Turnitin, although they followed the training guidelines on the Learning Hub on how to make use of Turnitin and obtain similarity indexes for students and their own academic work

##### *6.4.2.1 Level of training*

The majority of students (75%) rated Turnitin and anti-plagiarism training as being either good or very good. Only 25% of students rated the training as being fair. Moreover, 61 of the students indicated that the software training was very important for accomplishing their academic tasks.

#### **6.4.3 Effectiveness of Turnitin**

The majority of the students (86%) indicated that Turnitin was very effective and helped them to accomplish their academic work. Most students (94%) and 100% of the lecturers indicated that Turnitin was a good tool for detecting plagiarism. All lecturers interviewed indicated that anti-plagiarism training interventions were very effective. They argued that without Turnitin, students would get away with plagiarism in their schoolwork. The majority (88%) of students indicated that the intervention of Turnitin improved their understanding of academic dishonesty.

Most (80%) of the students indicated that the use of Turnitin had enabled them to do their academic work with confidence. A slight majority of students (56%) indicated that Turnitin had enabled them to become less dependent on proofreaders and other students. The majority of students (65%) indicated that Turnitin had improved their academic writing.

#### **6.4.4 Students' attitudes and perceptions regarding anti-plagiarism software**

Since plagiarism has been a problem in all higher learning institutions, to curb this problem anti-plagiarism software was developed to reduce it (Glendinning, 2014). In the study



conducted by Lamula (2017) at the University of KwaZulu- Natal, students were asked how they perceived anti-plagiarism software. Out of 23 students, 6 did not know or were not aware of anti-plagiarism software and had no knowledge of Turnitin. In the current study, 100% of students were aware of and had easy access to Turnitin.

Anti-plagiarism software has had an influence on SU. The majority of the students (98%) agreed that they made use of anti-plagiarism software. Moreover, 80% of the students indicated that the use of anti-plagiarism software contributed to the promotion of academic integrity. Similarly, all lecturers interviewed indicated that anti-plagiarism software helped to promote and improve academic integrity. A minority of students (17%) were not sure whether anti-plagiarism software contributed to the promotion of academic integrity.

The use of anti-plagiarism software encouraged students (85%) to acknowledge the works of others. This implies that most of the students in the study cited and referenced their work when they used the ideas of other people, owing to Turnitin. However, 11% of students were not sure about acknowledging other peoples' ideas in their academic work. Students (79%) acknowledged that the use of anti-plagiarism software had enabled them to understand the consequences of plagiarism. However, 23% of students were not sure about this.

Although 63% of the students indicated that the use of anti-plagiarism software had improved their academic writing, 37% were not sure about this. All interviewed lecturers encouraged students to make use of Turnitin as an opportunity to improve their academic writing. Because of the use of anti-plagiarism software, 76% of the students had developed the ability not to plagiarise, while 16% of students disagreed that the use of anti-plagiarism software had helped them not to plagiarise, and 9% were not sure of this. In Batane's (2010) study at the University of Botswana, 35% of the students did not like the software at all, as it made them fail.

In the current study, 72% of students indicated that the use of anti-plagiarism software increased their understanding of ethics. In contrast, 28% of students did not attribute the use of the software to increasing their understanding of ethics. The majority (88%) of students perceived that they understood academic dishonesty and ethical conduct because of Turnitin interventions. The Turnitin intervention had made students feel confident in their work, as it had enhanced their level of confidence, and as a result, they submitted their work on time.

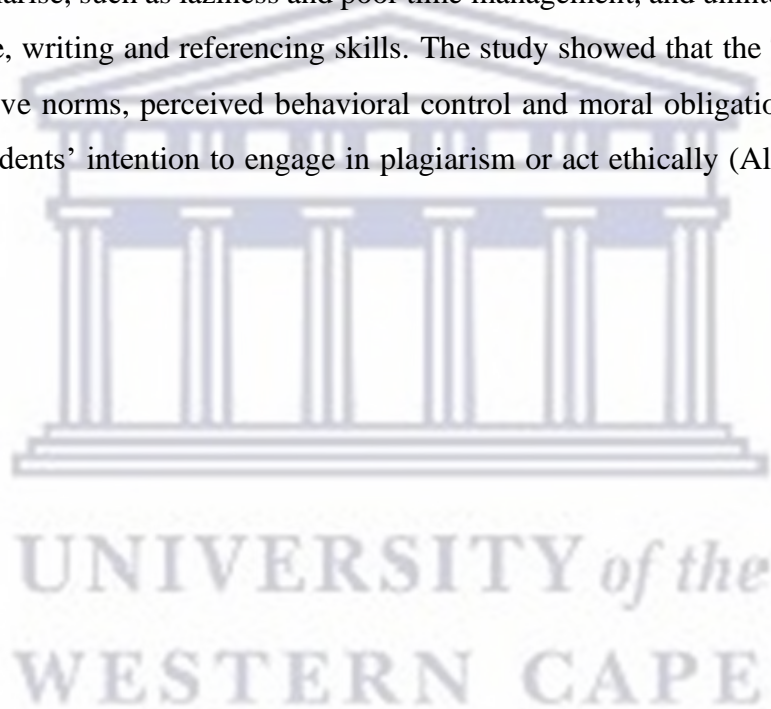
The Turnitin intervention had made 85% of the students perceive their research ability as improved and their research output increased. In general, the majority of students at the USB perceived anti-plagiarism software, particularly Turnitin, as a functional tool for detecting



plagiarism in their academic work. Thus, anti-plagiarism software interventions at SU, particularly Turnitin, have influenced students' attitude towards not committing plagiarism. They no longer have the intention to plagiarise and rather aim for academic integrity, owing to the influence of Turnitin, which has also enhanced their level of confidence in their academic work.

## **6.5 Summary of the chapter**

The majority of the students and lecturers of the Development Finance department were by far, mostly aware of plagiarism and anti-plagiarism software, particularly Turnitin. However, the majority of students still plagiarised intentionally, owing to factors that influenced their intention to plagiarise, such as laziness and poor time management, and unintentionally, owing to poor language, writing and referencing skills. The study showed that the TPB variables of attitude, subjective norms, perceived behavioral control and moral obligation are significant predictors of students' intention to engage in plagiarism or act ethically (Alleyne & Phillips, 2011, p. 336).



## CHAPTER 7

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 7.1 Introduction

This chapter will present a summary of the major findings presented in Chapter 6, draw a conclusion and make recommendations.

#### 7.2 Summary of the major findings

The summary of the major findings is discussed under the subheadings: understanding and awareness of plagiarism; description of plagiarism; reasons for plagiarism; use of anti-plagiarism and Turnitin software; plagiarism policies; and attitudes and perceptions regarding anti-plagiarism software.

##### 7.2.1 Understanding and awareness of plagiarism

The majority of master's students and the lecturers in the Development Finance Department at the University of Stellenbosch Business School were very much aware of plagiarism. Students and lecturers in this department showed an understanding of plagiarism in terms of what it means and entails.

##### 7.2.2 Description of plagiarism

Plagiarism is a complex issue in higher education institutions globally. Therefore, as a broad concept, people interpret it differently based on how they understand it (Sentleng, 2010). Lecturers and students at the higher learning institution in the study described plagiarism according to their awareness and understanding of the concept.

In the study, masters' students and lecturers in the Development Finance department mostly described plagiarism as the presentation of another person's intellectual property as one's own. Some students described it writing another person's work without a proper citation, and lastly, a few students viewed it as intellectual theft.

##### 7.2.3 Reasons for plagiarism

According to Sentleng (2010, p. 69), "the reasons for students to plagiarise are because of their lack of experience regarding expectations of tertiary education or because they are not aware of the seriousness of plagiarism". The study revealed that students plagiarised either intentionally or unintentionally. Those who committed plagiarism intentionally did so because

of academic pressure, the influence of friends or poor time management, for example. In support of this view, Roberts (2002), Okoro (2011) and Tripathi et al. (2015) maintain that students tend to engage in unethical behavior because of time constraints, laziness, peer pressure and poor role models. The current study found that students plagiarised unintentionally because of ignorance of ethical conduct; poor research and academic writing skills; and a lack of support from librarians.

The above-mentioned findings suggest that students need to be taught to cope with academic and peer pressure as well as time-management, research and academic writing skills by academic instructors. Husain et al. (2017) and McGowan (2005) confirm that there should be educational programmes to control plagiarism and especially, to empower students with academic writing skills, which will ensure academic integrity in higher education institutions. Sentleng (2010) is of the same view and recommends that lecturers and librarians should collaborate in teaching critical thinking, information literacy, academic writing, and research skills such as referencing to students.

#### **7.2.4 Use of anti-plagiarism and Turnitin software**

To prevent increased levels of plagiarism, SU introduced Turnitin as a strategy for detecting plagiarism. In the study, lecturers indicated that they encouraged their students to use Turnitin to improve their assignments and used it themselves when writing articles, for example. Thus, master's students and lecturers in the Development Finance department used Turnitin software, to check their work for plagiarism, which they reduced by applying the rules of referencing. Moreover, the majority of students and the lecturers in the same department believed that the software not only reduces plagiarism and promotes referencing but also contributes to good writing skills. The majority of students and the lecturers believed that because of Turnitin, they were able to promote academic integrity and eliminate plagiarism.

#### **7.2.5 Plagiarism policies**

To address and decrease plagiarism, SU formulated and implemented its Policy on Plagiarism (in Support of Academic Integrity). By interviewing the lecturers, some insight was gained into the University policy and that of the Development Finance department. Moreover, the lecturers, who adhered to the policies and handled them at both university and department level, believed that the policies and strategies that were in place were enough to discourage students from plagiarising. In fact, all lecturers and master's students in the study were aware of these policies.

### *7.2.5.1 Penalties of plagiarism*

In the academic world, plagiarism can be compared to a crime. Therefore, as pointed out by Lamula (2017), it can result in punishment and penalties, such as a disciplinary hearing, a deduction of marks and expulsion. Sentleng (2010) recommends that academics be provided with guidelines and a list of penalties for dealing with different levels of plagiarism. In the current study, the lecturers indicated their awareness of different penalties students received according to the level of plagiarism. After, the first high similarity index received from Turnitin for an assignment, students were given a chance to reduce the plagiarism. After, receiving a high similarity index a second time, students were given a warning. If a third high similarity index was received, students were given 50% for the assignment, even if the work was otherwise good. If students submitted another plagiarised assignment, (in other words this would be a fourth time), an appearance before the USB plagiarism committee would be required.

### **7.2.6 Attitudes and perceptions regarding anti-plagiarism software**

One of the objectives of the study was to explore the attitudes and perceptions of master's students regarding anti-plagiarism software. Students and lecturers indicated that they had easy access to Turnitin, which they used. Students were able to understand academic dishonesty and unethical conduct because of Turnitin interventions. According to the students, their research ability had improved, and they felt confident about their academic work because of Turnitin. In addition, their research output had increased.

### **7.3 Conclusion**

As plagiarism presents a challenge to academic integrity in higher education institutions worldwide, especially since information is easily accessible on the Internet, they have adopted anti-plagiarism software to fight it. The study focused on a particular higher education institution, Stellenbosch University (SU), in its investigation of postgraduate students' and lecturers' perceptions and attitudes regarding plagiarism and interacting with Turnitin. However, future research might consider conducting a similar study at another university or academic department.

The study adopted a mixed methods approach, which involved questionnaires completed by MPhil in Development Finance students and interviews conducted with lecturers in the Development Finance department. The theoretical framework on which the study was based

was the TPB, which is able to predict and explain behaviour in terms of intention and the factors that determine it: attitude, subjective norms, perceived behavioural control and moral obligation. The findings showed that students' intention to commit plagiarism or act with academic integrity was influenced by these factors as explained earlier in this chapter.

Data collected from students and lecturers showed that they were aware and understood the concept of plagiarism, especially since SU had introduced Turnitin to curb plagiarism at the institution. Lecturers and students indicated that they made use of Turnitin, which students, in particular, perceived as effective in preventing plagiarism in their academic work and having an impact on their research and writing skills. Nevertheless, as some students indicated that they plagiarised because they had poor research or writing skills, and others claimed that they were not sure that Turnitin contributed to promoting academic integrity, further interventions are needed to ensure that all students are helped to avoid plagiarism.

#### **7.4 Recommendations**

In this section, the researcher recommends strategies a higher education institution might follow to deal with plagiarism, instead of or in combination with those already in place. The researcher recommends for further research the same study be conducted in other departments within the University of Stellenbosch Business School as this study was limited to master's students and lecturers of the Development Finance department.

##### **7.4.1 Promoting/Raising student awareness of plagiarism**

Although the majority of students in the study showed awareness of plagiarism, its definition, what it entails, policies and anti-plagiarism software to detect plagiarism, university instructors need to teach students continuously about it. Lamula (2017, p. 175) explains this need as follows:

Additionally, academic staff and lecturers should play a significant role in the students learning and writing processes and they should not only educate students about plagiarism, but also make sure that students have easy access to plagiarism information.

##### **7.4.2 Role of academic stakeholders in fighting student plagiarism**

All academic stakeholders are responsible for motivating students to avoid plagiarism by adopting a supportive role.



#### *7.4.2.1 Training and workshops*

The literature and study findings indicated that students would benefit from training and workshops held by educators. In higher education institutions, despite policies and various strategies, students need their lecturers to teach them about plagiarism (Lamula, 2017; Sentleng, 2010). The study findings revealed that some students expected the librarians to provide support and teach them about plagiarism. Although only a few students had indicated this expectation, faculty librarians might view it as an invitation to address the issue of plagiarism with students, along with other academic staff members.

Lecturers could hold training and workshops at department level, which could include librarians, to educate students about plagiarism. Moreover, lecturers could collaborate with librarians, who give training in information literacy and the use of library resources to students throughout the year and teach students about writing skills and avoiding plagiarism (Sentleng, 2010).

Information literacy, defined as “a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information”(Sentleng, 2010, p. 75), could be combined with training about plagiarism and academic writing during workshops held by librarians and lecturers. Additionally, Lamula (2017) suggests that lecturers could attend workshops that are related to strategies on how to avoid plagiarism and teach these to students.

#### **7.4.3 Institutional policy, guidelines, and procedures on plagiarism**

This section refers to recommendations for policy implementation and awareness of policies, guidelines and procedures of plagiarism.

##### *7.4.3.1 Policy implementation*

The lecturers in the study indicated that plagiarism policies exist at SU at an institutional and departmental level. However, when implementing them, lecturers first dealt with student plagiarism at a school level, but once a student exceeded all levels of penalties, they referred him/her to the university plagiarism committee. This suggests that not only lecturers, but also other stakeholders should work together, particularly at departmental level, to enforce the policies and procedures of plagiarism as well as ensuring that Turnitin software reduces plagiarism and enables students to improve their academic writing and research skills.

#### *7.4.3.2 Awareness of policies, guidelines and procedures of plagiarism*

All stakeholders in higher education institutions should intervene to increase awareness of plagiarism and improve the effectiveness and accessibility of plagiarism policies, guidelines and procedures, as the study findings revealed a few students who were not sure about plagiarism policies. In addition, these policies, guidelines and procedures need to be updated regularly (Sentleng, 2010), accommodative of students' needs and uploaded on the equivalent of SU's Learning Hub, where every student looks for departmental information, which is communicated on a daily basis, about courses and other learning processes. In particular, disciplinary procedures should be made public so that students can become aware of them.

#### **7.4.4 Anti-plagiarism software and Turnitin**

All students in the study were aware of and had access to Turnitin. However, not all students indicated that Turnitin was useful in decreasing plagiarism in their academic work and promoting referencing. This shows that software alone cannot reduce plagiarism amongst students but can only indicate the amount of plagiarism, highlight the text that was plagiarised and link it to an identified source. Therefore, it is up to the students to reduce the plagiarism by rectifying their work themselves, once the similarities have been detected by the software, which might encourage them to improve their referencing skills. However, a few students were not sure about the software and its contribution to academic writing skills. Therefore, academic writing is a skill that students need to be taught, as the software only detects similarities in students' work against the Internet and its databases.

According to Batane's (2010) study conducted at the University of Botswana, lecturers and students welcomed and made use of the Turnitin software because they believed it would assist them in identifying plagiarism cases quickly. However, as much as the lecturers made use of Turnitin, they pointed out that they did not believe that the software alone would decrease plagiarism amongst students.

In the current study, the majority of the students and the lecturers had a positive attitude towards Turnitin, which they perceived as effective in preventing plagiarism. However, the researcher recommends that lecturers inspect Turnitin reports closely because some word similarities picked up by the system are unavoidable when dealing with subject-specific academic topics. Moreover, based on the researcher's experience, Turnitin might pick up word similarities in a

first submission and after plagiarism is rectified or a section paraphrased, the software continues to identify the work as plagiarised.



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## APPENDIX 1



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### APPLICATION LETTER FOR INSTITUTIONAL PERMISSION

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**INSTITUTION NAME & ADDRESS:** University of the Western Cape

Office of the Director: Research (Research and Innovation Division)

Private Bag X17 Bellville 7535

**INSTITUTION CONTACT PERSON:** Professor Sandy Zinn

**INSTITUTION CONTACT NUMBER:** (021) 959 2988 / 2948

**INSTITUTION EMAIL ADDRESS:** jcalvertwood@uwc.ac.za/szinn@uwc.ac.za

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**TITLE OF RESEARCH PROJECT:** An investigation of the perceptions and attitudes of postgraduate students interacting with Turnitin towards plagiarism: the case of the University of Stellenbosch Business School

**ETHICS APPLICATION REFERENCE NUMBER:** HS19/3/22

**RESEARCHER:** Nombulelo Magwebu-Mrali

**DEPT NAME & ADDRESS:** Department of Library & Information Science University of the Western Cape

Private Bag X17 Bellville 7535 South Africa

**CONTACT NUMBER:** 0727811237



**EMAIL ADDRESS:** [nombulelom@usbi.sun.ac.za](mailto:nombulelom@usbi.sun.ac.za)

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Dear Registrar

Kindly note that I am a Staff member at the Stellenbosch University Business School, and I would appreciate your assistance with one facet of my research project.

Please take some time to read the information presented in the following four points, which will explain the purpose of this letter as well as the purpose of my research project, and then feel free to contact me if you require any additional information. This research study has been approved by the Research Ethics Committee (REC) at Stellenbosch University and will be conducted according to accepted and applicable national and international ethical guidelines and principles.

1. A short introduction to the project:

Globally there is growing concern around increased levels of plagiarism. Researchers claim that plagiarism is growing at a rapid rate, and universities are now required to devote enough time and resources to combating plagiarism. South African universities have also found themselves victims of plagiarism. To prevent increased levels of plagiarism in South Africa, the University of Stellenbosch promotes the use of Turnitin. This study proposes to investigate the perceptions and attitudes of postgraduate students interacting with Turnitin at the University of Stellenbosch Business School. Currently there is no study that has been conducted within the context of South Africa to explore the views of South African postgraduate students interacting with Turnitin. This study would fill a research gap

2. The purpose of the project:

Although Turnitin is a generally accepted tool to detect plagiarism, it's unclear how effective it is in preventing/avoiding plagiarism, because the perceptions and attitudes towards the tool have not been investigated. The aim of the study is to investigate the perceptions and attitudes of master's second year students in Development Finance towards the use of Turnitin software at the University of Stellenbosch Business School. The objectives of the study are to contribute



to fully understand the concept of plagiarism in the academic community, strategies to discourage plagiarism and use anti-plagiarism software to detect plagiarism.

3. Your assistance would be appreciated in the following regard:

I am requesting permission to undertake a study at the University of Stellenbosch Business School in the Development Finance Department. The reason for choosing the Development Finance department is convenience as I am the librarian who trains them on an introduction to the library and the use of resources. I would like the University of Stellenbosch to grant me permission to distribute the survey questionnaires to the master's second-year students in Development Finance 2019-2020 intake and conduct interviews with Development Finance academics. The researcher will ask interviewees permission to record the interviews.

4. Confidentiality:

The purpose of this study will be explained to all participants, and respondents will remain anonymous. Participation will be voluntary, and participants will have the freedom to withdraw from participation at any stage. Participants will be required to sign consent forms.

If you have any further questions or concerns about the research, please feel free to contact me via email [nombulelom@usbi.sun.ac.za](mailto:nombulelom@usbi.sun.ac.za) or telephonically 021 918 4272. Alternatively, feel free to contact my supervisor, Prof Sandy Zinn, via email ([szinn@uwc.ac.za](mailto:szinn@uwc.ac.za)) or telephonically 021 959 2349.

Thank you in advance for your assistance in this regard.

Kind regards,

Nombulelo Magwebu-Mrali

Principal Investigator

## APPENDIX 2



23 October 2018

Dear Academics and Postgraduate students

### RESEARCH INFORMATION LETTER

I am Nombulelo Magwebu-Mrali: a faculty librarian at the University of Stellenbosch Business School. I am doing master's in library and Information Science at the University of the Western Cape.

As part of my course, I am required to produce a full thesis. I am conducting a survey amongst Academics and master's students in Development Finance at the University of Stellenbosch Business School to fully understand the concept of plagiarism in the academic community, strategies to discourage plagiarism and use anti-plagiarism software to detect plagiarism. The topic of my research project is **“An investigation of the perceptions and attitudes of postgraduate students interacting with Turnitin: the case of the University of Stellenbosch Business School”**.

My investigation will be facilitated by means of interviews with academic staff and questionnaires with master's students in Development Finance at the University of Stellenbosch Business School.

I kindly ask few minutes of your time to answer interview and questionnaire surveys. The success of this project relies on the information that will be gathered by means of these interviews and questionnaires. Please be assured that the information gathered will be used strictly for the purposes of the project. Confidentiality and anonymity are assured.

Your participation in this regard will be much appreciated.

Yours Sincerely

Nombulelo Magwebu-Mrali

Faculty Librarian

University of Stellenbosch Business School

P O Box 610, Bellville 7535, South Africa

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Cell: 072 781 1237

Email: [nombulelom@usbi.sun.ac.za](mailto:nombulelom@usbi.sun.ac.za)

**If you have questions about your role as a research participant, you could also contact:**

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Office of the Director: Research (Research and Innovation Division)

Private Bag X17 Bellville 7535

Tel: (021) 959 2988 / 2948 Email: [research-ethics@uwc.ac.za](mailto:research-ethics@uwc.ac.za)


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to action through knowledge

## APPENDIX 3

Letter of information for Questionnaire



UNIVERSITY of the  
WESTERN CAPE

University of the Western Cape

Department of Library and Information Science

Private Bag X17, Bellville, 7535, Cape Town, South Africa

Dear Sir/ Madam,

My name is Nombulelo Magwebu-Mrali. I am a master's student from the Department of Library and Information Science at the University of the Western Cape. I am conducting a survey amongst master's students in Development Finance at the University of Stellenbosch Business School to fully understand the concept of plagiarism in the academic community, strategies to discourage plagiarism and use anti-plagiarism software to detect plagiarism. The survey is part of my research for my master's thesis. The topic of my research project is **“An investigation of the perceptions and attitudes of postgraduate students interacting with Turnitin: the case of the University of Stellenbosch Business School”**.

The objectives of my research are to:

- Establish Masters second year students' understanding of plagiarism
- Gain insight into academics' understanding of the concept plagiarism
- Investigate academics' ways of addressing plagiarism or academic dishonesty
- Explore the attitudes and perceptions of master's second year students regarding anti-plagiarism software.
- Examine the Stellenbosch University policies regarding academic dishonesty and anti-plagiarism software.
- Investigate the effectiveness of anti-plagiarism software training intervention amongst master's second year students.

I am therefore requesting master's students in Development Finance at the University of Stellenbosch Business School to please participate in this survey. As no names are required, your identity will remain anonymous. If you agree to participate, please read, and confirm your participation by ticking the consent box. As the consent form indicates, your participation is completely voluntary, your identity remains anonymous, your responses will be kept confidential, and you are free to withdraw from the study at any time.

If you have any questions or concerns or wish to know more about this study, please contact me, Nombulelo Magwebu-Mrali at [nombulelom@usbi.sun.ac.za](mailto:nombulelom@usbi.sun.ac.za) you could contact my supervisor Prof Sandy Zinn at [szinn@uwc.ac.za](mailto:szinn@uwc.ac.za). Your participation in this study is greatly appreciated.

Kind regards,

Nombulelo Magwebu-Mrali





## APPENDIX 4

### Letter of information for Interviews



UNIVERSITY of the  
WESTERN CAPE

University of the Western Cape

Department of Library and Information Science

Private Bag X17, Bellville, 7535, Cape Town, South Africa

Dear Sir/ Madam,

My name is Nombulelo Magwebu-Mrali. I am a master's student from the Department of Library and Information Science at the University of the Western Cape. I am conducting interviews with Development Finance academic staff at the Stellenbosch University Business School to fully understand the concept of plagiarism in the academic community, strategies to discourage plagiarism and use anti-plagiarism software to detect plagiarism. The interviews are part of my research for masters. The topic of my research project is **“An investigation of the perceptions and attitudes of postgraduate students interacting with Turnitin: the case of the University of Stellenbosch Business School”**.

The objectives of my research are to:

- Gain insight into academics' understanding of the concept plagiarism
- Investigate academics' ways of addressing plagiarism or academic dishonesty
- Examine the Stellenbosch University policies regarding academic dishonesty and anti-plagiarism software.
- Investigate the effectiveness of anti-plagiarism software training intervention amongst academics.

May you, therefore, kindly check your calendar and confirm a convenient date and time you can avail yourself for a 15/20-minute interview between 1 April 2021 and 30 April 2021. Your participation is completely voluntary, your identity remains anonymous, your responses will be kept confidential, and you may withdraw from the study at any time.

If you have any questions or concerns or wish to know more about this study, please contact me, Nombulelo Magwebu-Mrali at [nombulelom@usbi.sun.ac.za](mailto:nombulelom@usbi.sun.ac.za) or you could contact my supervisor, Prof Sandy Zinn at [szinn@uwc.ac.za](mailto:szinn@uwc.ac.za)

Kind regards,

Nombulelo Magwebu-Mrali



## APPENDIX 5



Consent Form for Questionnaires

University of the Western Cape

---

An investigation of the perceptions and attitudes of postgraduate students interacting with Turnitin: the case of the University of Stellenbosch Business School

**Researcher:** Nombulelo Magwebu-Mrali

Please initial box

1. I confirm that I have read and have understood the information sheet explaining the above research project and I have had the opportunity to ask questions about the project.

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline.

(If I wish to withdraw, I may contact the lead researcher at any time)

3. I understand my responses and personal data will be kept strictly confidential. I give permission to the researcher to have access to my anonymised responses.

I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the reports or publications that result for the research.

4. As a participant in this research, I will not discuss or divulge information to others, or the researcher, outside of this interview.

5. I agree that the data collected from me may be used in future research.

6. I agree to take part in the above research project.

---

Name of Participant \_\_\_\_\_ Date \_\_\_\_\_ Signature \_\_\_\_\_  
(or legal representative)

---

Name of person taking consent \_\_\_\_\_ Date \_\_\_\_\_ Signature \_\_\_\_\_  
(If different from lead researcher)

---

Lead Researcher \_\_\_\_\_ Date \_\_\_\_\_ Signature \_\_\_\_\_

(To be signed and dated in presence of the participant)

Copies: All participants will receive a copy of the signed and dated version of the consent form and information sheet for themselves. A copy of this will be filed and kept in a secure location for research purposes only.

Researcher: Nombulelo Sylvia Magwebu-Mrali Telephone No.: 021 918 4272 Cell No.: 073 704 1007
--

Supervisor: Prof Sandy Zinn Dept of Library & Information Science, UWC P/Bag X17, Bellville, 7535
---

HOD: Prof Sandy Zinn Dept of Library & Information Science, UWC P/Bag X17, Bellville, 7535
--

## APPENDIX 6



Consent Form for Interviews

University of the Western Cape

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An investigation of the perceptions and attitudes of postgraduate students interacting with Turnitin: the case of the University of Stellenbosch Business School

**Researcher:** Nombulelo Magwebu-Mrali

Please initial box

7. I confirm that I have read and have understood the information sheet explaining the above research project and I have had the opportunity to ask questions about the project.

8. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any question or questions, I am free to decline. (If I wish to withdraw, I may contact the lead researcher at any time)

9. I understand my responses and personal data will be kept strictly confidential. I give permission to the researcher to have access to my anonymised responses.

I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the reports or publications that result for the research.

10. As a participant in this research, I will not discuss or divulge information to others,



or the researcher, outside of this interview.

11. I agree to have the interview or discussion audio recorded.

12. I agree that the data collected from me may be used in future research.

13. I agree to take part in the above research project.

\_\_\_\_\_  
Name of Participant                      Date                      Signature  
(or legal representative)

\_\_\_\_\_  
Name of person taking consent                      Date                      Signature  
(If different from lead researcher)

\_\_\_\_\_  
Lead Researcher                      Date                      Signature  
(To be signed and dated in presence of the participant)

Copies: All participants will receive a copy of the signed and dated version of the consent form and information sheet for themselves. A copy of this will be filed and kept in a secure location for research purposes only.

Researcher:  
Nombulelo Sylvia  
Magwebu-Mrali  
Telephone No.: 021 918  
4272  
Cell No.: 072 781 1227

Supervisor:  
Prof Sandy Zinn  
Dept of Library & Information  
Science, UWC  
P/Bag X17, Bellville, 7535

HOD:  
Prof Sandy Zinn  
Dept of Library &  
Information Science, UWC  
P/Bag X17, Bellville, 7535

## APPENDIX 7



### SURVEY QUESTIONNAIRE FOR SUN BUSINESS SCHOOL

### MASTERS IN DEVELOPMENT FINANCE DEPARTMENT STUDENTS.

- Demographics

Please enter your personal details requested below.

	Answer
Your age	
Year of study	
First year of registration at SUN	

- Understanding of plagiarism

Which phrase/s describe/s plagiarism the best? You may tick more than one.

Intellectual theft	
Literacy piracy	
Borrowing other people's words or ideas	
Presentation of another person's intellectual property as one's own	

	Writing another person's work without a proper citation	
--	---	--

- Are you aware of any policies at Stellenbosch University regarding anti-plagiarism software?

YES	
NO	



- Use of anti-plagiarism software:



Are you aware of Turnitin?

.....  
.....

When did you first learn about the Turnitin?

.....  
.....

Do you make use of Turnitin?

.....  
.....

When did you start using the Turnitin?

.....  
.....

When last did you make use of Turnitin?

.....  
.....

How many of your friends are making use of the Turnitin? (Excluded from the graph)

- What is the usefulness of anti-plagiarism software for your academic work?

Mark all that apply with an [X]

It decreases plagiarism	
It promotes a good writing standard	
It promotes proper referencing / citing	







- Training Received

.1 Did you receive training in the use of Turnitin for your academic work?

Mark your answer below with an [X]

YES	<input type="checkbox"/>
NO	<input type="checkbox"/>

If your answer to the question above is **YES** proceed with answering the following question if **NOT** jump to question 6.

Mark your answer below with an [X] next to the number

6.2 On a scale of 1 to 5, with 5 being very good and 1 being very poor, rate the level of training received.

5	4	3	2	1
very good	good	Fair	Poor	very poor

6.3 On a level of importance, rate how important you found the training received in relations to helping you accomplish your academic tasks.

4	3	2	1
very important	important	somewhat important	unimportant

- Second year master's students' perceptions of Turnitin in regards with facilitating their academics accomplishment.

Mark your answer below with an [X] indicating either agree or disagree

	Issues	Agree	Disagree
1	Second year master's students at SUN have easy access to Turnitin		
2	Second year master's students at SUN makes use of anti-plagiarism software		





- Mark the statements below with an [X] indicating either agree or disagree

	Statements	Agree	Disagree
1	Turnitin intervention has improved my understanding of academic dishonesty		
2	Turnitin intervention has improved the quality of research being submitted to SUN students		
3	Turnitin intervention has improved second year master's students' research ability		
4	Turnitin intervention has improved ethical conduct amongst master's students		
5	Turnitin intervention has enhanced master's students' confidence level		
7	Only academicians have access to or have benefited from Turnitin intervention		
8	Turnitin helped me to better my studies and it has increased my research output		
9	Turnitin intervention helped me to submit my work on time		
10	I am now confident of my own work as a result of Turnitin		

- How has the use of Turnitin influence your studies?

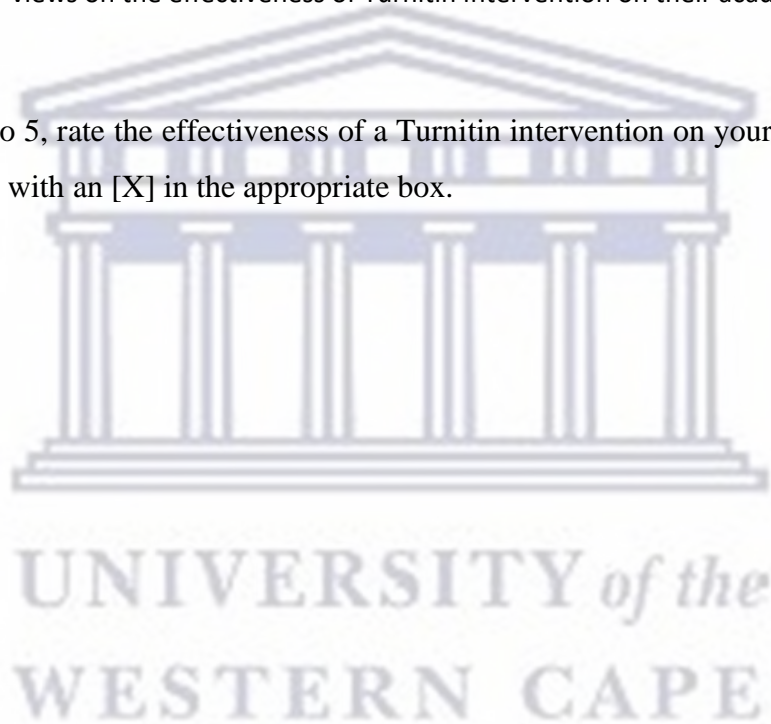
Mark your answer with an [X].

	Issues	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	The use of Turnitin made me promote academic integrity and eliminate plagiarism					
2	The use of Turnitin made me acknowledge the works of others					
3	The use of Turnitin made me understand the consequences of plagiarism					
4	The use of Turnitin made me meet most of my academic basics research needs					

5	After I started using Turnitin, my academic writing level improved					
6	The use of Turnitin has helped me to develop the ability not to plagiarise					
7	The use of Turnitin has increased my research competency					
8	The use of Turnitin has increased my understanding of ethics					

- Students' views on the effectiveness of Turnitin intervention on their academic career.

On a scale of 1 to 5, rate the effectiveness of a Turnitin intervention on your academic career fulfilment. Mark with an [X] in the appropriate box.





a. Based on your personal experience, the Turnitin intervention is?

Excellent	Very good	Good	Fair	Poor
5	4	3	2	1

a) Do you believe investing in Turnitin will help the SUN to effectively deal with the crisis of academic dishonesty?

YES	NO
-----	----

b) Please justify your choice:

..... (Excluded in graph)

- SUN: Marketing, promotion, and Communication mediums in relations to creation of awareness of Turnitin.

Mark your answer with an [X] in the appropriate column.

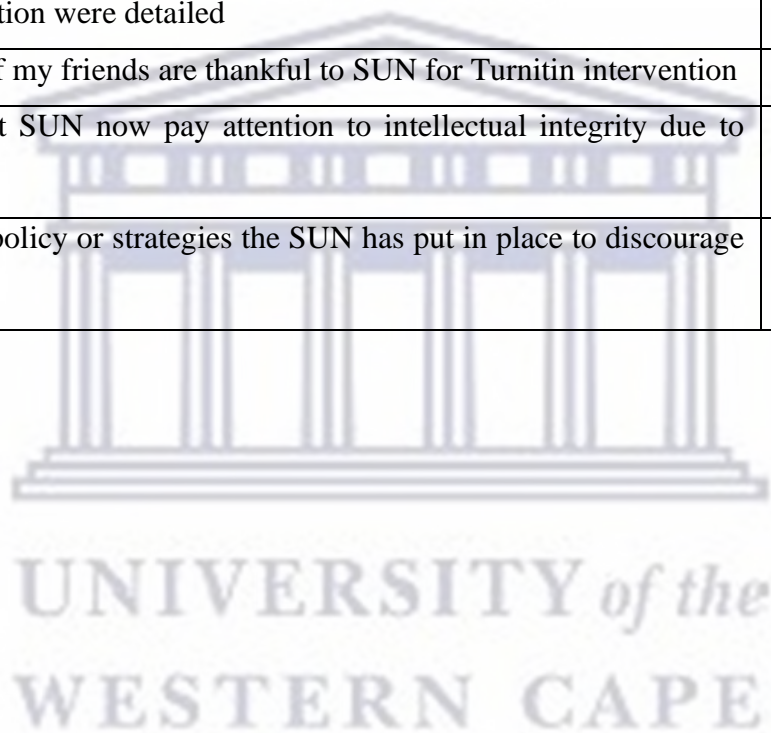
To promote anti-plagiarism software to undergraduate and postgraduate students, SUN makes use of:	YES	NO	Don't know
Voice Calls			
E-mail			
SMS			
WhatsApp			
Facebook			
E-learning platform			
Library website			
None of the above			



- The university policy design and implementation

Mark your answer with an [X] in the appropriate box.

	Statements	YES	NO	Don't know
1	When SUN introduced Turnitin at the university I was informed			
2	The SUN leadership involves students in discussing ways to stop plagiarism			
3	Undergraduate and postgraduate students do receive regular workshops on the use of Turnitin			
4	The communication strategies that were used to inform students about the Turnitin intervention were detailed			
5	I am and many of my friends are thankful to SUN for Turnitin intervention			
6	Many students at SUN now pay attention to intellectual integrity due to Turnitin			
7	I am aware of a policy or strategies the SUN has put in place to discourage plagiarism			





- **Students' perceptions of the success of Turnitin** Your use of Turnitin: was plagiarism index high or low/acceptable?

Mark your answer with an [X] in the appropriate box.

	Statement	Agree	Disagree
1	Largely successful: most of the time I attained my major goals and did not experience undesirable outcomes		
2	Successful: most of the time I attained my goals and did not experience significant undesirable outcomes		
3	Partially successful: I attained some major goals, but some were not and/or there some significant undesirable outcomes		
4	Largely unsuccessful: Some goals I attained but I did not attain my major goals and/or experienced significant undesirable outcomes		

- The effect of Turnitin on academic excellence

Mark with an X in the appropriate box.

		Most of the time	Sometimes	Hardly ever	Never
1	How often do I use Turnitin?				
2	I use Turnitin for article / papers				
3	I use Turnitin for assignments				
4	I use Turnitin for publications				
5	I use Turnitin for thesis work				

- What are the major barriers that you are facing every time you want to make use of Turnitin?
- What are the major barriers that you are facing every time you want to make use of Turnitin?

•

		Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	Lack of support					
2	Unfriendly IT staff					
3	I do not know how to improve my writing using the Turnitin report					
4	I don't know how to interpret Turnitin report					



UNIVERSITY *of the*  
WESTERN CAPE

- Confidence improvement

Mark with an X in the appropriate box.

	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	The use of Turnitin has enabled me to do my academic work with confidence					
2	Turnitin has enabled me to become less dependent on proof-readers and other students					
3	Turnitin has improved my academic writing					

- **Academic Dishonesty:** Postgraduate students plagiarise because of:

Mark with an X in the appropriate box

	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	Poor research skills					
2	Lack of support from SUN librarians					
3	Academic pressure					
4	External influence (influence from friends)					
5	Ignorance of ethical conduct					
6	Poor time management					
7	Poor academic writing skills					

- General

A. Are there any other issues not raised but which may be important in learning how Turnitin has contributed to making it easier for you to do your academic work?

B. In general, what is your experience of the Turnitin?

C. How has the use of Turnitin enabled you to submit your work on time?

D. According to your experience using Turnitin, is there anything you would like to change?

Thank you for your participation





## APPENDIX 8



### INTERVIEW QUESTIONS FOR DEVELOPMENT FINANCE ACADEMICS

Answers will be kept strictly confidential and anonymous.

1. What is your understanding of the concept of plagiarism?
2. What in your mind constitutes plagiarism?
3. Are you aware of any policies or strategies the university has put in place to discourage plagiarism?
4. Have you previously used or are you currently using anti-plagiarism software for academic purpose?
5. Did you receive any training in the use of anti-plagiarism software at Stellenbosch University?
6. How effective are anti-plagiarism training interventions?
7. What is your attitude towards and perception of anti-plagiarism software?
8. How often do you use anti-plagiarism software for academic purposes?
9. Do you think anti-plagiarism software helps in improving academic integrity?
10. Can you tell me how you interpret the similarity index on Turnitin?
11. Do you encourage students to use Turnitin for remedial purposes (to improve their writing) or more for punitive measures?
12. In your own opinion, are the pamphlets, policies, and various strategies the university have in place enough to discourage students from plagiarising?

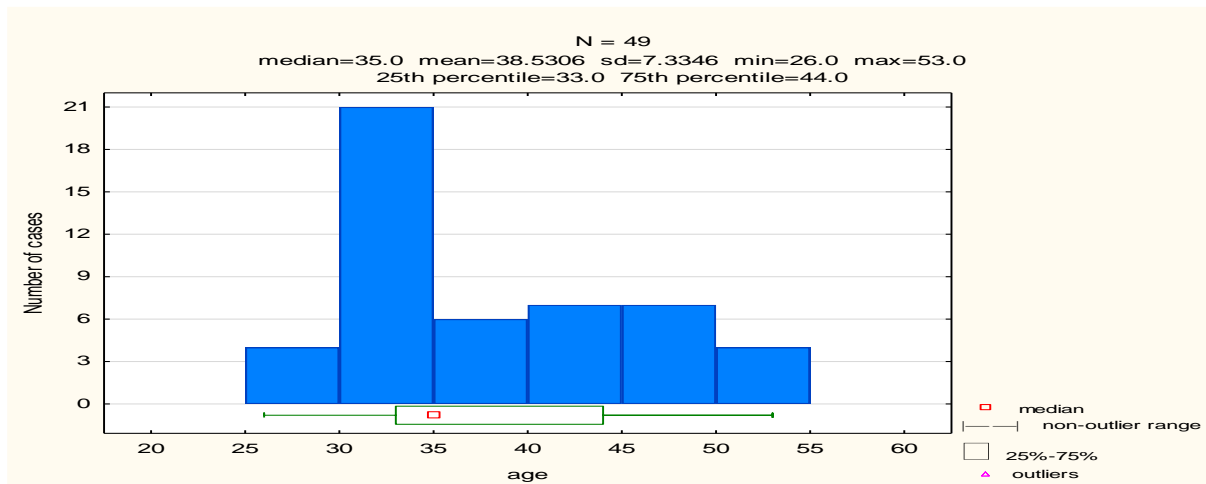
Thank you for your participation

## APPENDIX 9

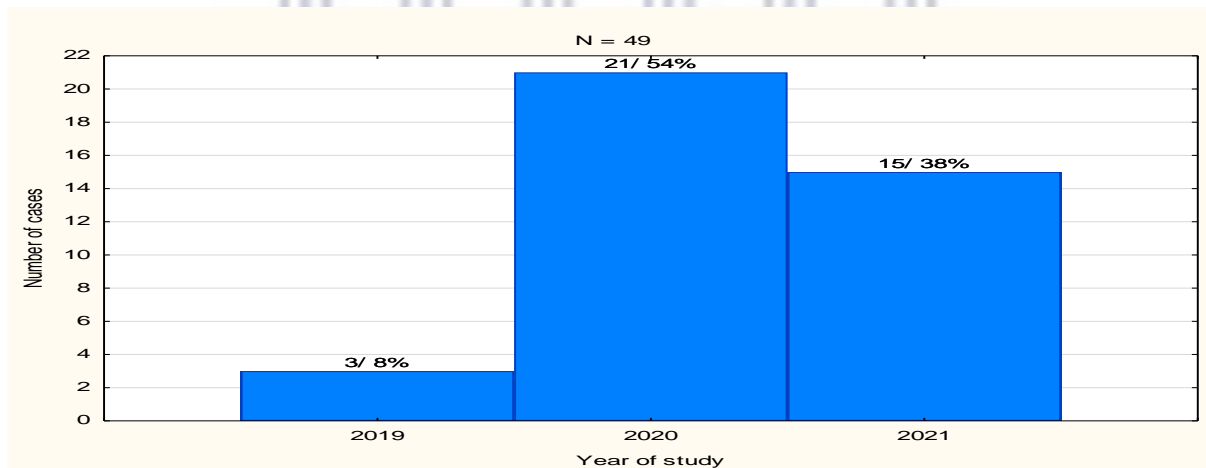
### GRAPHS AND RESULTS OF THE QUESTIONNAIRE: DEVELOPMENT FINANCE MASTERS STUDENTS

#### Question 1: Demographics

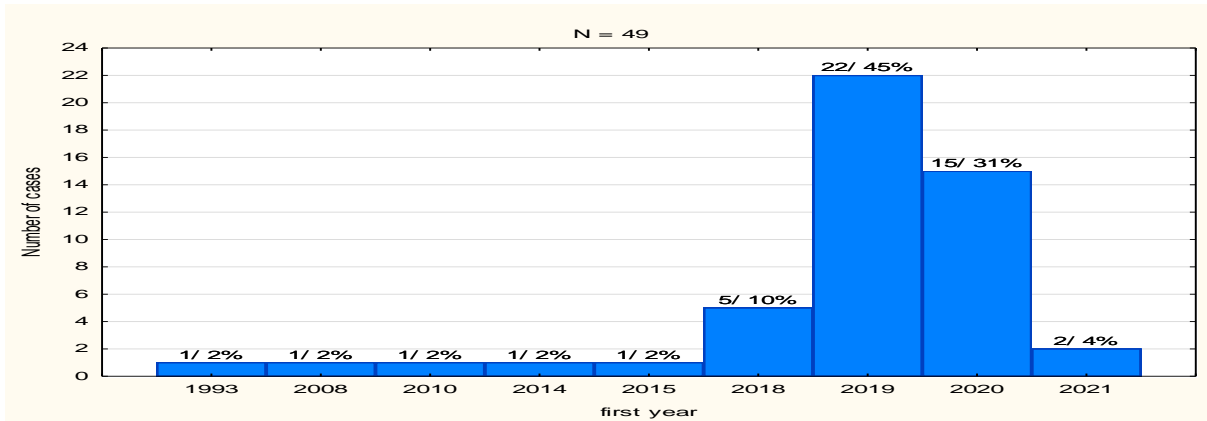
##### 1.1 Respondent's age



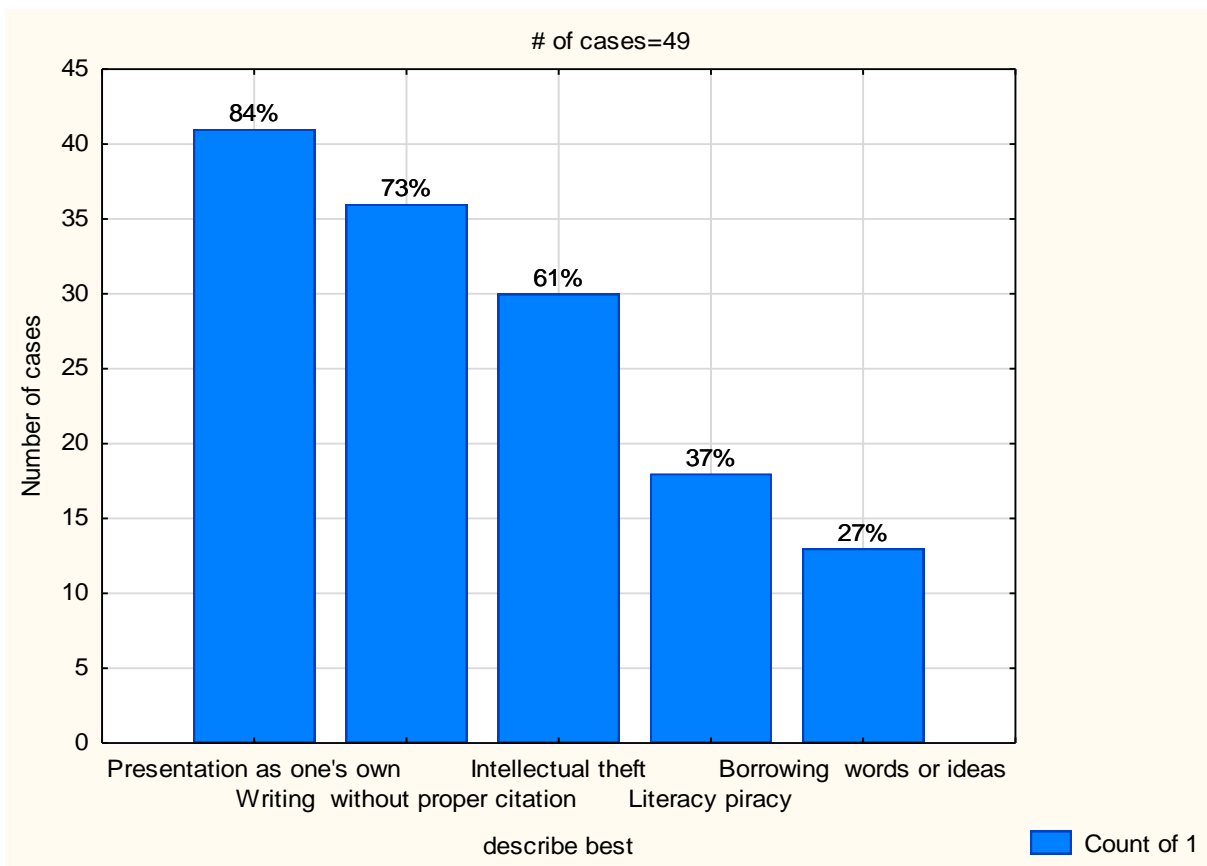
##### 1.2 Year of study



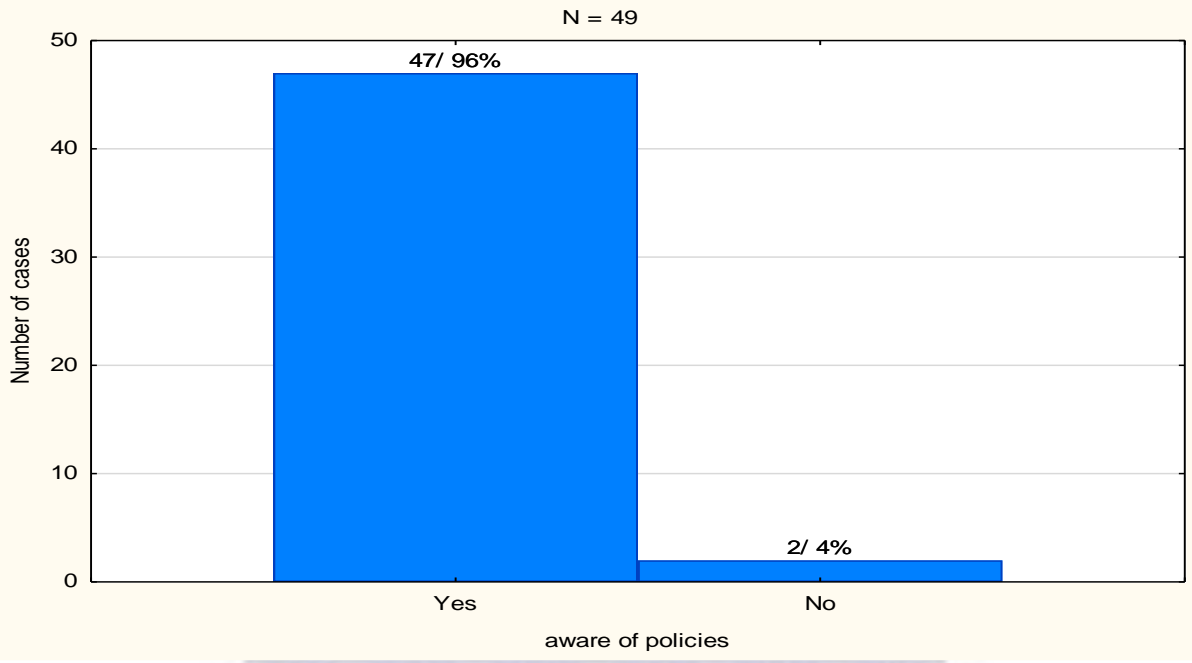
##### 1.3 First year of registration at SUN



Question 2: Understanding of Plagiarism

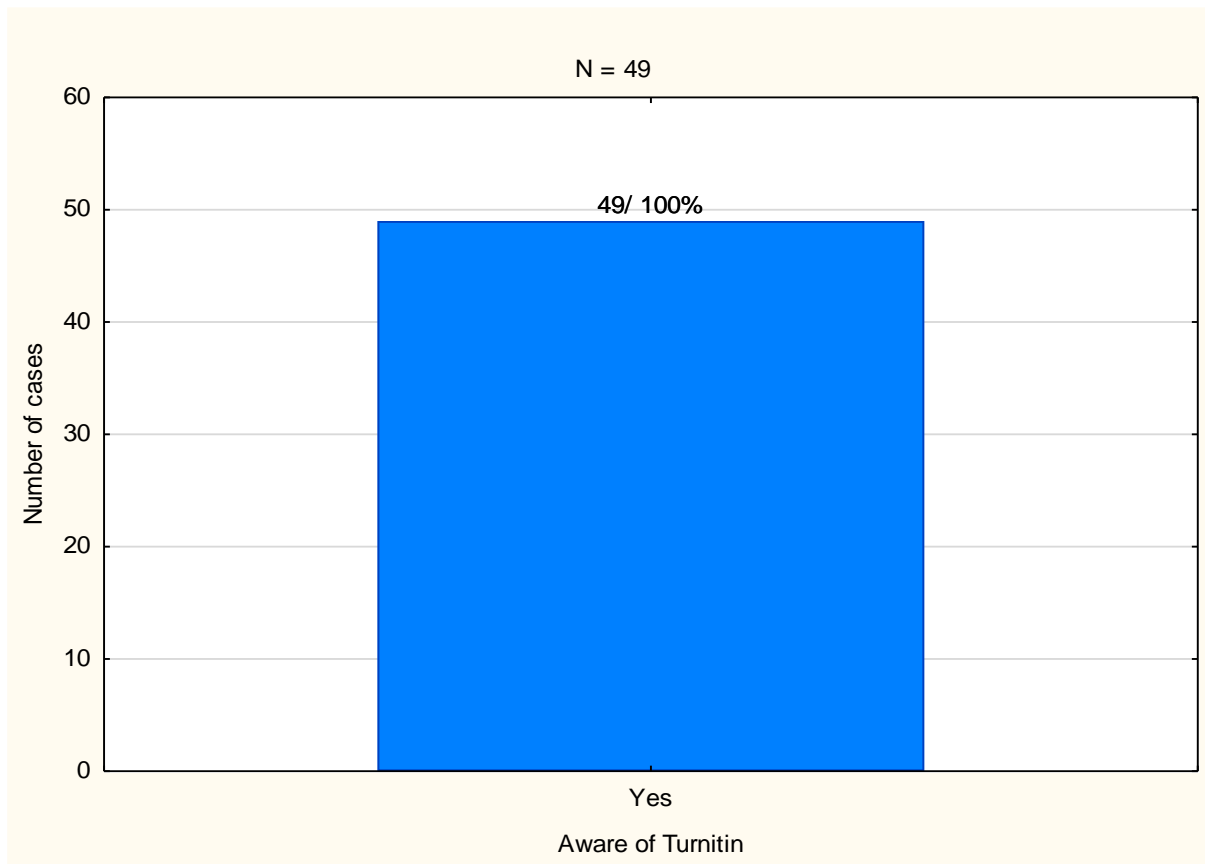


Question 3: Are you aware of policies at Stellenbosch University regarding anti-plagiarism software?

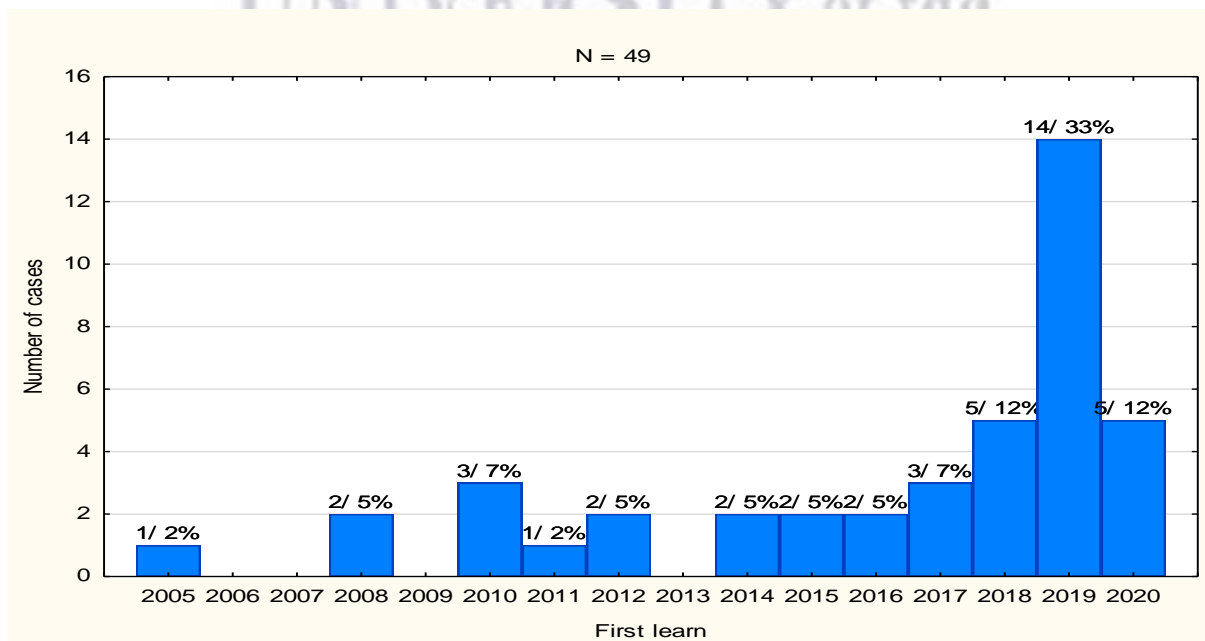


## Question 4: Use of anti-plagiarism software

### 4.1 Aware of Turnitin

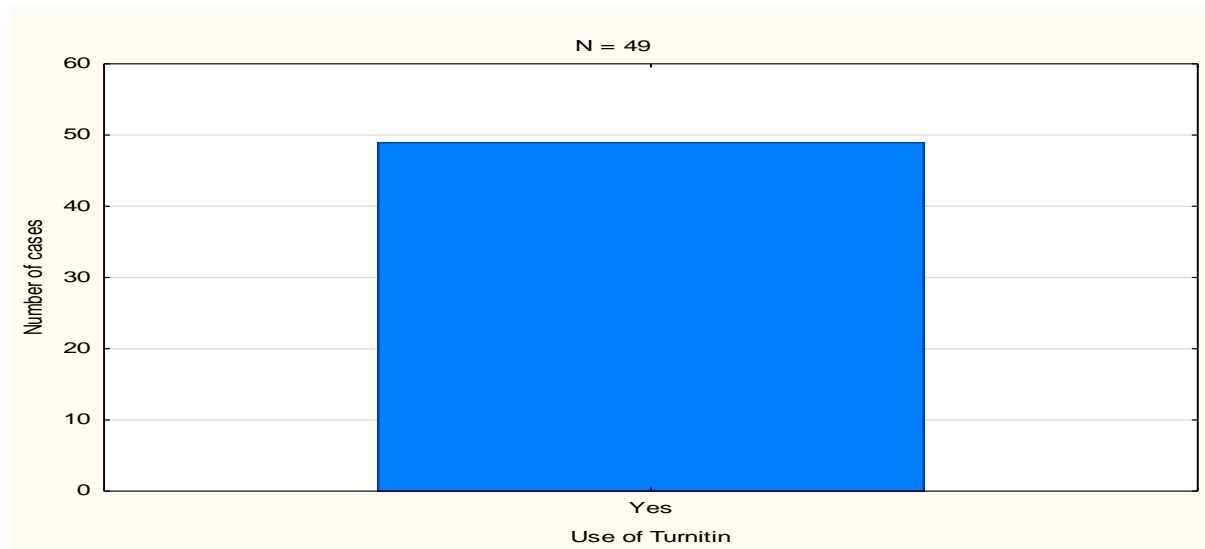


### 4.2 First learn

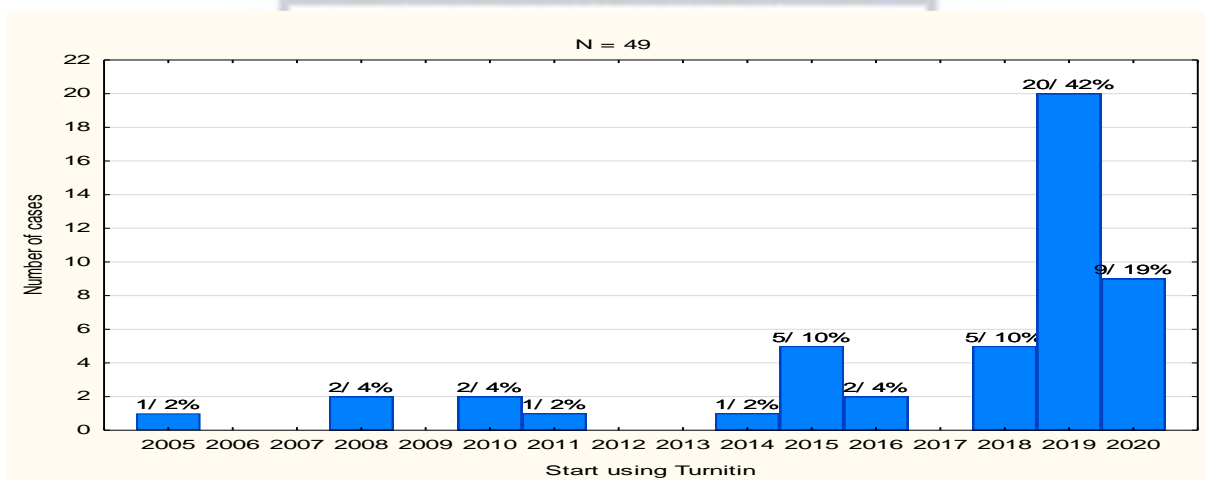




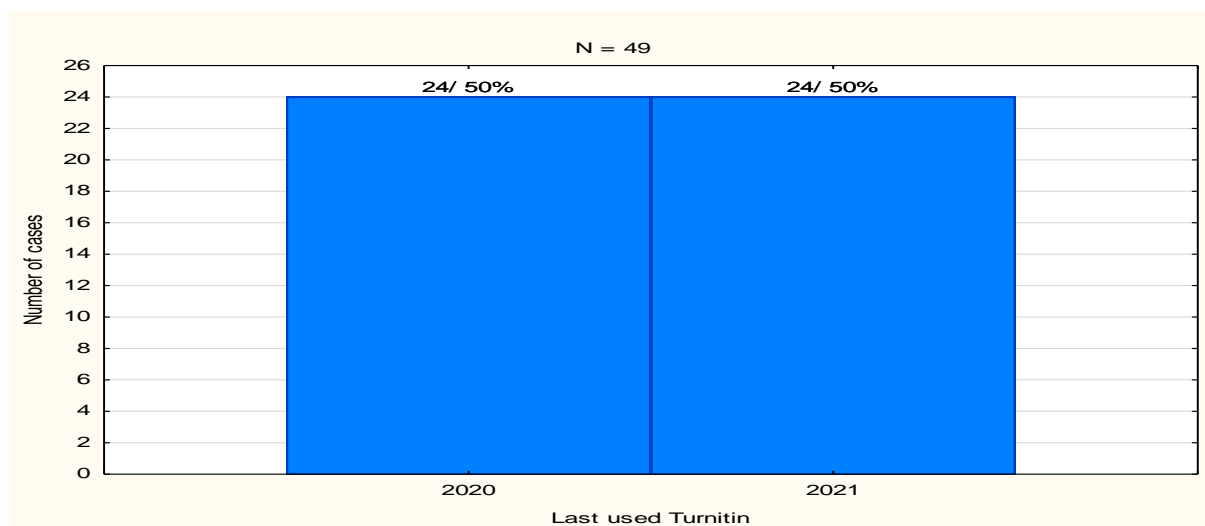
### 4.3 Use of Turnitin



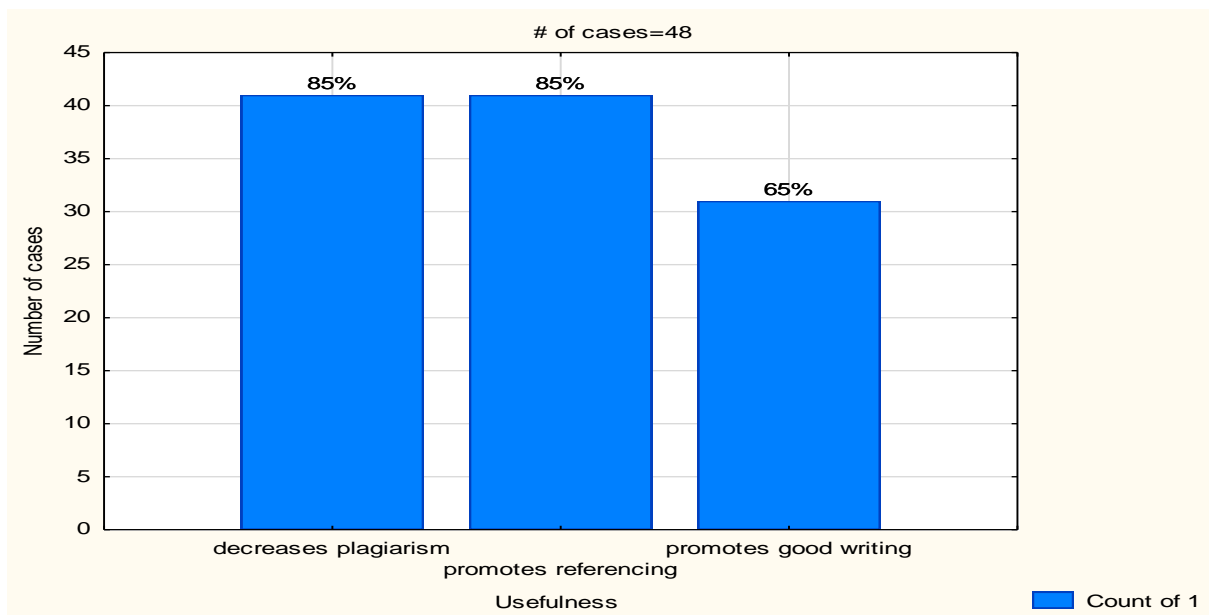
### 4.4 Start using Turnitin



### 4.5 Last used Turnitin

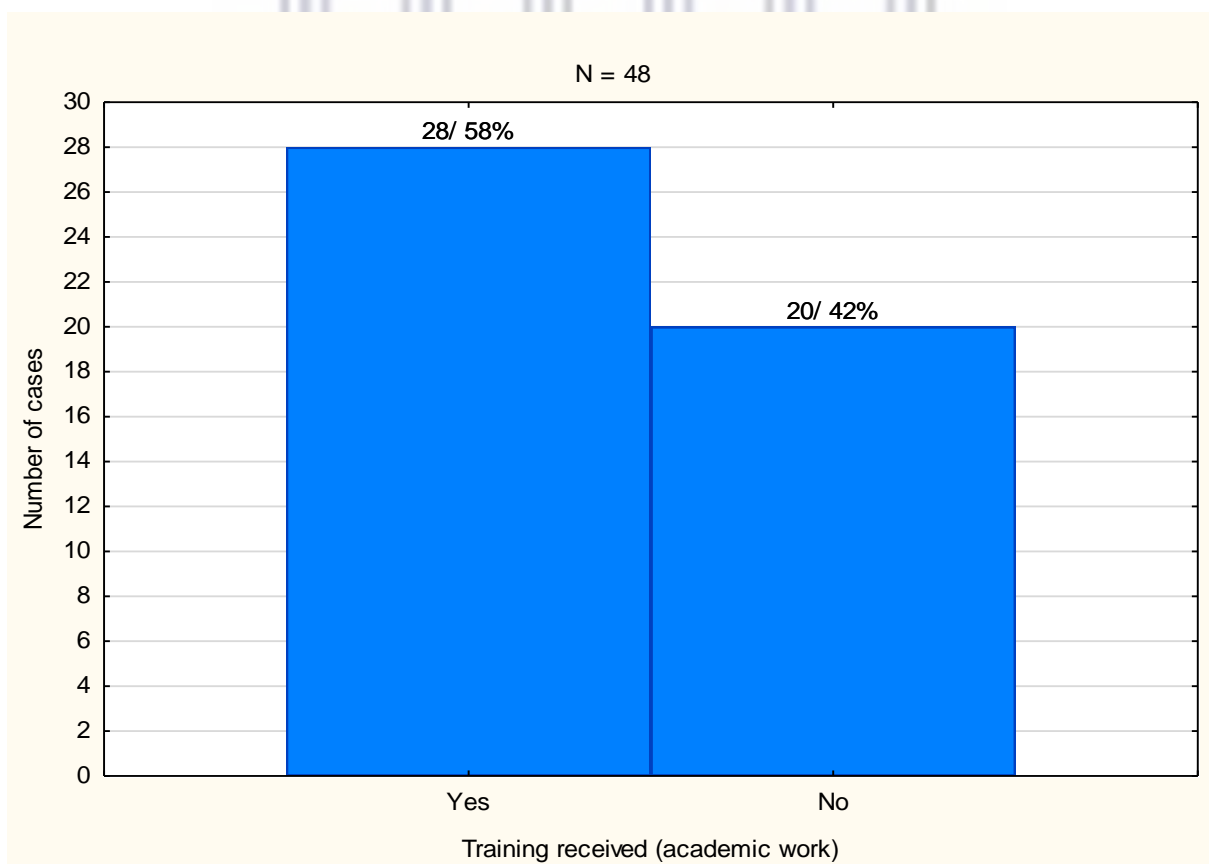


Question 5: What is the usefulness of anti-plagiarism software for your academic work

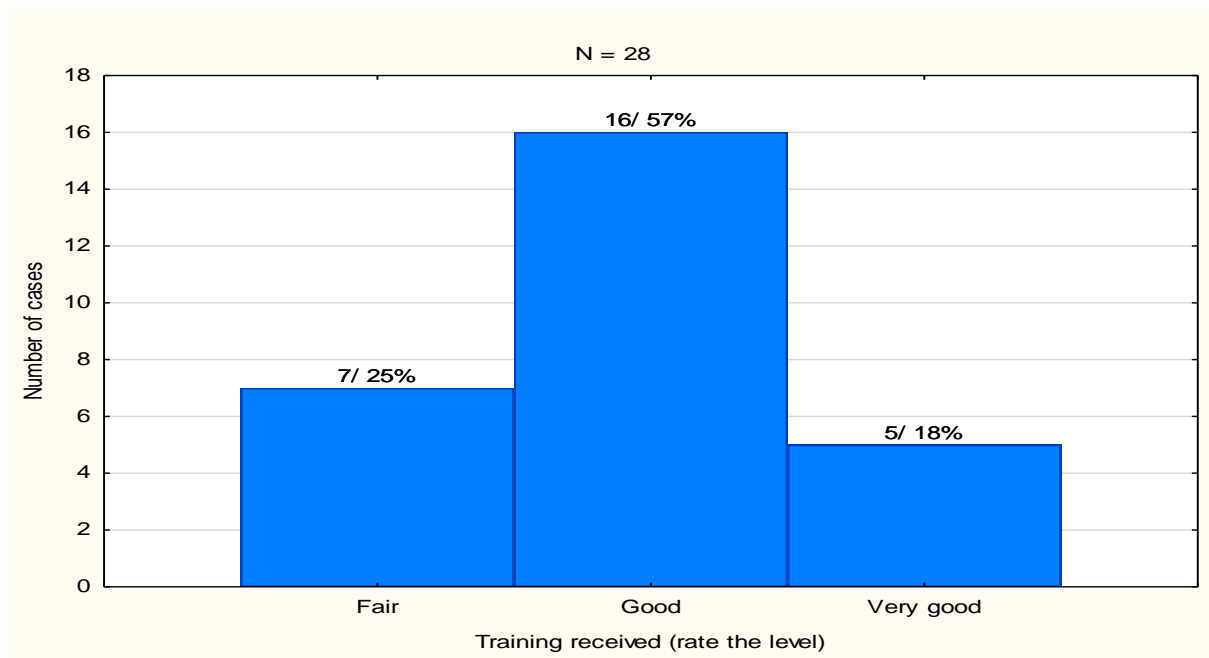


Question 6: Training received

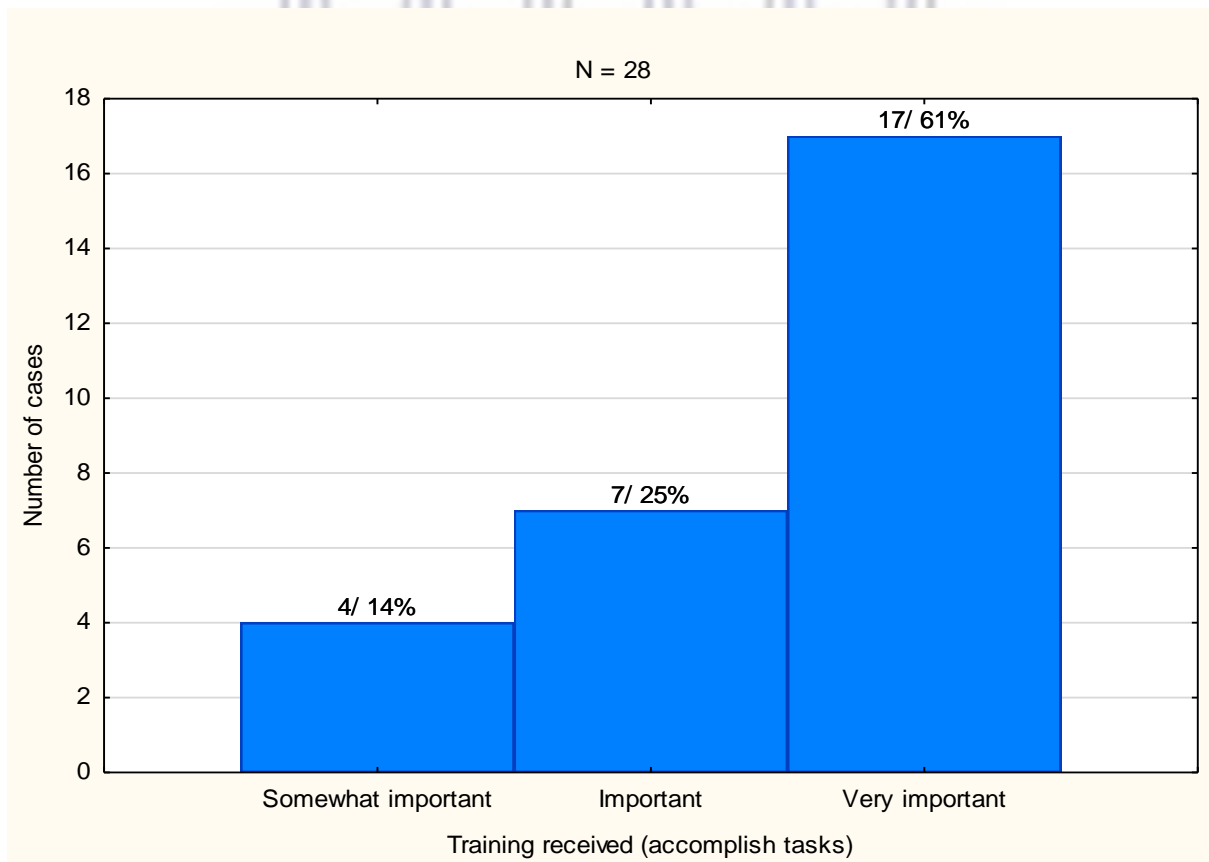
6.1 Did you receive training in the use of Turnitin for your academic work?



6.2 Training received (rate the level)

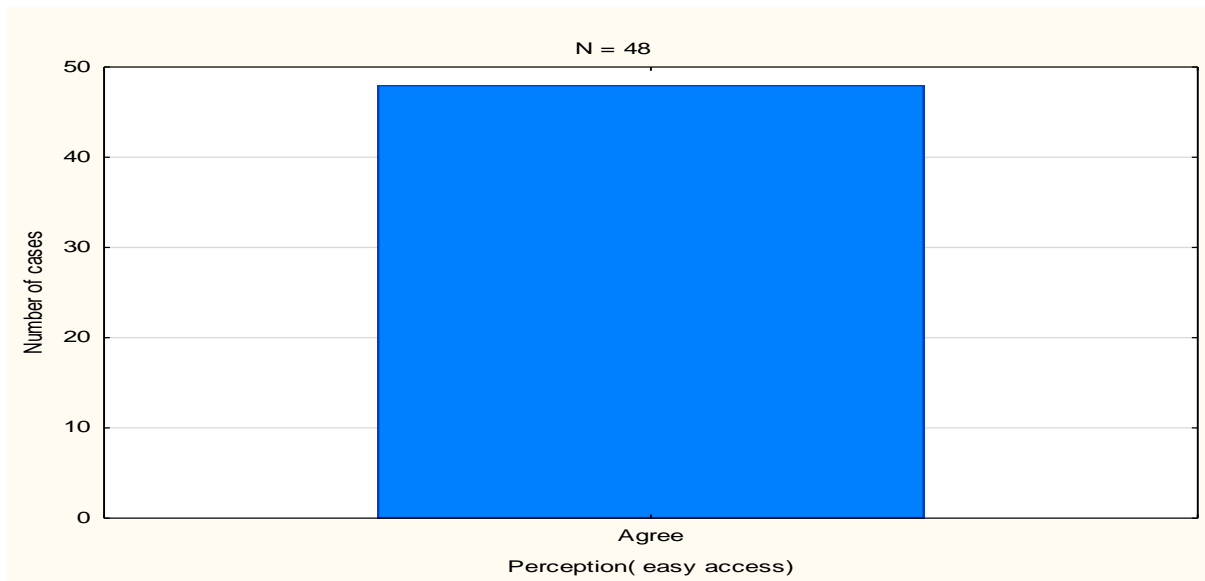


### 6.3 Training received (accomplish tasks)

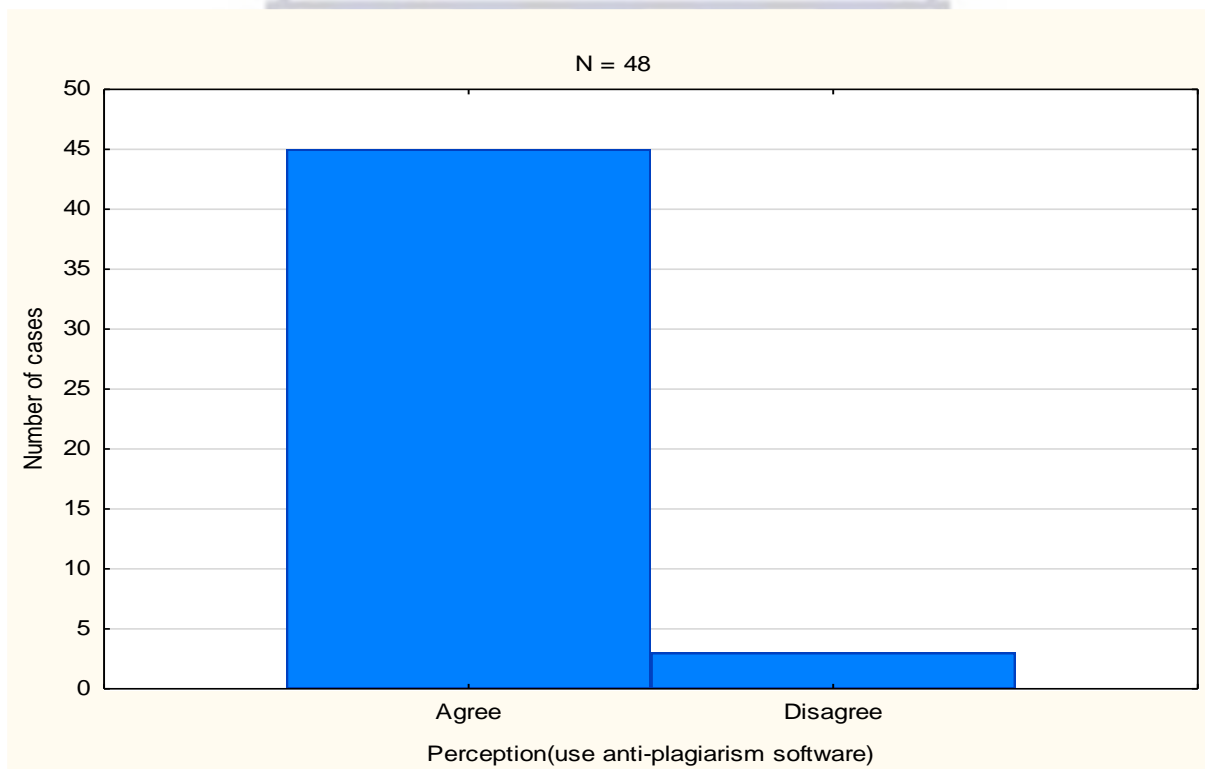


Question 7: Second year masters students' perceptions of Turnitin in regards with facilitating their academics accomplishment

## 7.1 Easy access

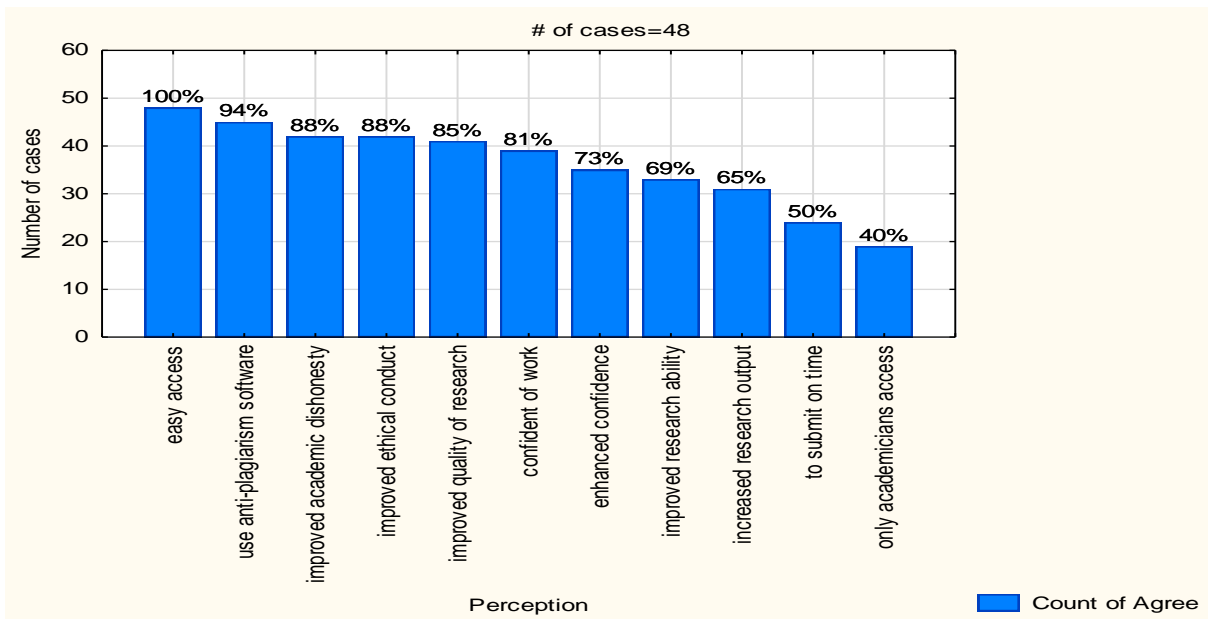


## 7.2 Perception (use anti-plagiarism)



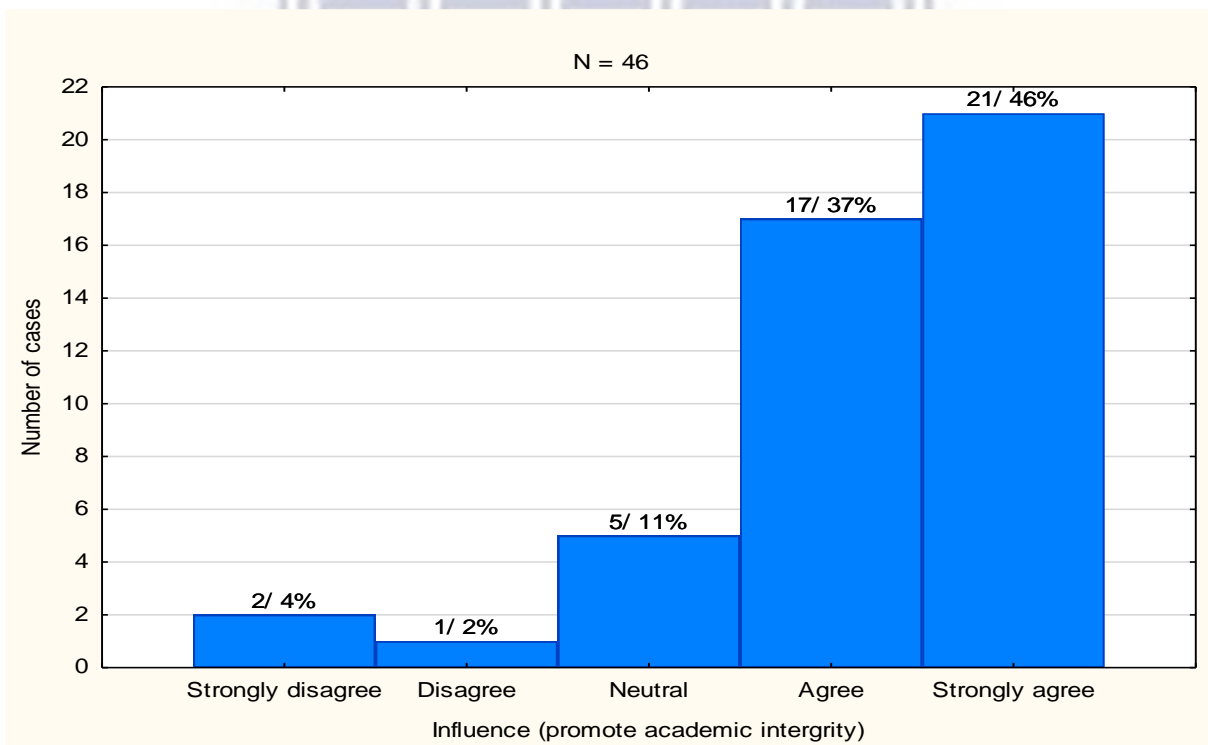
Question 8: Student's perception of Turnitin

Mark with [X] indicating either agree or disagree



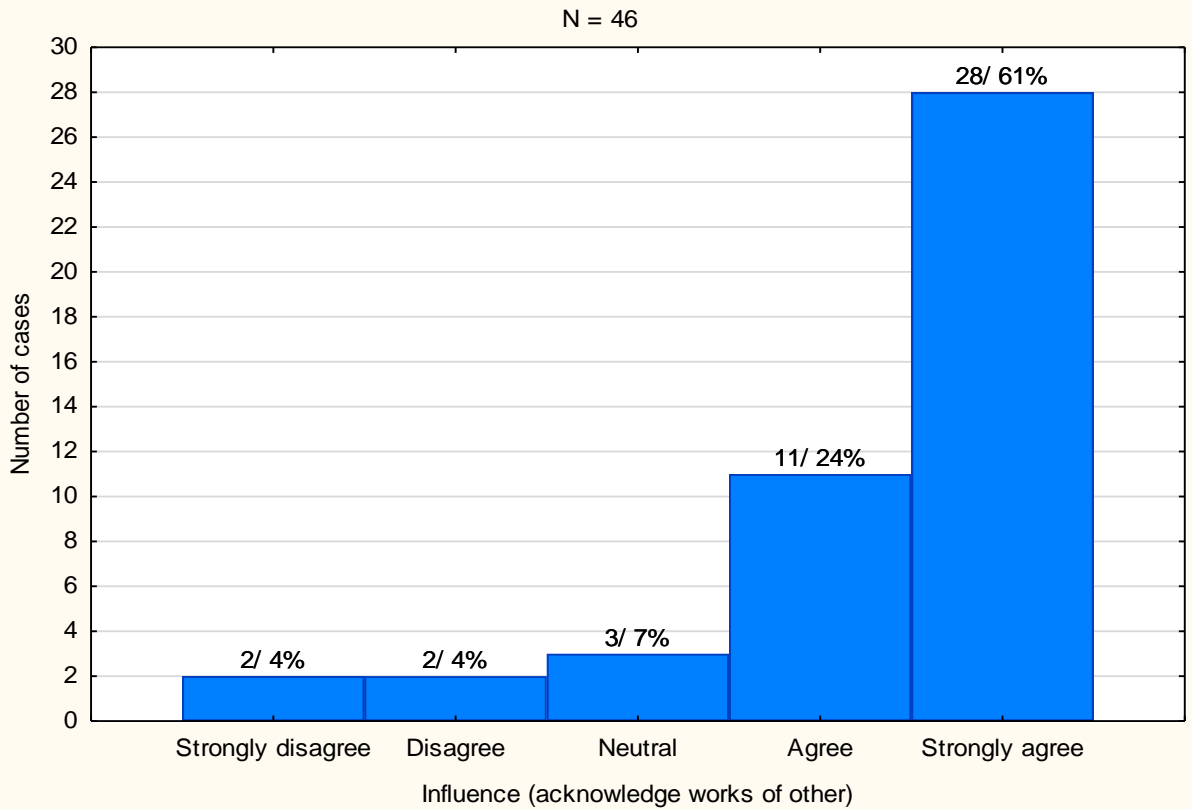
Question 9: How the use of Turnitin influence your studies? Mark an answer with an [X]

### 9.1 Promote academic integrity

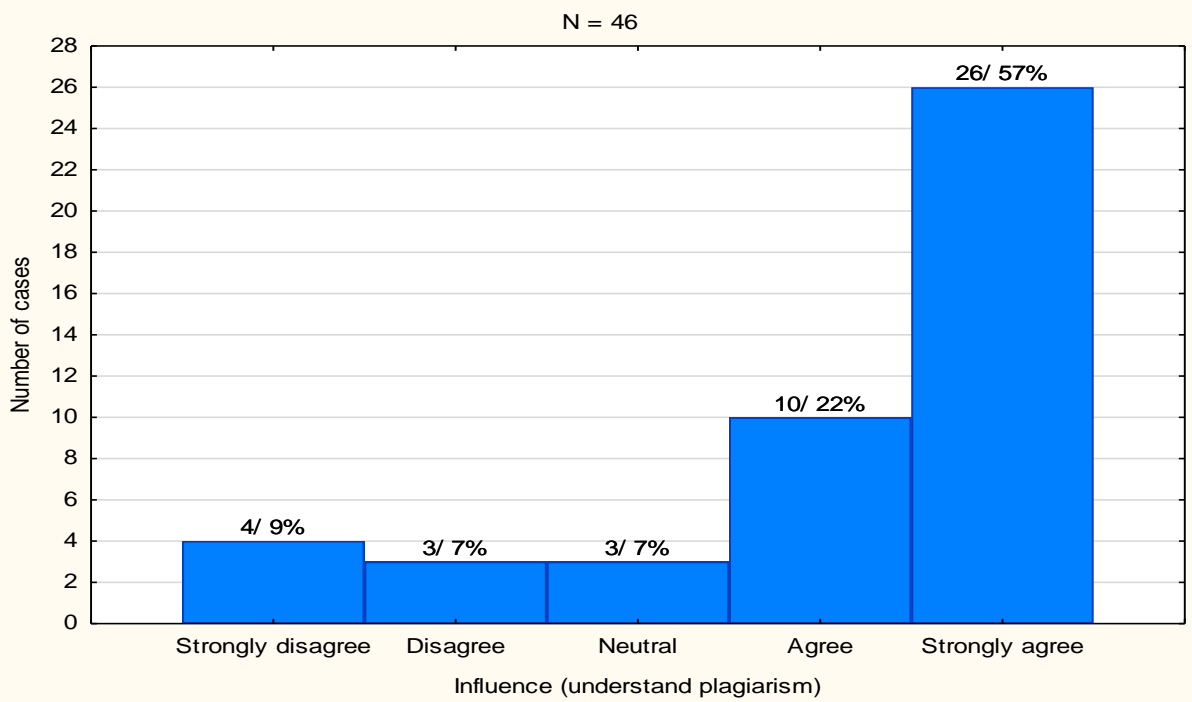


### 9.2 Acknowledge works of others

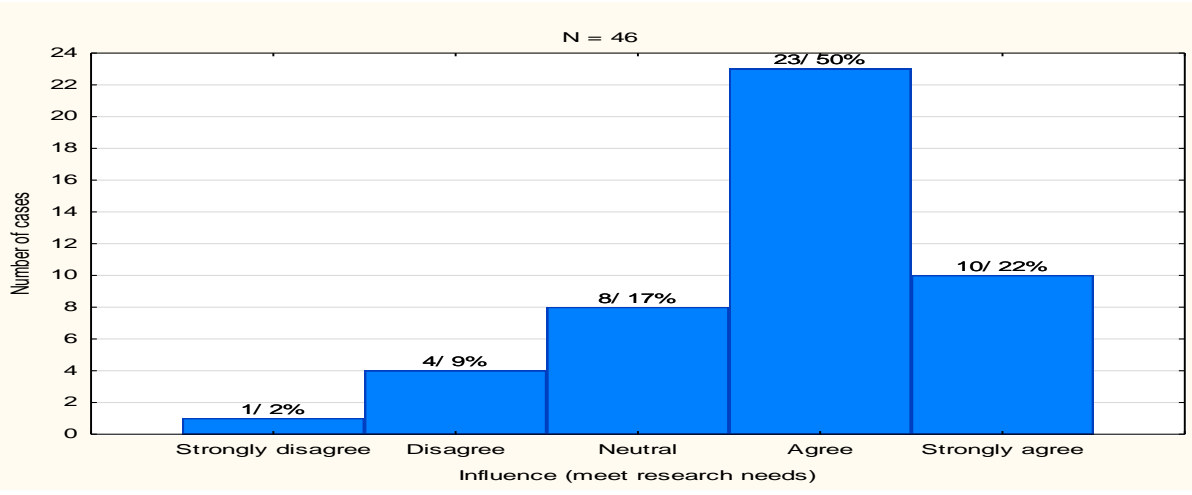




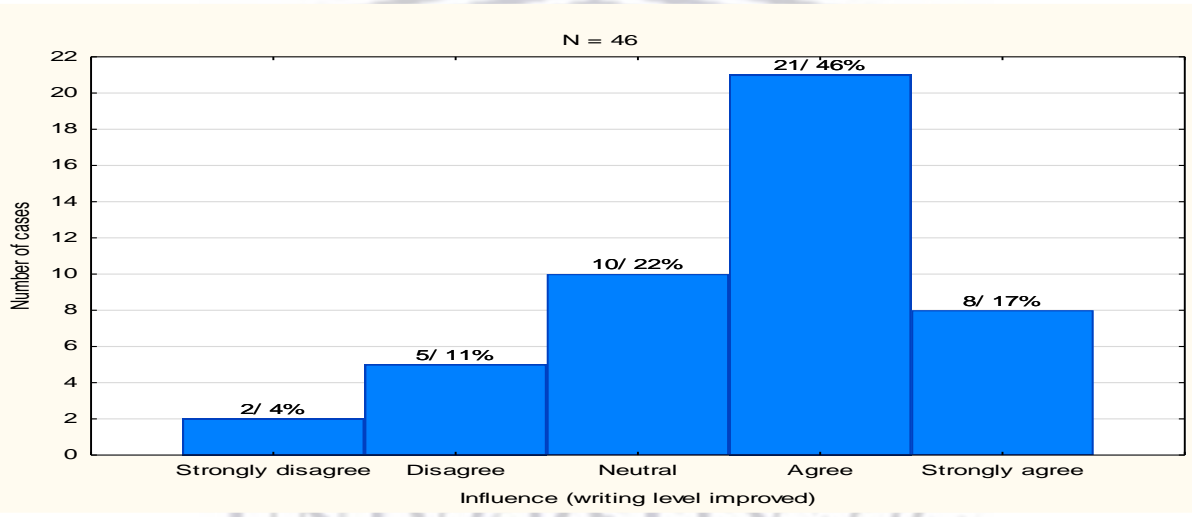
### 9.3 Understand plagiarism



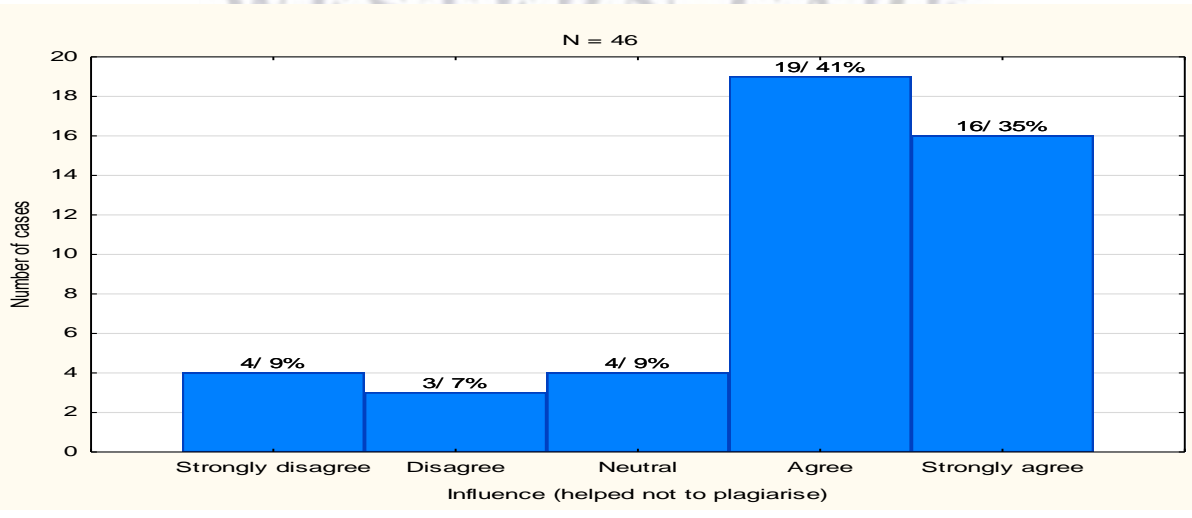
### 9.4 Meet research needs



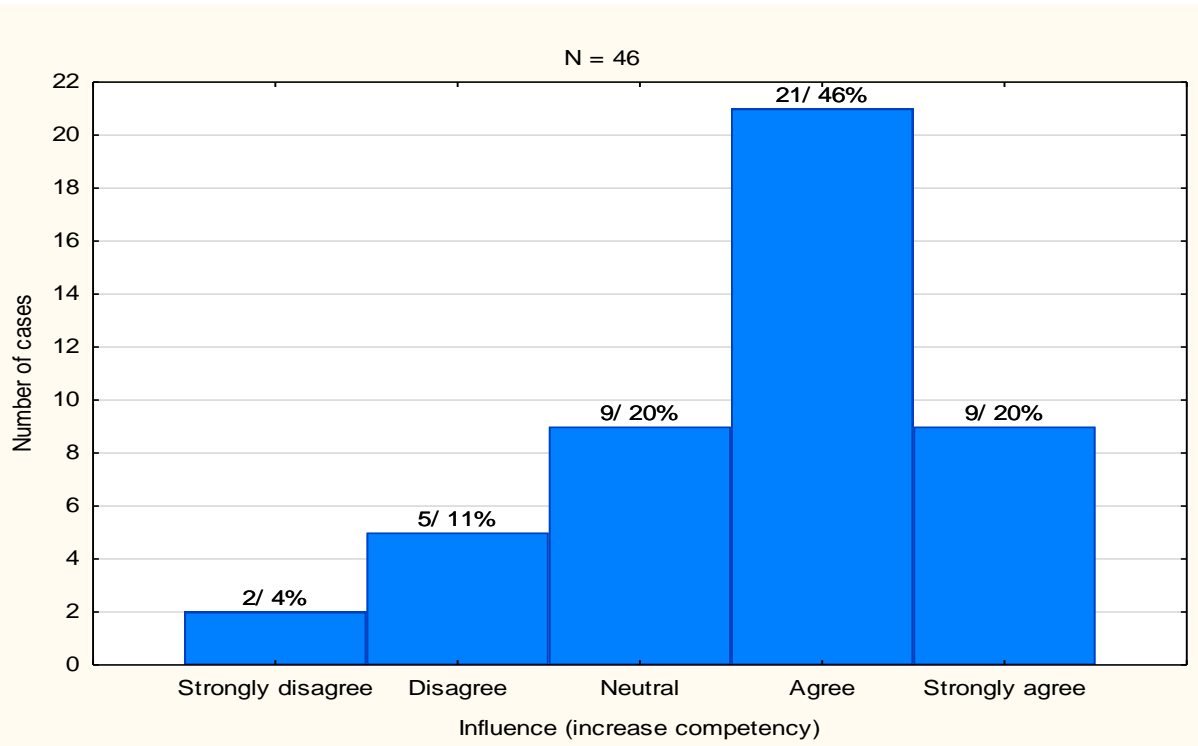
9.5 Writing level improved



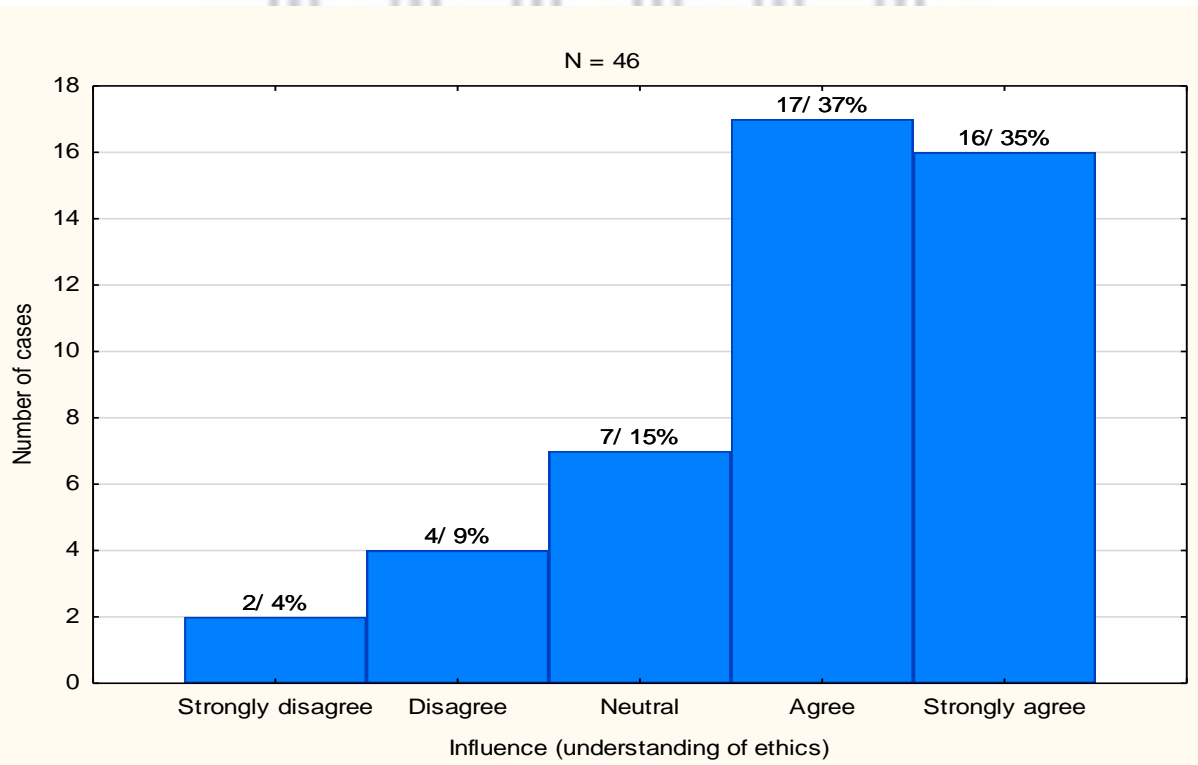
9.6 Helped not to plagiarise



9.7 Increase competency

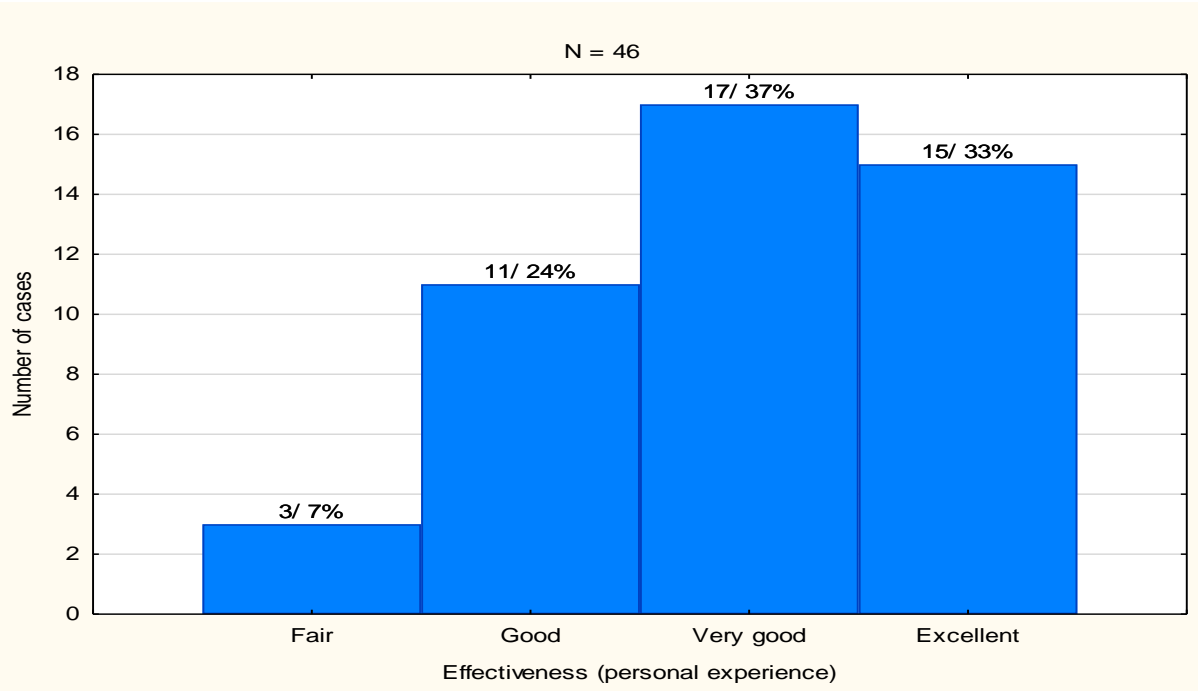


## 9.8 Understanding of ethics

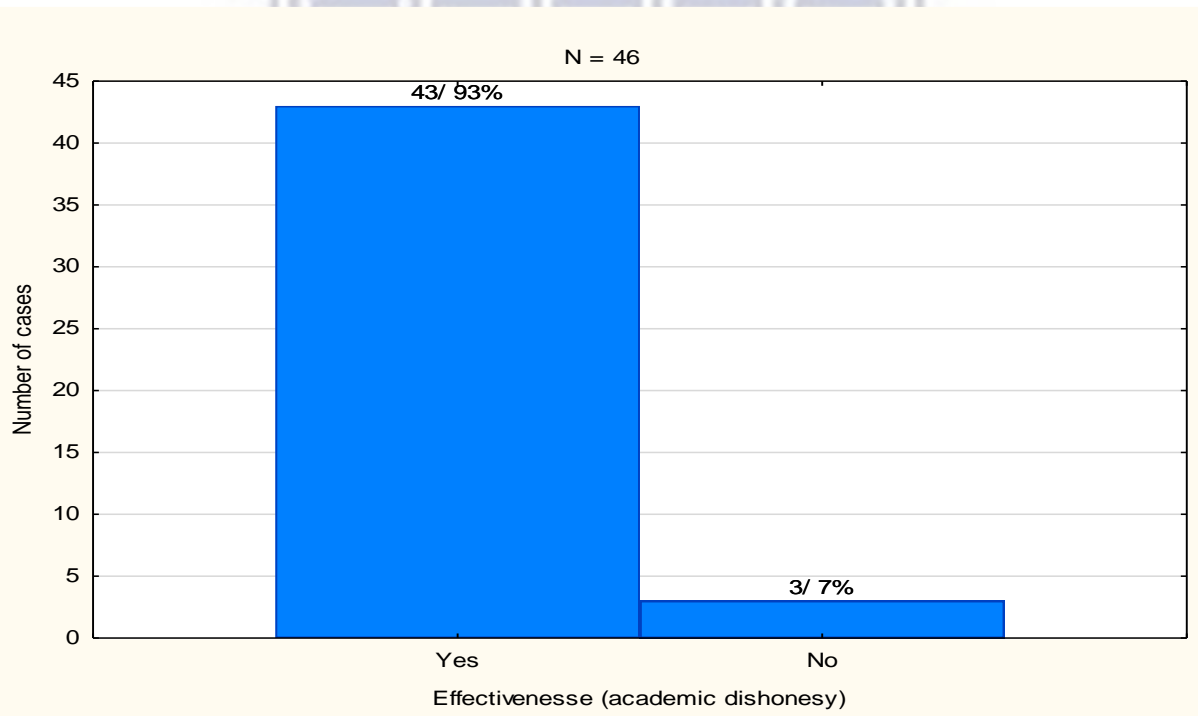


Question 10: Students views on the effectiveness of Turnitin intervention on their academic career

### 10.1 Effectiveness (personal experience)

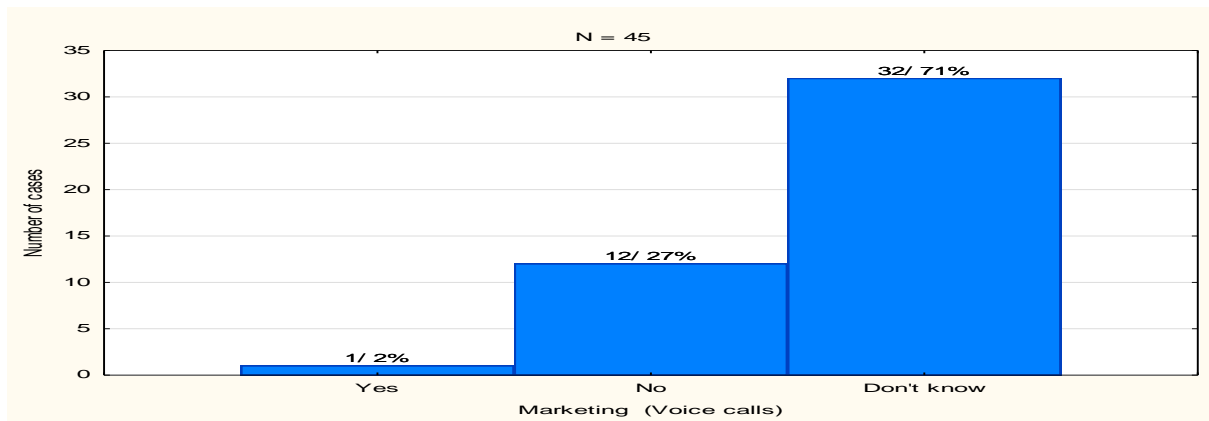


### 10.2 Effectiveness (academic dishonesty)

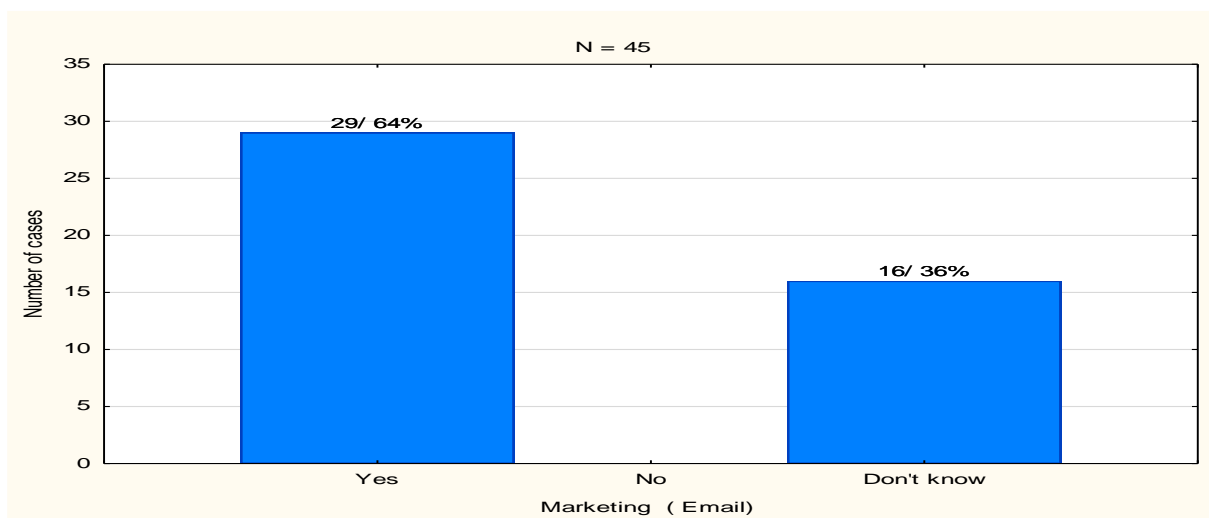


Question 11: SUN: Marketing, promotion, and communication in relations to creation of awareness of Turnitin

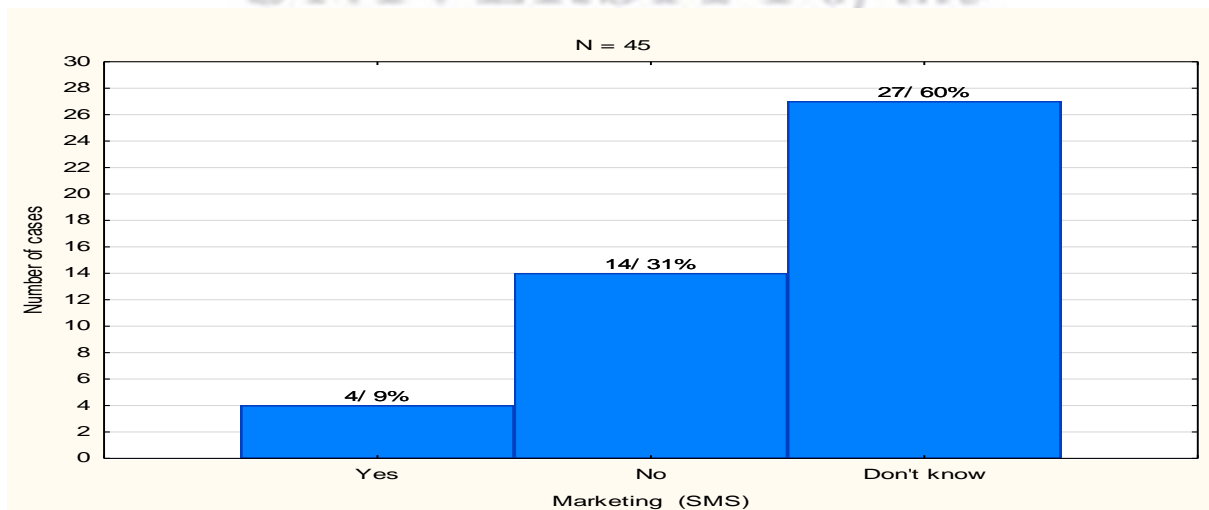
### 11.1 Marketing (Voice calls)



### 11.2 Marketing (E-mail)

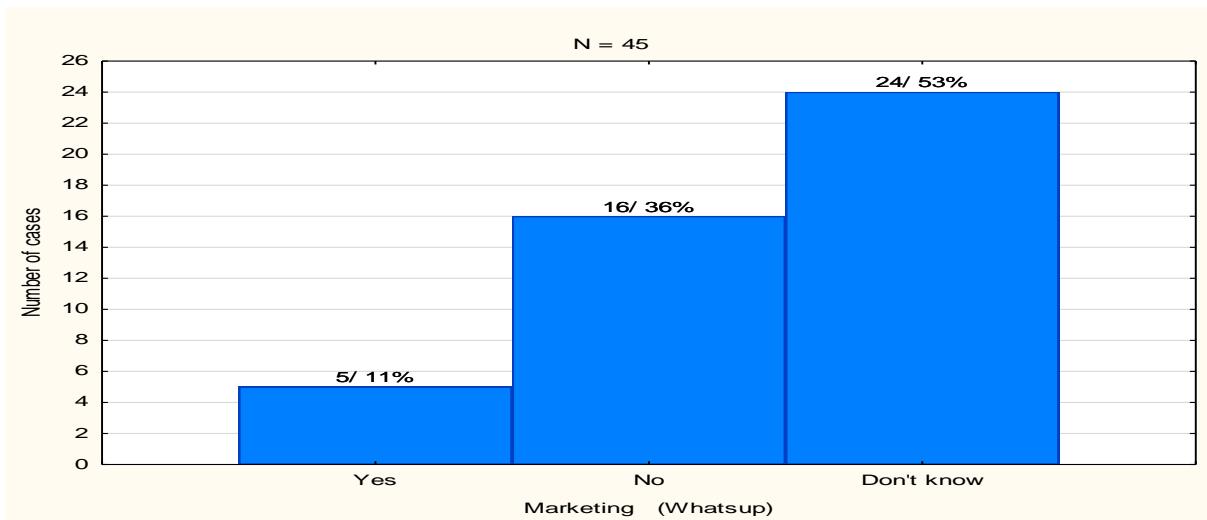


### 11.3 Marketing (SMS)

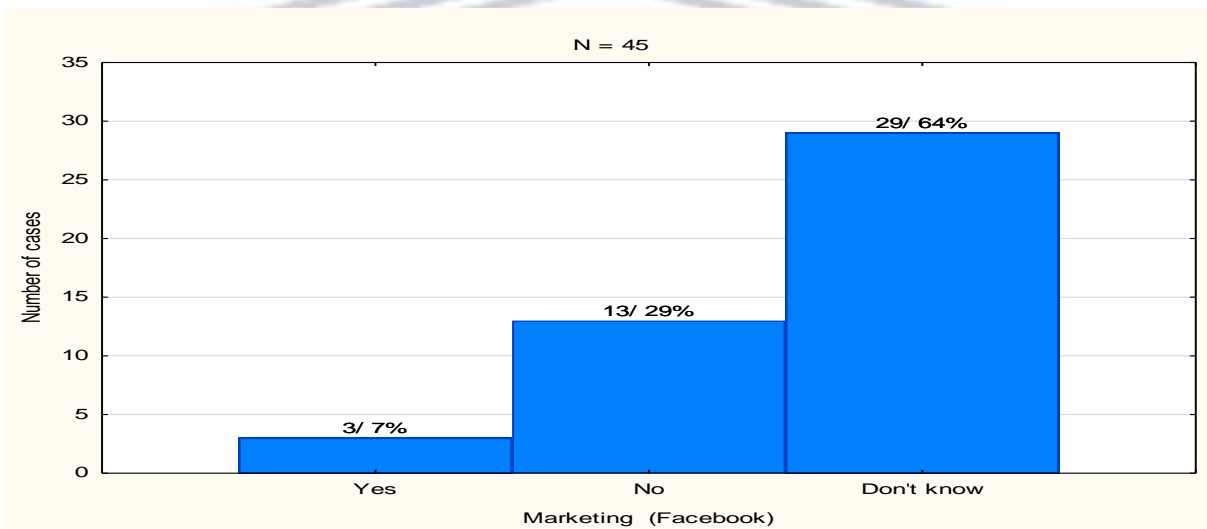


### 11.4 Marketing (WhatsApp)

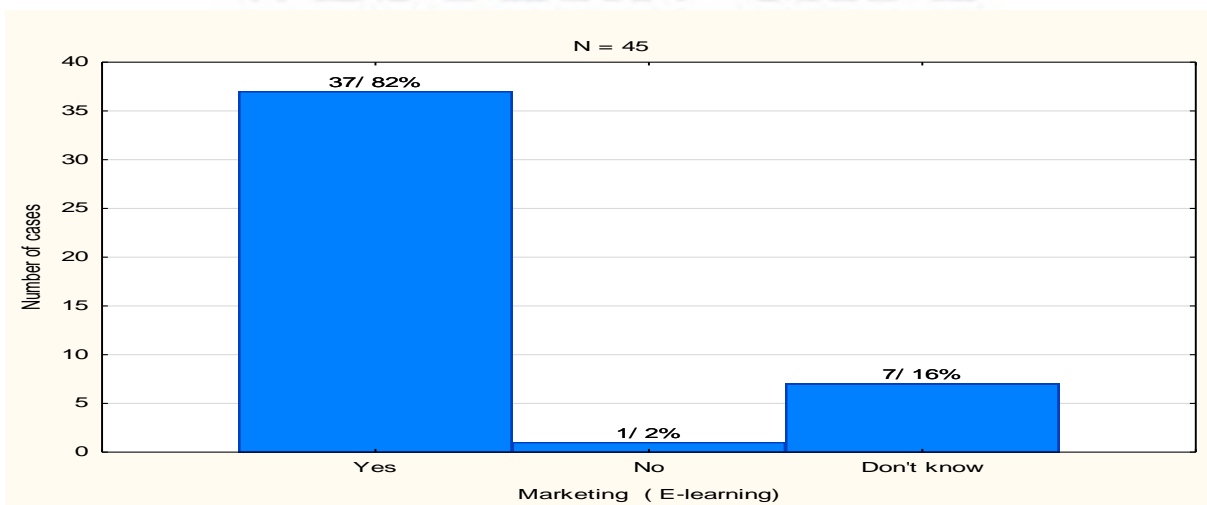




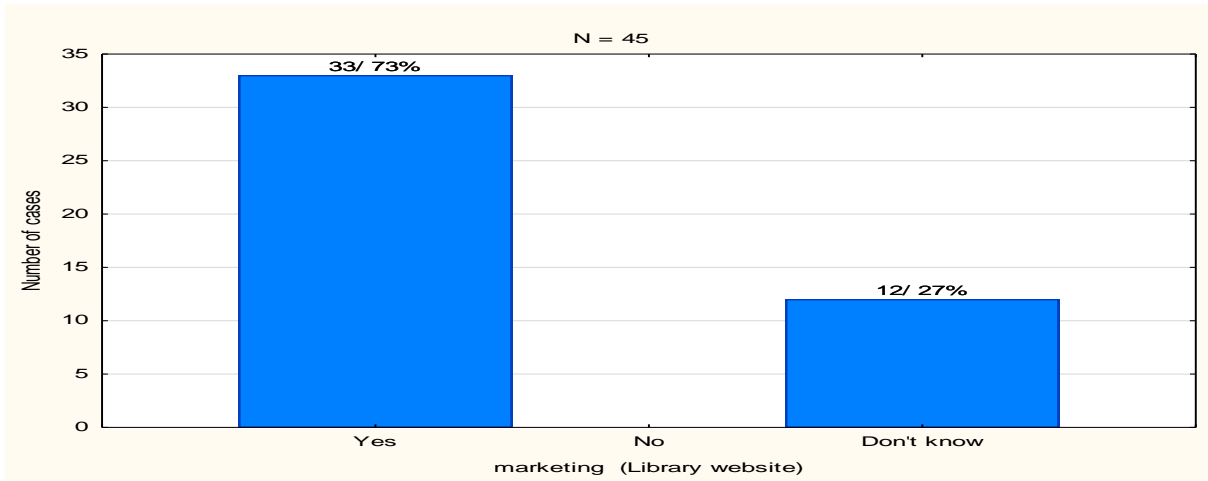
### 11.5 Marketing (Facebook)



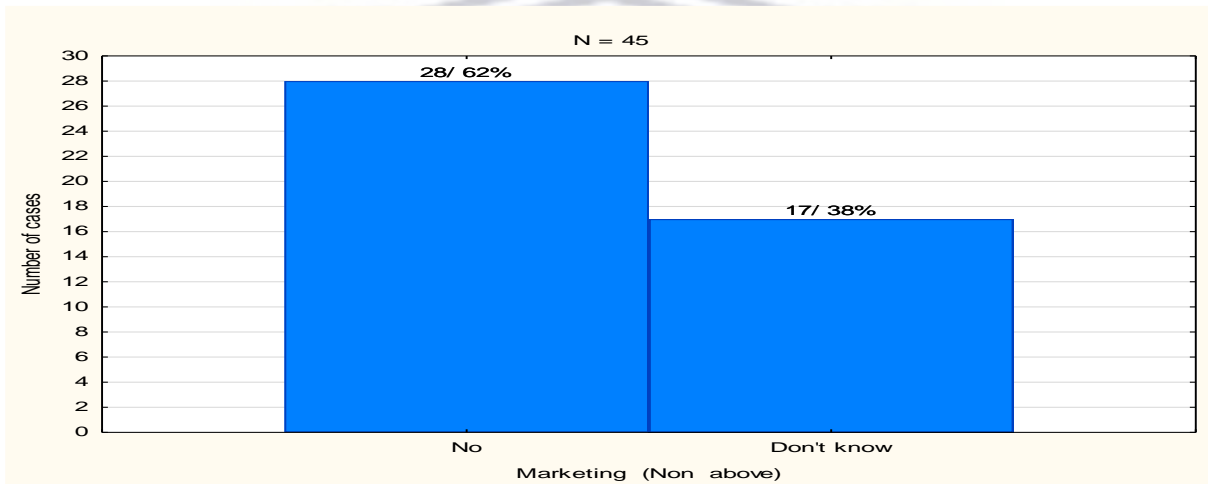
### 11.6 Marketing (E-learning platform)



### 11.7 Marketing (Library website)

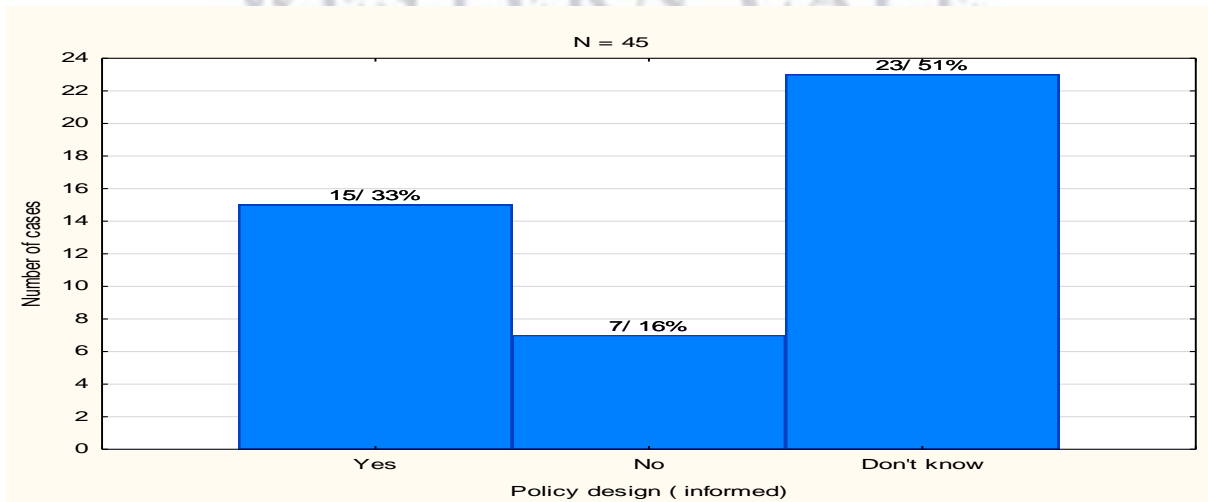


11.8 Marketing (None of the above)

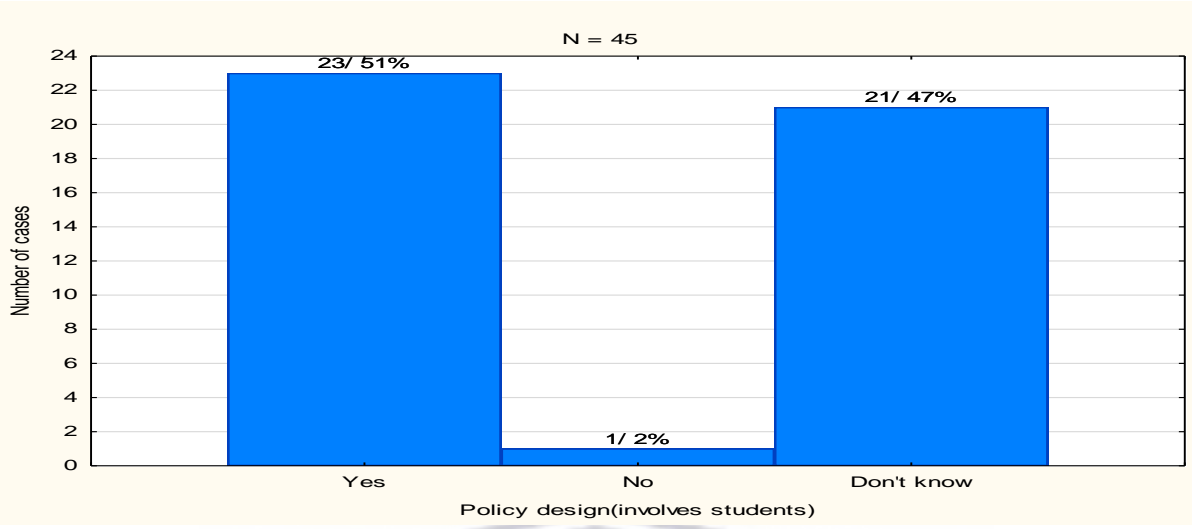


Question 12: The university policy design and implementation

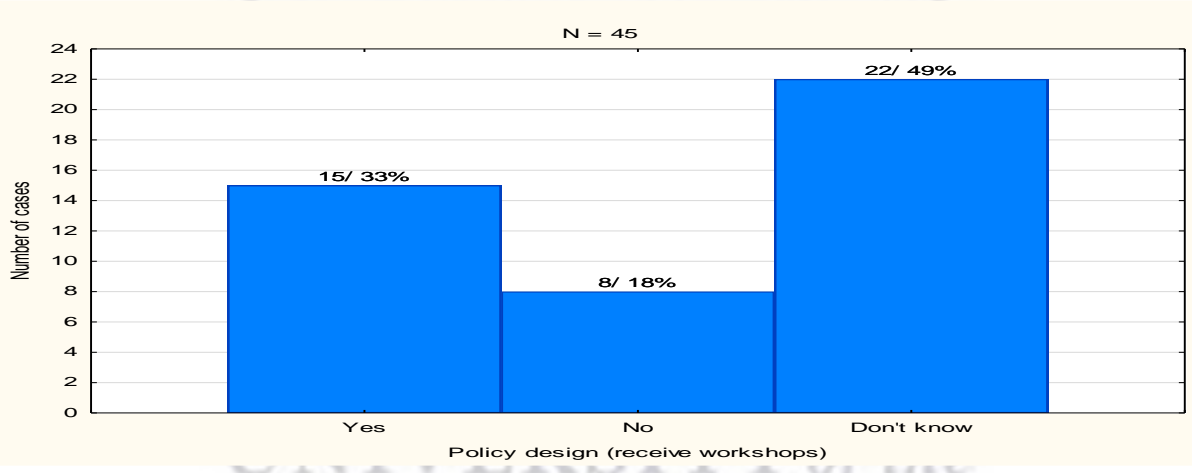
12.1 Policy design (informed)



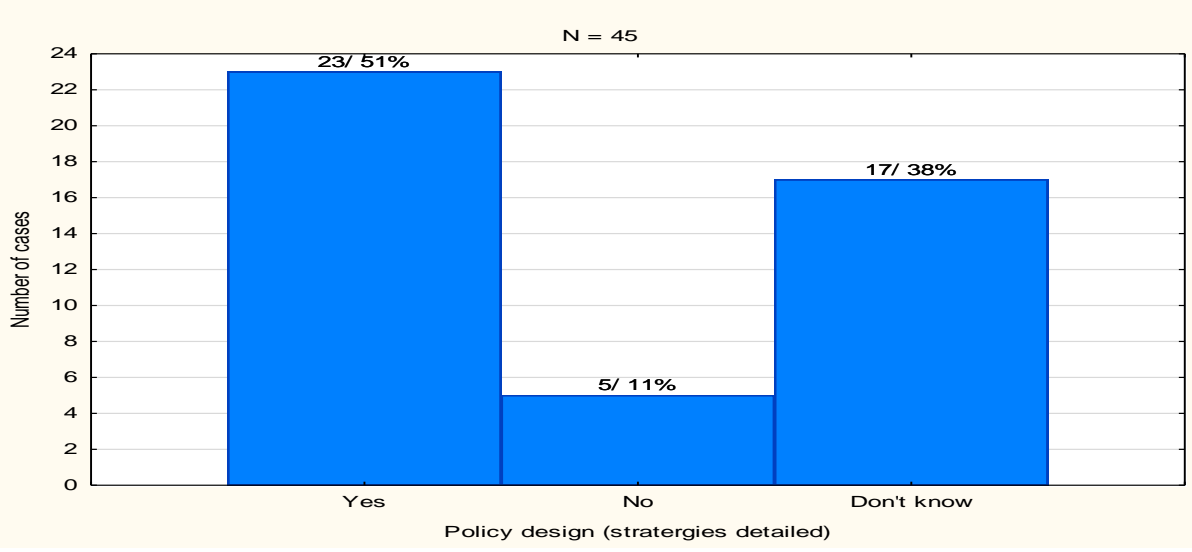
Policy design (involves students)



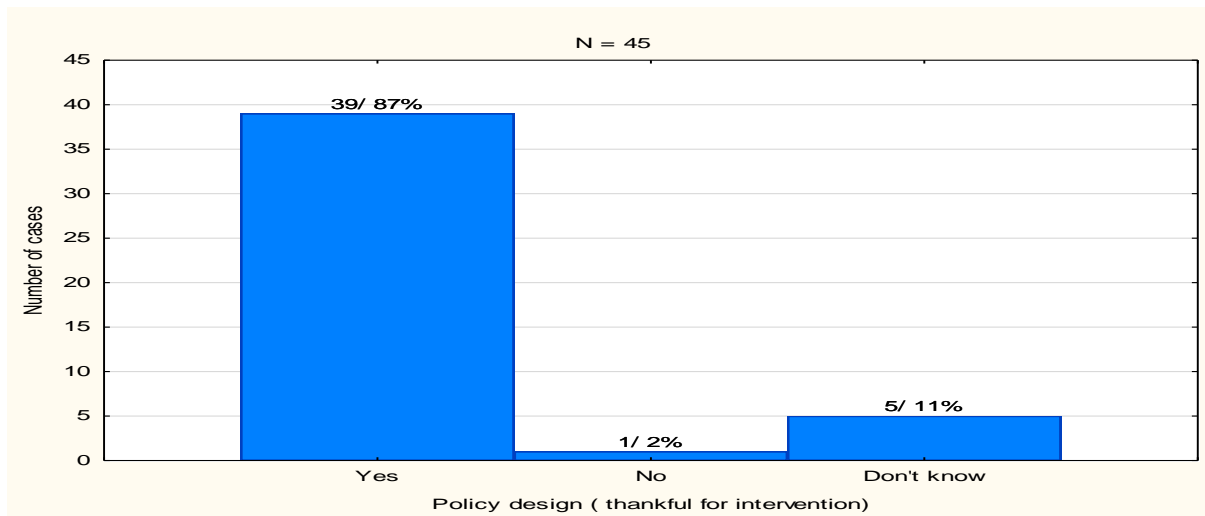
12.2 Policy design (receive workshops)



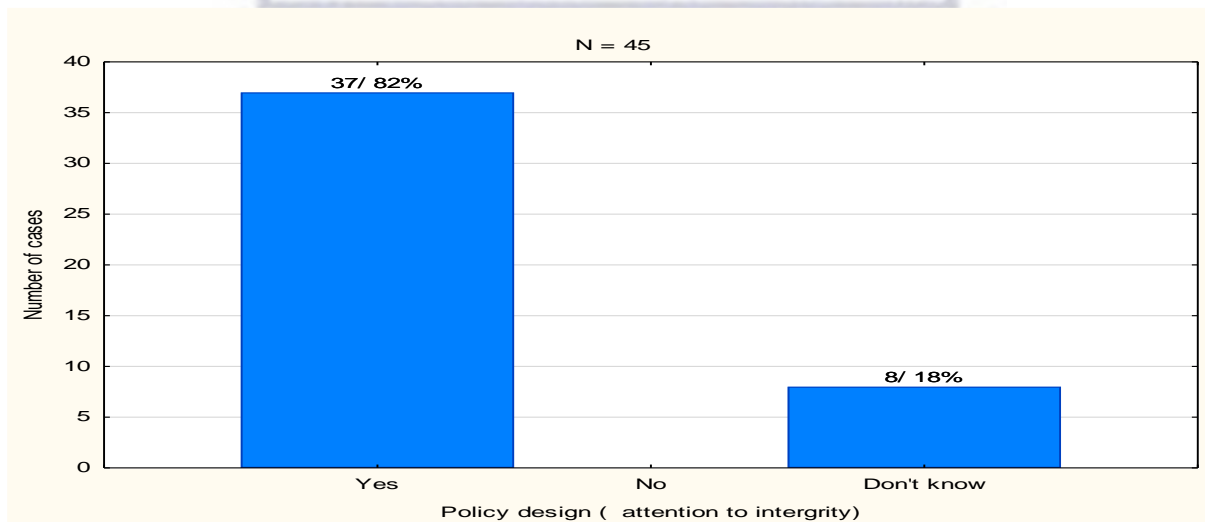
12.3 Policy design (strategies detailed)



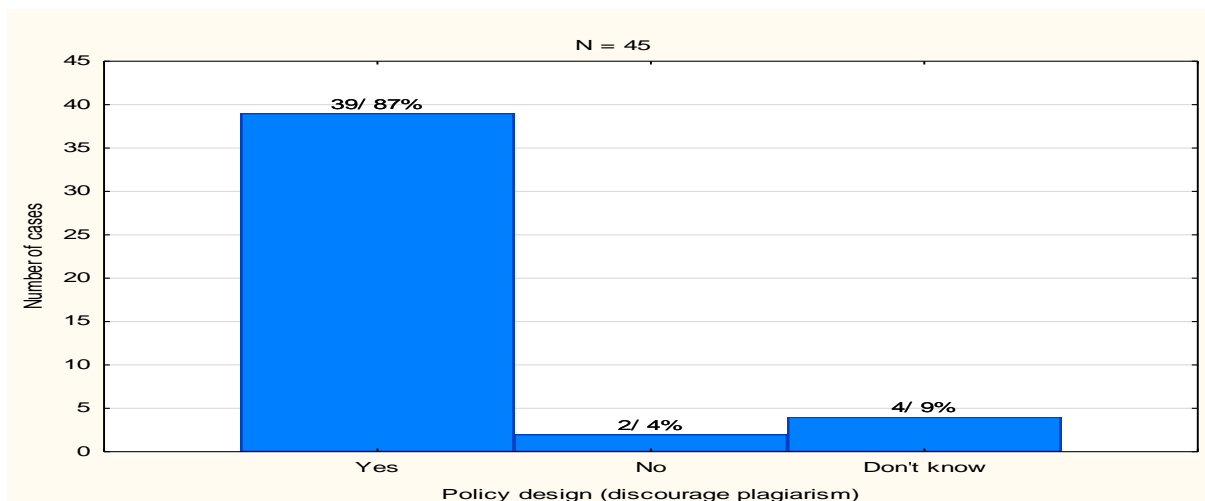
Policy design (thankful for intervention)



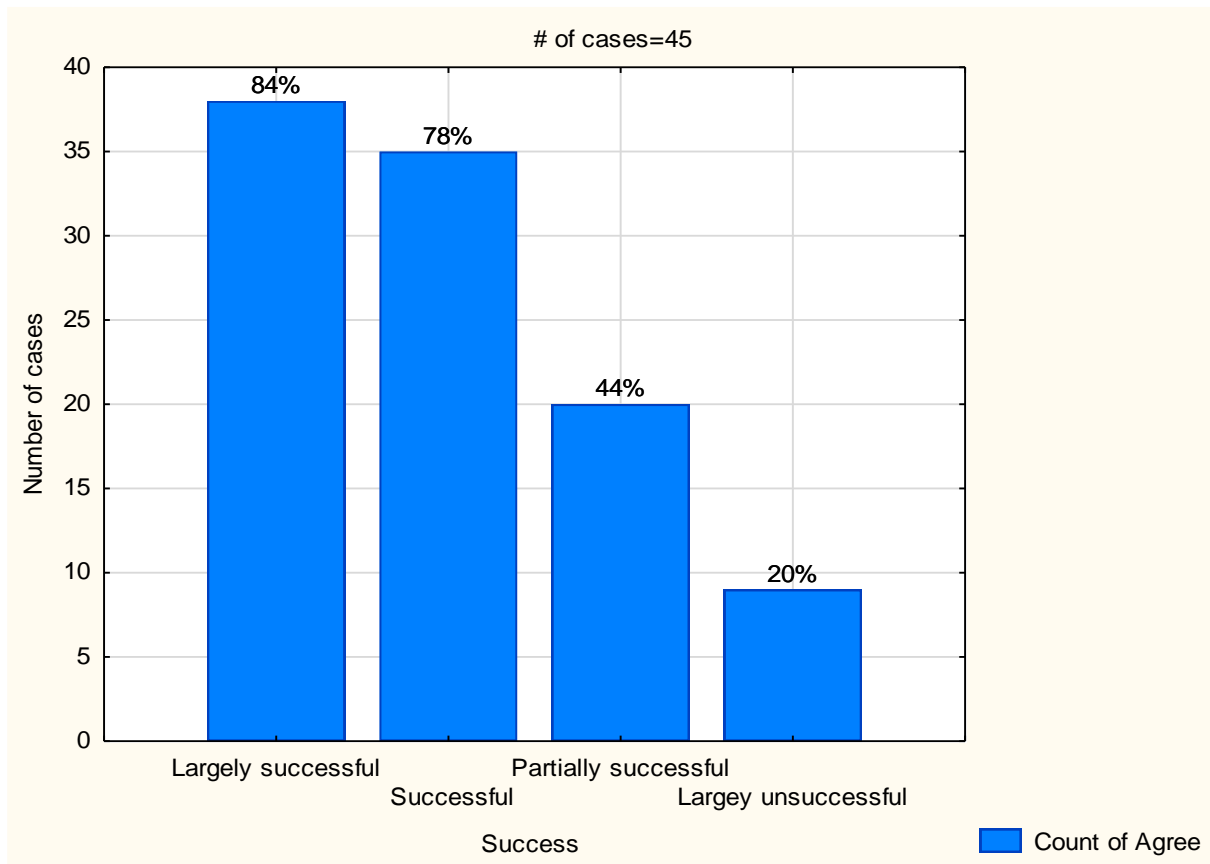
12.4 Policy design (attention to integrity)



12.7 Policy design (discourage plagiarism)

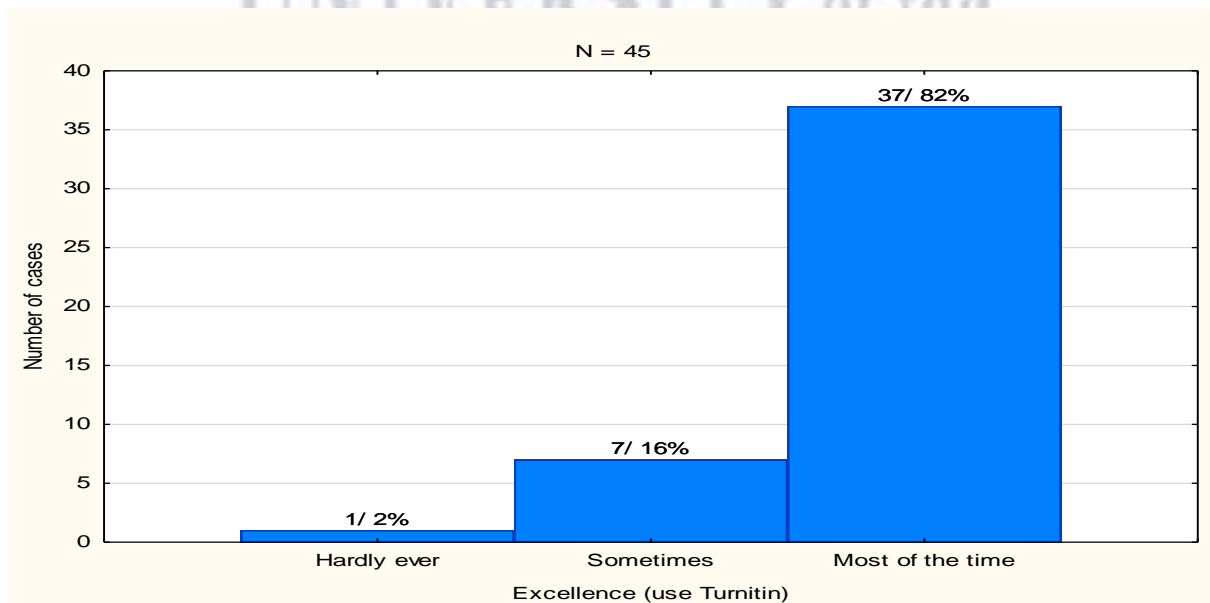


Question 13: Students' perceptions of the success of Turnitin



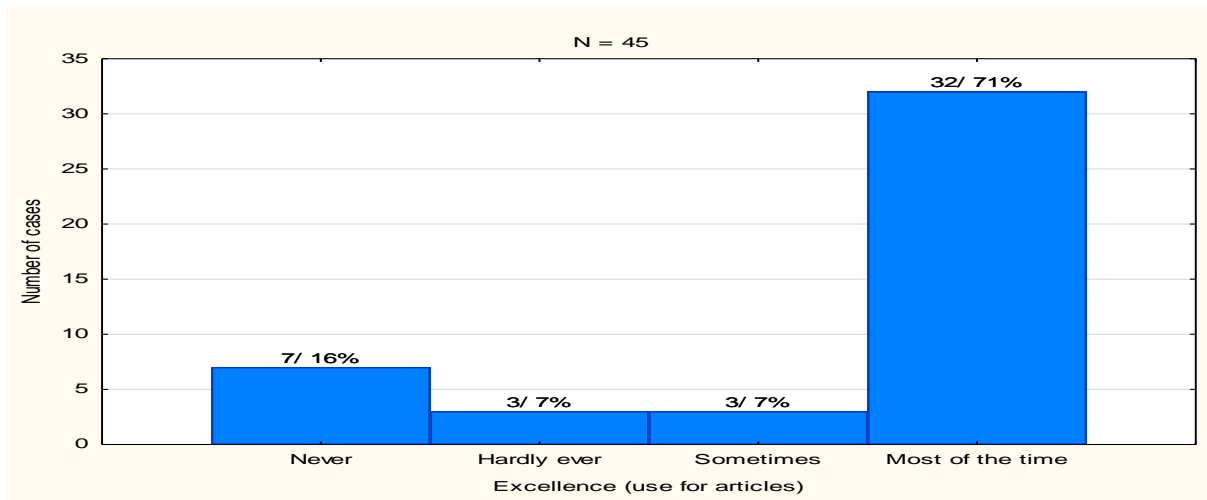
Question 14: The effect of Turnitin on academic excellence. Mark with an [X]

14.1 Excellence (use Turnitin)

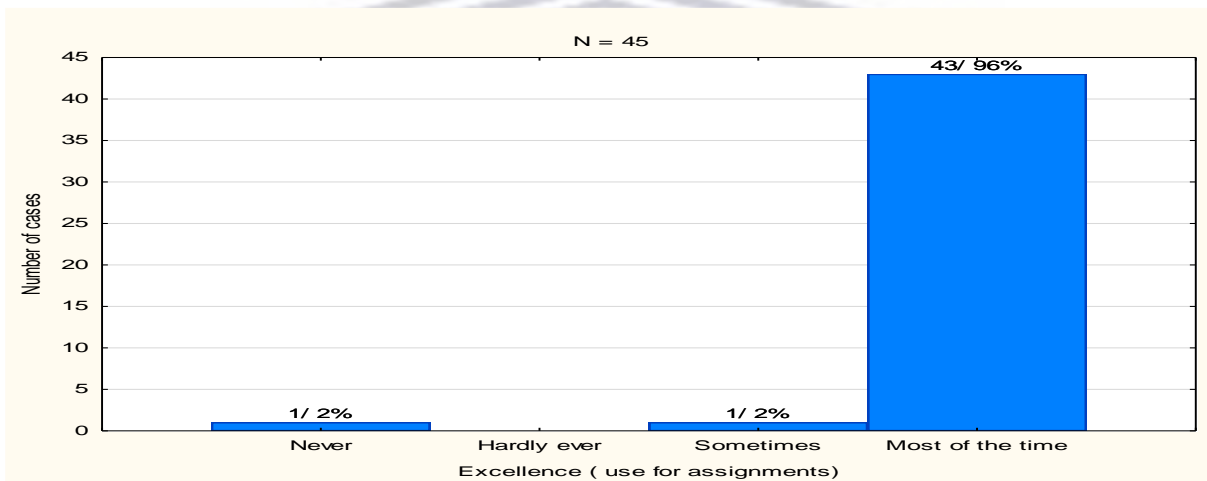


14.2 Excellence (use for articles)

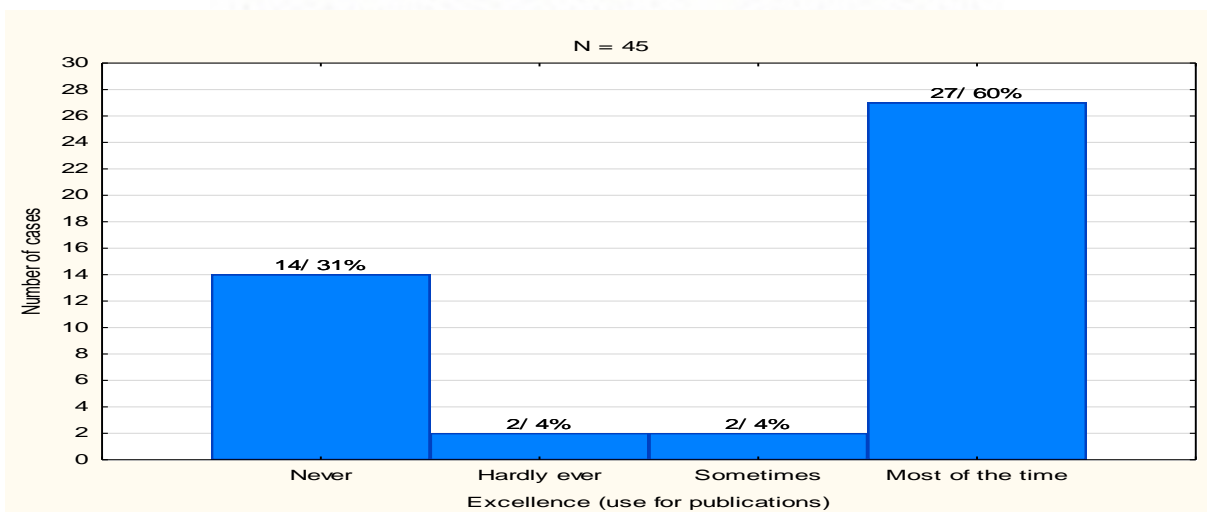




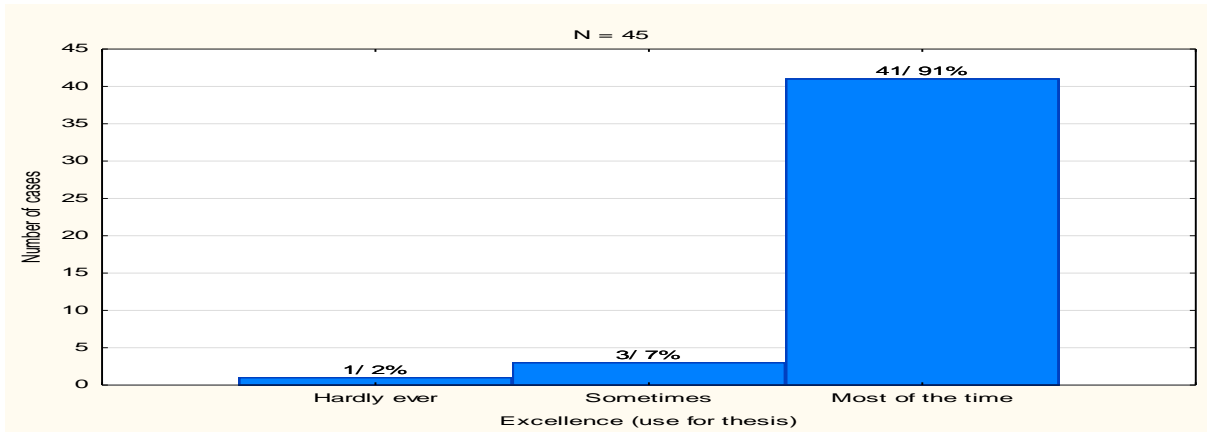
#### 14.3 Excellence (use for assignments)



#### 14.4 Excellence (use for publications)

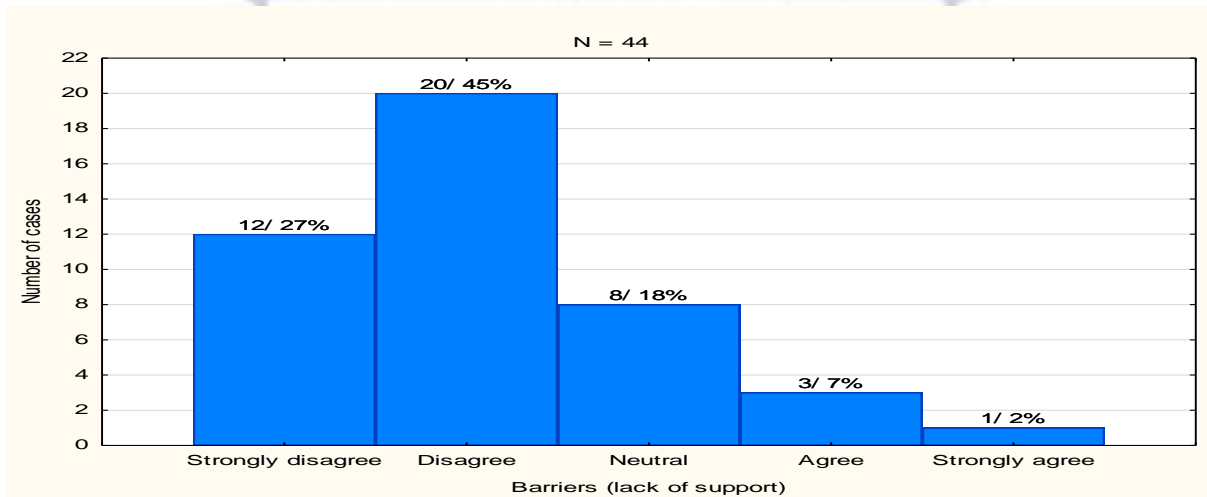


#### 14.5 Excellence (use for thesis)

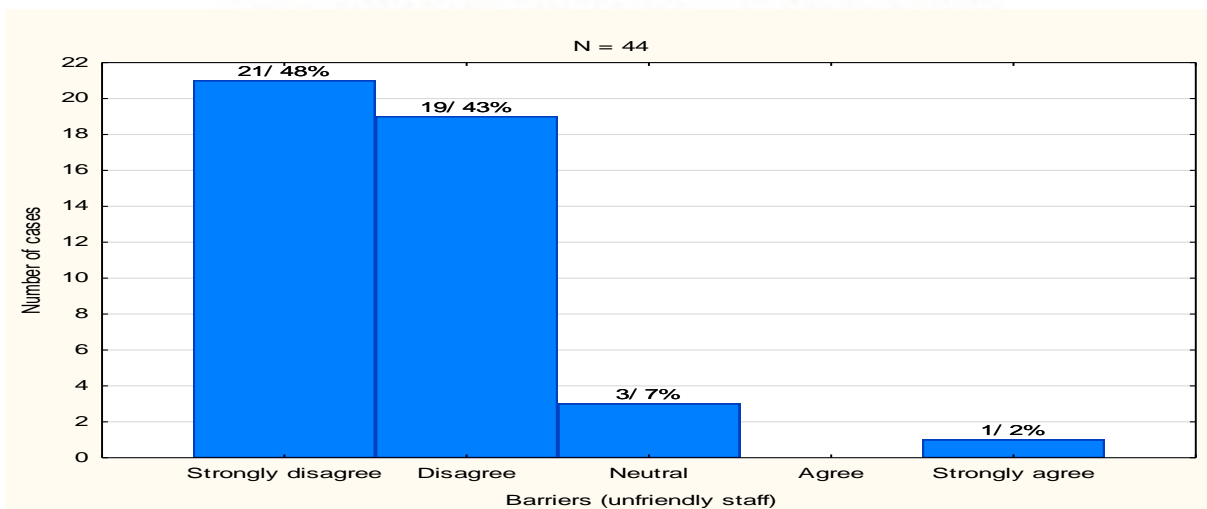


Question 15: What are the major barriers that you are facing every time you want to make use of Turnitin?

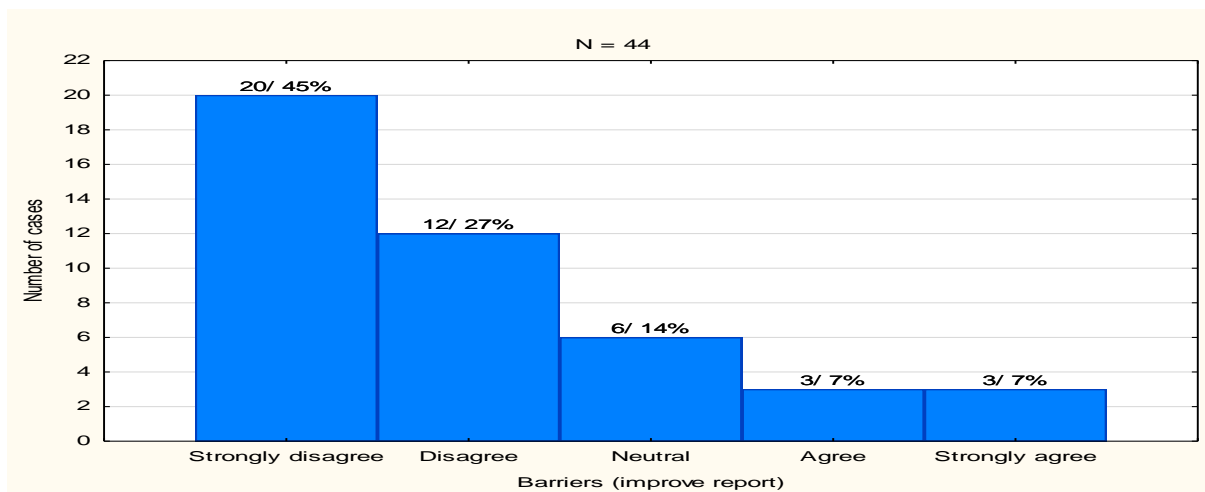
15.1 Barriers (lack of support)



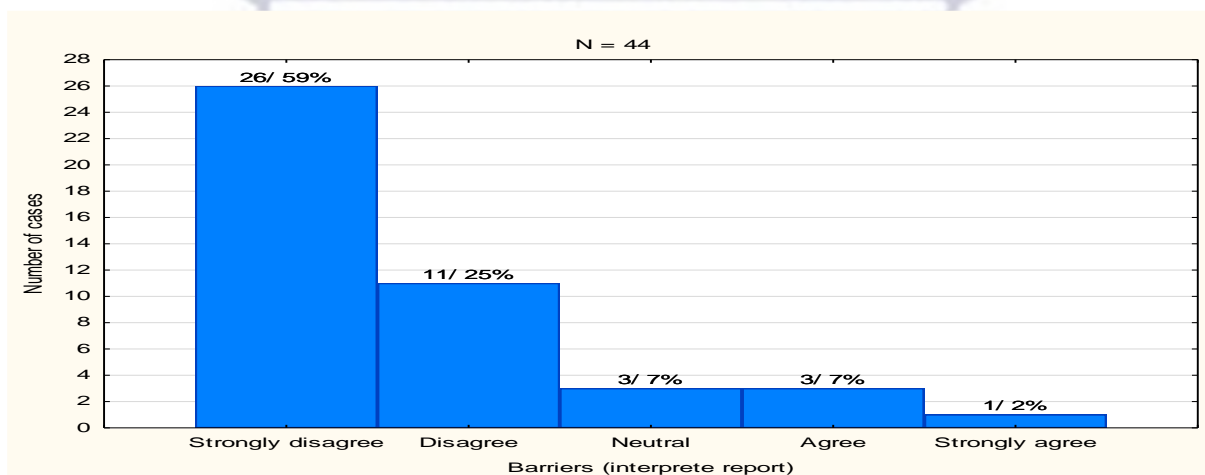
15.2 Barriers (unfriendly staff)



### 15.3 Barriers (improve report)

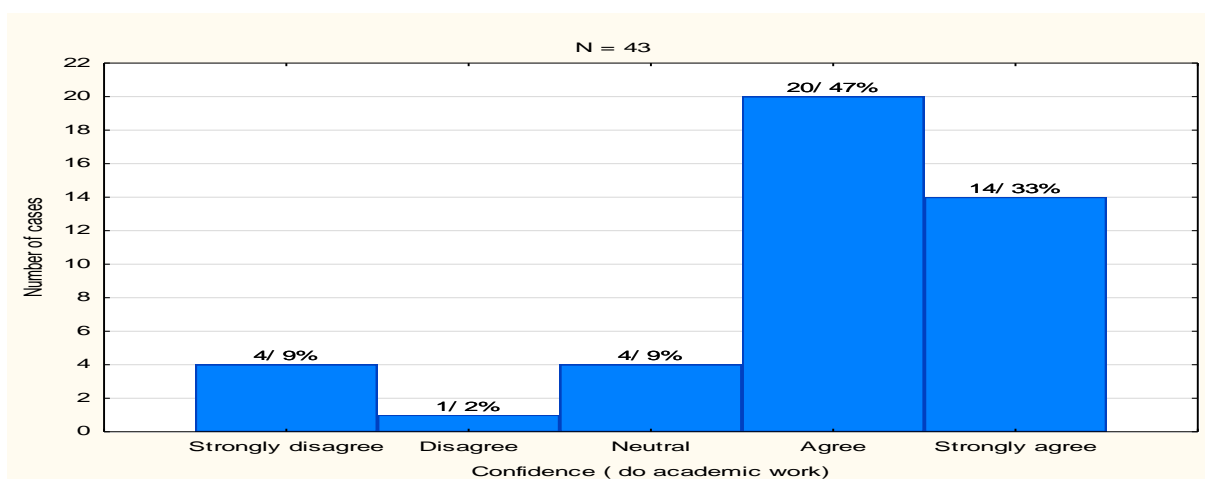


### 15.4 Barriers (interpret report)

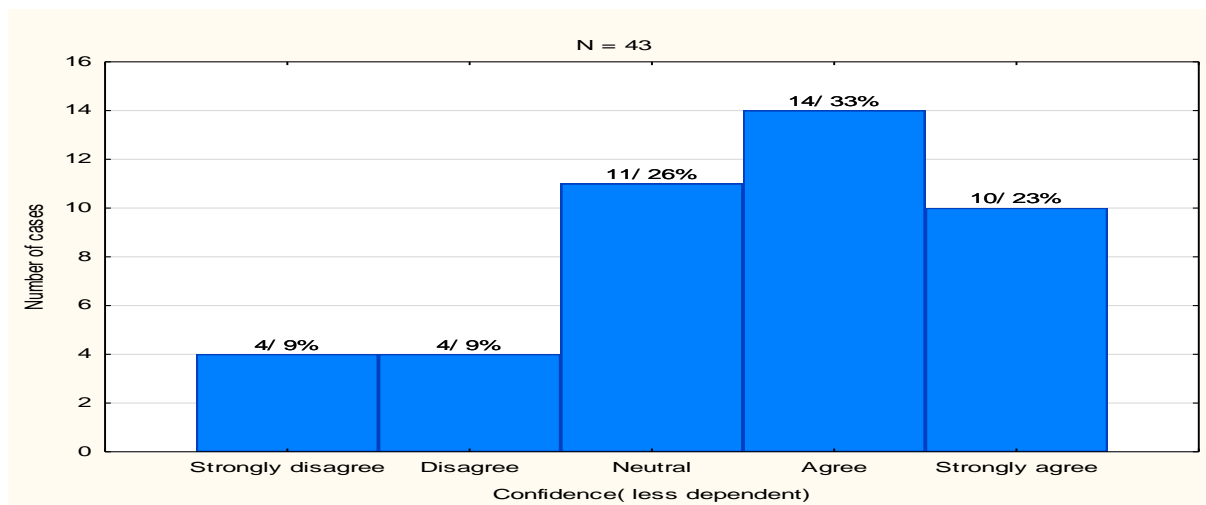


### Question 16: Confidence improvement

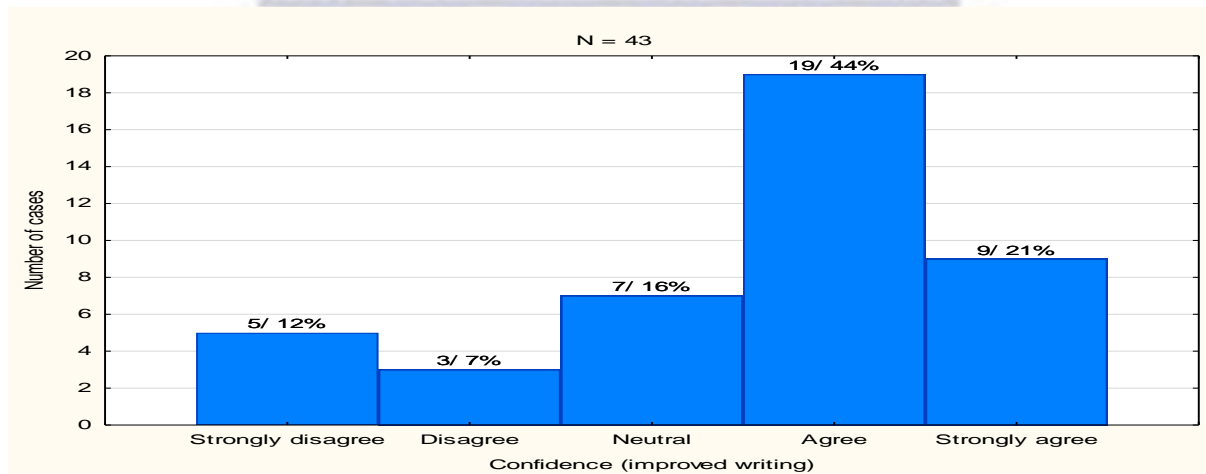
#### 16.1 Confidence (do academic work)



### 16.2 Confidence (less dependent)

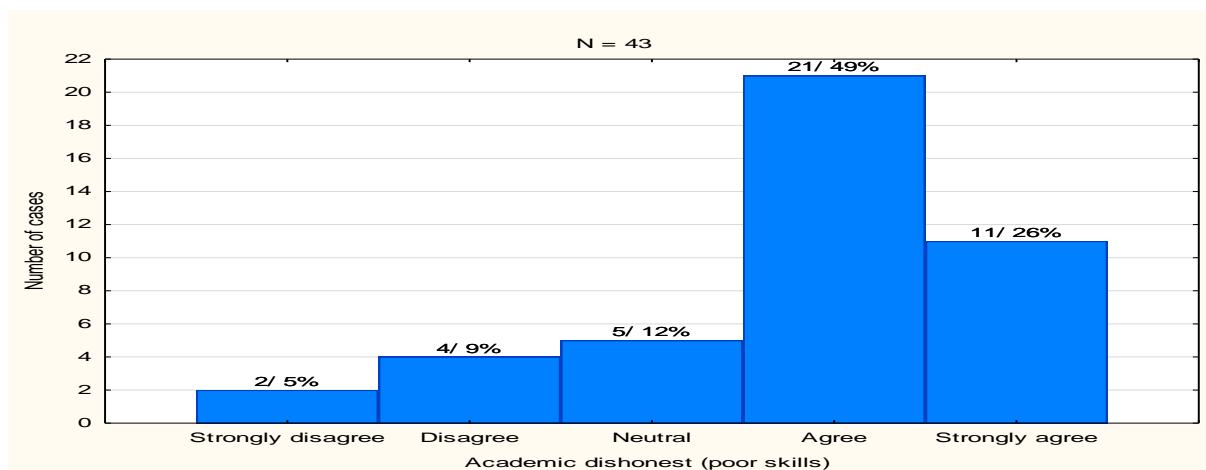


### 16.3 Confidence (improved writing)

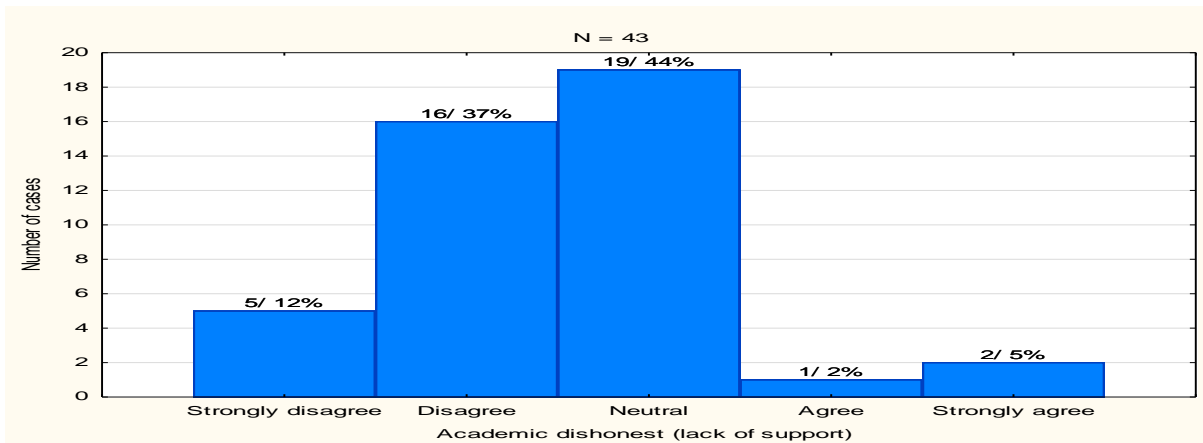


### Question 17: Academic dishonest

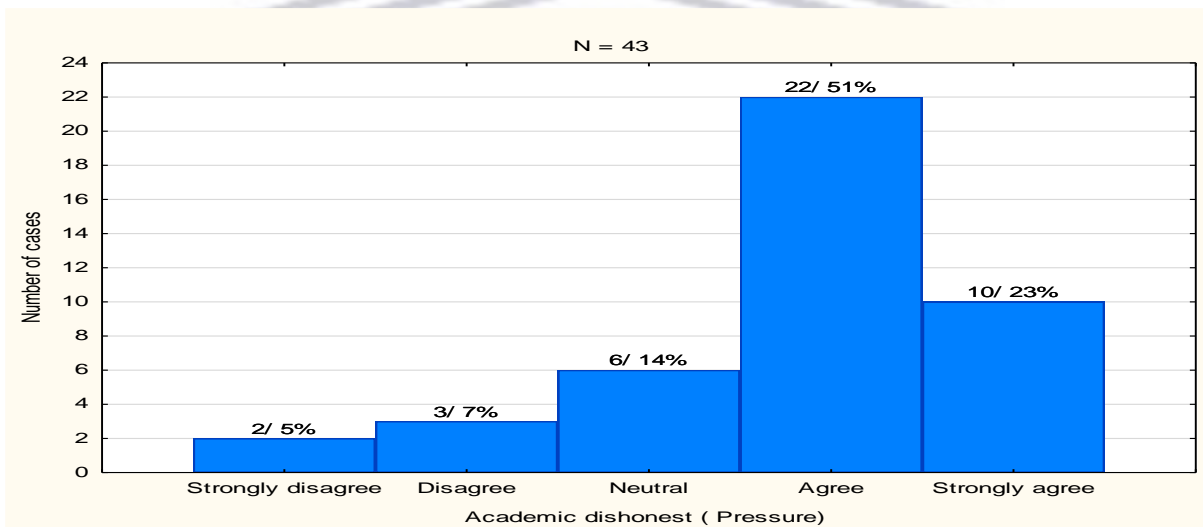
#### 17.1 Academic dishonest (poor skills)



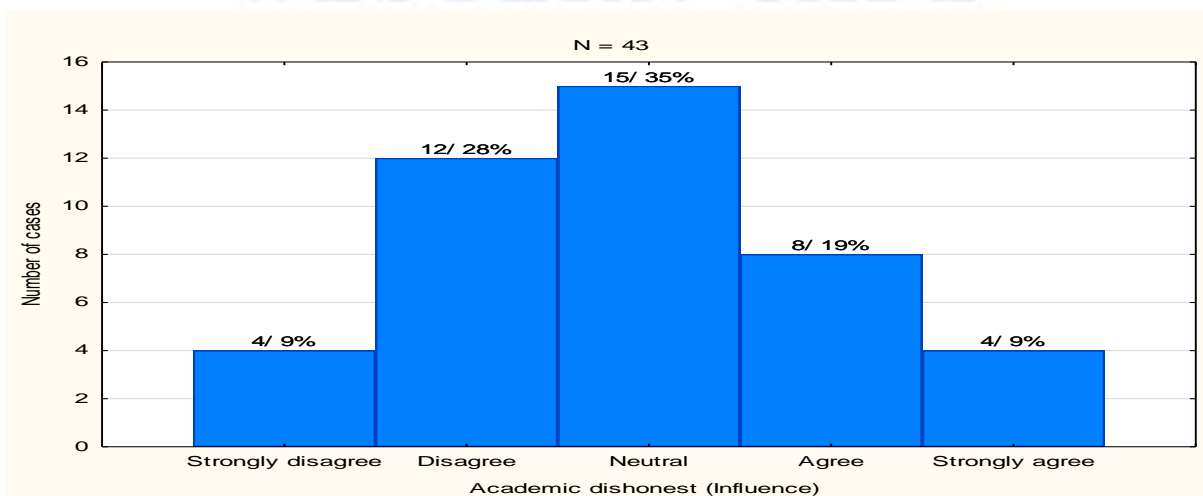
### 17.2 Academic dishonest (lack of support)



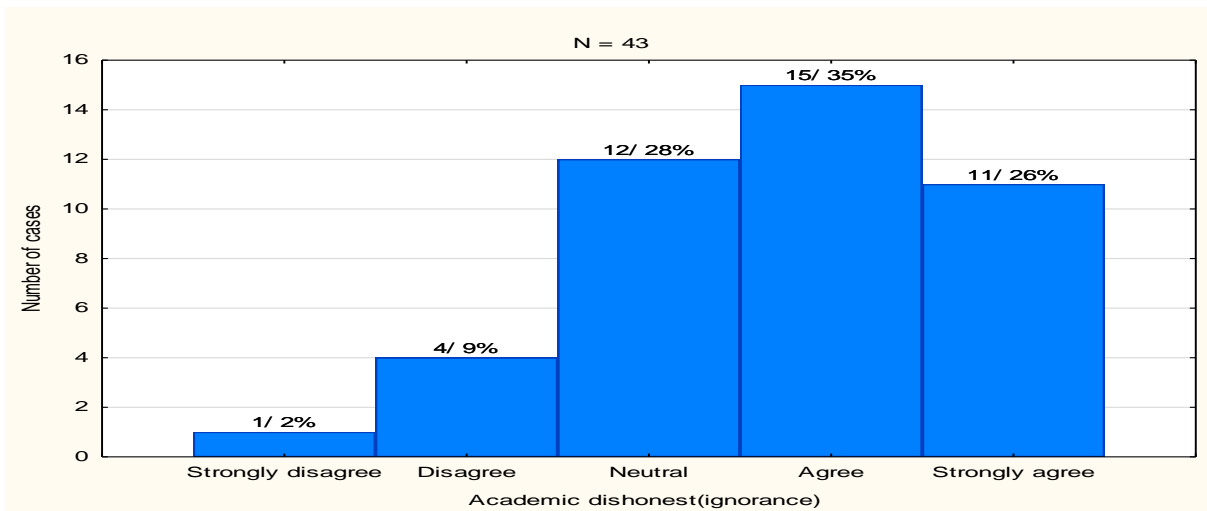
### 17.3 Academic dishonest (pressure)



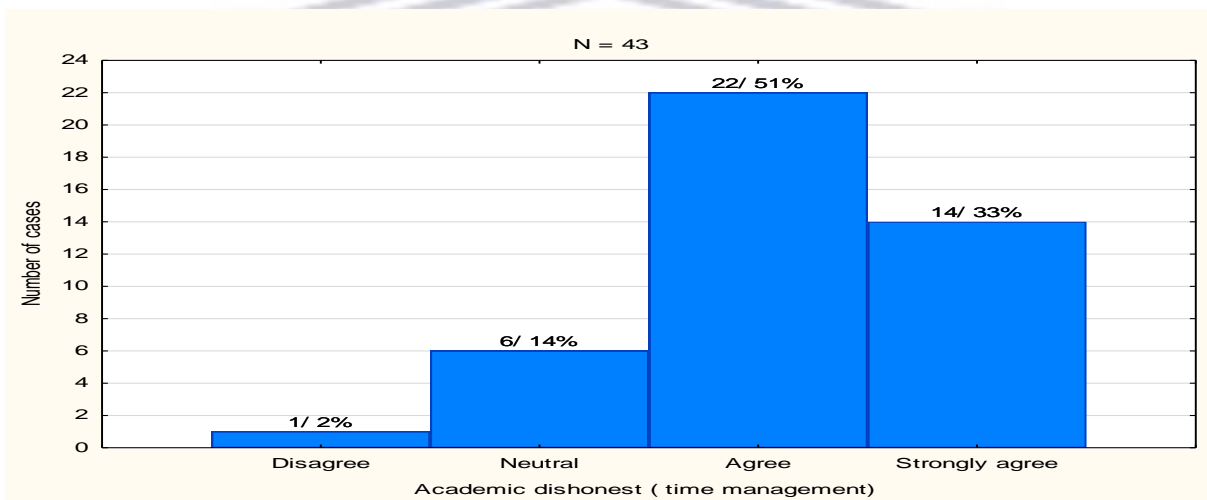
### 17.4 Academic dishonest (influence)



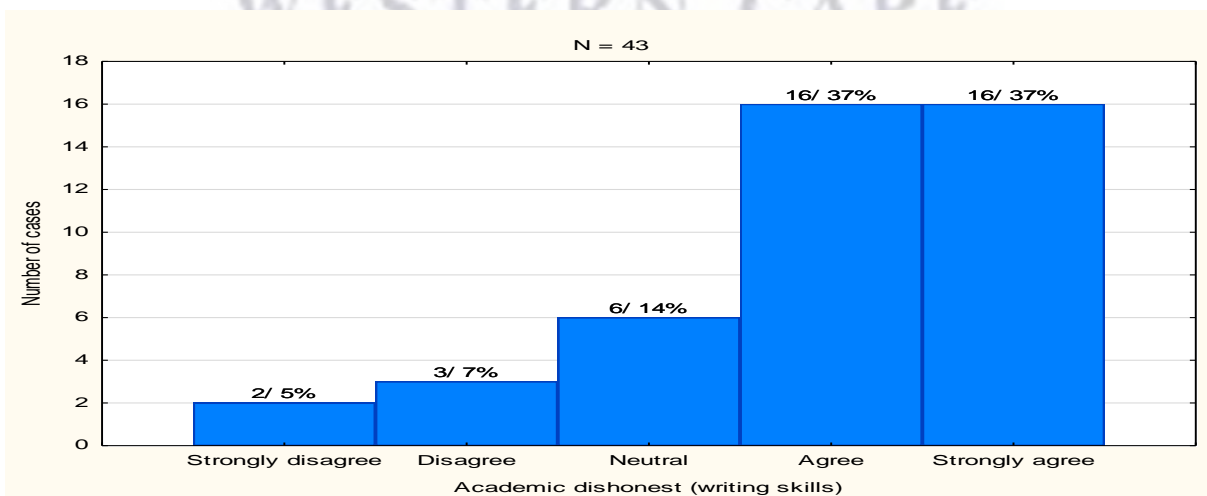
### 17.5 Academic dishonest (ignorance)



### 17.6 Academic dishonest (time management)



### 17.7 Academic dishonest (writing skills)





## APPENDIX 10

### INTERVIEW TRASCRIPTS: DEVELOPMENT FINANCE ACADEMICS

#### INTERVIEW 1: 13 April 2021

Interviewer: What is your understanding of the concept of plagiarism?

Interviewee: Plagiarism is using somebody's else's notes as if is yours. You present it as if is own. Its theft in the academic world.

Interviewer: What in your mind constitutes plagiarism?

Interviewee: What I consider as plagiarism is using someone else's statements, someone else's findings, conclusions as if they are one's own tokes or one's own findings, it can arise due to many reasons. Sometimes students are not aware particularly in this day and age where people can easily google when they want to know something, they can just source a paragraph or source a couple of sentences from an online article and put as their writing without proper citation. That is for me an example of plagiarism. In general case of plagiarism is when someone uses somebody else's notes or written documents without acknowledgement in the form of citation.

Interviewer: Are you aware of any Policies strategies the university has put in place to discourage plagiarism?

Interviewee: Yes, we have at USB I think you are also aware a plagiarism policy and have implementation guideline. If a student is found to have a committed plagiarism, we look at it and read there are excusable offences and excusable offences and the penalty rings for instance sending a warning letter to the student and at the same time recommending a student to attend plagiarism workshop. And maximum penalty is giving nothing to the assignment student has submitted. In fact, even before we detect plagiarism at USB as you aware we provide adequate orientation to students so that they do not fall at the offence.

Interviewer (Follow up question):

Do not you give a second chance to students to rectify his/her work after you have detected plagiarism on his work:

Interviewee: Yes, at the moment what happens is, when a lecturer detects plagiarism then we have to login to ethics committee, the USB has ethics committee that will look at it and will

immediately contact a student to rectify and after receiving a student response they will deliberate on the matter and will eventually make a decision on the matter.

Interviewer (2<sup>nd</sup> follow up question): Is the committee made of lecturers??

Interviewee: Lecturers, research coordinators, research managers and other mini staff as well

Interviewer: Have you previously used or are you currently using anti-plagiarism software for academic purposes?

Interviewee: Yes, I do, I have been using TII, so whenever I write a paper before sending it out for publication, I run it on TII to see where it falls in terms of similarity scores and concern instances of similarities in the paper I wrote and other documents I will attend to it and when I am comfortable, I will proceed with it. And when it comes to assignments obviously, we have a Learning Hub through which students submit assignments and, on the LH, we can see similarity scores. But a similarity score does not mean a student has plagiarised on his/her assignment. I closely look at similarities. In some instances, a student may have submitted a draft previously and TII can immediately detect that draft and report a very high similarity score. So, in that instance what I would do I will exclude the previously submitted assignment from TII to derive a true similarity score. And even after getting the actual TII score I look at paragraphs and the sentences. In Development Finance we usually have common terminology for quantitative research which we cannot avoid. I cannot avoid for instance a word statistical significance; students use frequently some commonly used terminologies so if the similarity comes from commonly used terminology, I will then make my own assessment of the actual instance of plagiarism.

Interviewer: Did you receive any training in the use of anti-plagiarism software at Stellenbosch University?

Interviewee: No, I have not received any training on the use of TII. But We have an online plagiarism training module that we have all attended sometime last year. It's just broadly on plagiarism not specifically on TII. Infact It covers areas like how to use TII score as a guidance in accessing plagiarism instances.

Interviewer (Follow-up question)

Are you telling me you do not need this kind of training? You comfortable learning it on your own ways, by attending online workshops.

Interviewee: I think at the moment I know how to check for plagiarism using TII. We already have TII embedded into the Learning Hub. I do not need to access TII software, because all my needs are currently certified using the LH platform.

Interviewer: How effective are anti-plagiarism training interventions?

Interviewee: I can speak for myself. For me it helped a lot because you sometimes consider instances of plagiarism as a real plagiarism. In some instances, the students copy the entire paragraph, but as long the student has put a quote it would be considered a standard practice. So, there are things I have learnt from the online training, it was adequate.

Interviewer: What is your attitude towards and perception of anti-plagiarism software?

Interviewee: It helps in the absence of anti-plagiarism software, I do not know how we would be able to detect plagiarism, the software helps a lot. But we should not forget that the software is a similarity detector. I detect similarity it does not give a full answer. You have to use your own judgement as a lecturer to decide whether a particular assignment has got plagiarism or not. It helps a lot. Without a software I cannot imagine detecting plagiarism, unless a student changes a name and submit as a thesis at another institution for a program. In those instances, you can use google and read articles across. But going paragraph by paragraph, line by line you cannot detect plagiarism manually.

Interviewer (Follow up question):

So, when you receive assignments first thing before you look at them do you send them to TII?

Interviewee: This how it works, when students upload and submit their assignment on Learning Hub, few hours TII similarity score appear on our side. I can see the assignment and the TII score.

Interviewer (Follow-up):

Do students have a chance of submitting their assignments and check plagiarism before submitting to Learning Hub?

Interviewee: Yes, they have TII playground, they can submit and see the TII score before they can submit on LH

Interviewer: How often do use anti-plagiarism software for academic purposes?

Interviewee: Frequently use, every time a student submits assignments, I interact with TII. Even my own work before submitting for publication I run it on TII playground. It is very often.

Interviewer (Follow up question): Do you use TII playground for your own work?

Interviewee: Yes, I use playground for my own work.

Interviewer: Do you think anti-plagiarism software helps in improving academic integrity?

Interviewee: Yes, in view it does improve integrity?

Interviewer: Can you tell me how you interpret the similarity index on TII?

Interviewee: like I said previously, the TII does not give you an answer or whether there is plagiarism or not. It just gives you the extent of similarity between a submitted work or other papers or chapters. Its up to the lecturer to use his/her own judgment to decide whether there is an offence. It beautiful as a tool to detect plagiarism use it with your own judgment for the decision.

Interviewer: Do you encourage students to use TII for remedial purposes (to improve their writing) or more for punitive measure?

Interviewee: Yes, we encourage them to use TII to improve their writing. The reason why we have plagiarism online training introduced by Business school a couple of years ago is just to assist the student. We are not here to punish a student. This is a learning institution, as a learning institution We need to coach them. We need to nature them; we need make them aware that copy and pasting is not what we wish to see in their work. So as a learning institution we need to offer them. opportunity to improve in their writing.

Interviewer: In your own opinion, are the pamphlets, policies, and various strategies the university have in place enough to discourage students from plagiarizing?

Interviewee: In my view the policies on the information that we share at the beginning of every program is enough for our students to strictly adhere to the plagiarism policy. When we have offenders, we do not just punish them we also give them opportunity to get training on plagiarism, over and above the orientation.

INTERVIEW 2: 14 April 2021

Interviewer: What is your understanding of the concept of plagiarism?



Interviewee: My understanding is literal writing a doc in your own word not actual using the same word in copying word to word in the document you are using. If you are using a document you need to paraphrase the sentences in your own understanding to avoid plagiarism otherwise if you are taking it directly, even if you use quotation marks you are still plagiarizing the work. We strongly discourage the act of copying word for word in a soft document. Copying word to word and maybe you can put quotation marks in one or two sentences. Once copying the whole paragraph its plagiarism.

Interviewer: What in your mind constitutes plagiarism?

Interviewee: If I take the Threshold that we Development Finance apply which is 15% and above it signifies some degree of plagiarism. And once it crosses 35% now it becomes serious. Now maybe you want to go and look at the document, and what I do when I receive a document, I scroll down a TII originality report that has been downloaded and look through the sources of similarities of index any index above 5% it attracts some sort of scrutiny so if the index is 2% or 3% it's not a problem once it exceeds 5% it becomes a problem.

Interviewer: Are you aware of any Policies strategies the university has put in place to discourage plagiarism?

Interviewee: Yes, there is a document that has been shared to all departments, and even before the beginning of each session when students are on campus, they given a lecture on plagiarism which has been done by plagiarism committee. There is a lot of information that has been given to the students and lecturers as well and workshops as well on how to report plagiarism and how to handle it. Students are given a lecture on their first time on campus.

Interviewer (Follow up question):

I did not hear your response in terms of policies, if you are aware of any policies, what do they state in the policy?

Interviewee: Yes, USB has policy. They show various levels at which once a student work crosses that threshold it becomes a problem. They are in categories A, B and C to D First level is not a problem, second level is a warning then up to the last level.

Interviewer (Follow up question):

Are there any punitive measures in place that are mentioned in the policy?

Interviewee: Yes, the second level of similarity index is a warning to the student. 3<sup>rd</sup> Level the student is sanctioned with a penalty of 50% so the work will be kept at 50% no matter how best is the student and the 4<sup>th</sup> Level the student will appear before the USB plagiarism committee.

Interviewer: Have you previously used or are you currently using anti-plagiarism software for academic purposes?

Interviewee: Yes, we use Turnitin playground for academic purposes. All the MPhil theses must be submitted through Turnitin, and the report be attached to their documents before the submission. The students download similarity index and attach to their documents before submitting the final documents. Assignments as well submitted through TII to ensure the work has not been copied somewhere else.

Interviewer: Did you receive any training in the use of anti-plagiarism software at Stellenbosch University?

Interviewee: Yes, we did receive training on plagiarism since 2013 and I know how to use Turnitin anti-plagiarism.

Interviewer: How effective are anti-plagiarism training interventions?

Interviewee: I can say its effective, because before you submit your document you need to check whether there is plagiarism or not. Sometimes you are writing, there are words overlapping and may writing thinking that you have written well, without knowing it unless you check, to be sure you have written well.

Interviewer: What is your attitude towards and perception of anti-plagiarism software?

Interviewee: I have a positive attitude towards it. It is a good software to avoid cheating. It is very possible for somebody to get away with if such software was not there. One could just get somebody's work in the library or thesis and you change your name and then you submit. With the use of anti- plagiarism software such as TII you cannot get way. If you do such things, you will get caught immediately.

Interviewer: How often do use anti-plagiarism software for academic purposes?

Interviewee: Very often especially when it comes to the research assignments because no research is submitted without checking it. And sometimes when you write a paper you will



need to check before you submit. When writing an article some journals will require a TII report before they can accept it. When submitting a paper on TII its just for you to check the similarity index.

Interviewer: Do you think anti-plagiarism software helps in improving academic integrity?

Interviewee: Yes, it does help a lot. I once read a story of a guy from German, his PhD was revoked, because it was later discovered that he has copied someone's thesis and submitted. That is academic integrity without a software that would not be discovered that. After the degree had been awarded it was revoked later, because they have discovered that his big portion of his work was from the same article copied and pasted.

Interviewer: Can you tell me how you interpret the similarity index on TII?

Interviewee: The interpretation is guided by the policy that the university is using. For us in the Development Finance 0% -15 % is accepted within that range, but from 15% and above is a problem. In some departments sometimes from 16% -20 % can be mild once crosses that it is serious. Some departments will give a second chance to a student to rectify. Even on the USB policy 16% -20 % is not a problem it is a problem when its above 20%.

Interviewer: Do you encourage students to use TII for remedial purposes (to improve their writing) or more for punitive measure?

Interviewee: Yes, its mandatory no document will be accepted without TII report. It is a compulsory requirement to all students.

Interviewer: In your own opinion, are the pamphlets, policies, and various strategies the university have in place enough to discourage students from plagiarizing?

Interviewee: Yes, I think they are enough. The key is that any article they are using need to internalize it and now right information in their own words rather that copying and pasting using quotation marks and page numbers. Sometimes because they don't have time to read a particular document rigorously may be over and over and internalize it, they will just blow over it. The strategies are enough and sufficient for them to right well and avoid plagiarism.

INTERVIEW 3: 22 April 2021

Interviewer: What is your understanding of the concept of plagiarism?

Interviewee: Somebody uses somebody's work without acknowledge it or without giving the properly attribution to the original person the idea is coming from. Sometimes in writing people who write getting idea from a source but did not acknowledge or reference it properly.

Interviewer: What in your mind constitutes plagiarism?

Interviewee: Basically, when somebody uses somebody's work idea without properly attributing the source to that person, acknowledging that person.

Interviewer: Are you aware of any Policies strategies the university has put in place to discourage plagiarism?

Interviewee: Of course, a quite a number of policies USB have, policy which applies to everybody that is academics and students. We always emphasizing to students in terms of the policy of the university.

Interview (Follow-up question): Who made those policies?

Interviewee: There are two levels here, there is a bigger university policy and committee that looks at any violation of the policy and who handle that. Some policy will be dealt at the school level at USB we have committee that handles that and if the matter becomes more serious that it cannot be handled by Business school then will be referred to main university plagiarism committee.

Interviewer: Have you previously used or are you currently using anti-plagiarism software for academic purposes?

Interviewee: Yes, we have been using TII for a very longtime. There was a similarity word check we used before at USB before TII (Drop) around 2004 to check similarities.

Interviewer: Did you receive any training in the use of anti-plagiarism software at Stellenbosch University? (Zoom disabled and used Cellphone recording)

Interviewee: There are workshops from time to time (Internet disabled). Cannot remember a formal training with IT (Learning Hub) assistants (Start to use my Phone to record) Only when we have problems, we will start call IT to assist.

Interviewer: How effective are anti-plagiarism training interventions?

Interviewee: Yes, its effective because students use TII and every year at the beginning of the year they get training during orientation. They know how to submit their documents on playground.

Interviewer: What is your attitude towards and perception of anti-plagiarism software?

Interviewee: It is a very good software. The availability of material online would make people to copy from Internet.

Interviewer: How often do use anti-plagiarism software for academic purposes?

Interviewee: When I write a paper before submitting, I check. I do check students work as well if they have not used somebody's work. Or if there are similarities.

Interviewer: Do you think anti-plagiarism software helps in improving academic integrity?

Interviewee: Absolutely

Interviewer: Can you tell me how you interpret the similarity index on TII?

Interviewee: We exclude anything 2%. It becomes serious when it 50% from one paper, and it is not acceptable. In the case of a sentence here and there it does not matter but they might add up in a big percentage, If the whole paragraph is highlighted, then it's a problem.

Interviewer: Do you encourage students to use TII for remedial purposes (to improve their writing) or more for punitive measure?

Interviewee: Yes, we use it for improvement, they use TII playground to see if bad they can redo till their final submission

Interviewer: In your own opinion, are the pamphlets, policies, and various strategies the university have in place enough to discourage students from plagiarizing?

Interviewee: When (with) student information they do not appreciate/ believe how bad it is. On the first assignment we become tough so that they learn their lesson.