Plagiarism among undergraduate students in the Faculty of Applied Science at a South African Higher Education Institution

Mapule Patricia Sentleng[1]
Cape Peninsula University of Technology
sentlengp@cput.ac.za

Lizette King[2]
University of the Western Cape
Lking@uwc.ac.za

The purpose of this study was to investigate plagiarism among undergraduate students at a higher education institution in South Africa. This study investigated the awareness and causes of plagiarism among undergraduate first, second and third year students of the departments of Chemistry and Mathematical Technology within the Faculty of Applied Science at a university of technology. A quantitative research method was used. The results of the study confirm that student plagiarism is fairly common. The study shows that 41% of undergraduate students think that plagiarism is very serious, but plagiarism is still being practised within these departments. It was also found that 71.9% of students admit to using the Internet to compile their assignments. This implies that the Internet is the most possible source of plagiarism. Students also used books and journal articles as possible sources to plagiarise.

1 Introduction

The objectives of the study were to investigates the awareness of plagiarism among undergraduate students at a South African higher education institution, the causes and trends of plagiarism in academic work amongst these students, to examine if these students were aware of policies and guidelines regarding plagiarism and to make recommendations as to how higher education institutions can improve student's awareness of plagiarism. The purpose of the study was to find answers to the following questions:

- Are undergraduate students aware of the seriousness of plagiarism?
- What are the causes of plagiarism among these undergraduate students?

This paper will focus on the forms of plagiarism, the sources used and the causes of plagiarism. It is clear that most students plagiarise intentionally. Reasons vary from being lazy (Dordoy 2002), poor time management (Dordoy 2002), pressure from other students, (Dordoy 2002; Errey 2002:17; Wilhoit 1994:162; Devlin & Gray 2007: 187; Park 2003: 479), pressure to receive higher grades (Dordoy 2002; Park 2003: 479; Wilhoit 1994: 162), gaining easy access to material via the internet (Dordoy 2002), fear of failure and taking risks because they think they will not get caught (Dordoy 2002 and Sutherland 2004: 5). Reasons for plagiarising unintentionally may include collaborative team work in producing an assignment (Wilhoit 1994: 162), misunderstanding of rules (Dordoy 2002) and not being aware of what plagiarism entails (Dordoy 2002).

2 Plagiarism

Plagiarism is a modern Western construct which arose with the introduction of copyright laws in the eighteen century (Angelil-Carter 1995: v; Angelil-Carter 2000: 2). Jameson (1993: 18) pointed out that there is no universal definition of plagiarism and that it depends on the context, circumstances, audience, expectation and genre of the written work. Every institution develops its own definitions, even if the definition is interpreted differently by individuals (Colin 2007: 28; Leask 2006: 185).

Plagiarism is the intentional and unintentional use of another's work or ideas, published and unpublished, without acknowledging the source of the work (Jameson 1993: 18; Logue 2004: 40). Cormeny (as cited in Hannabus 2001: 312) defined plagiarism as using the words or phrases of another person and restating another person's thoughts in slightly

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different words, while Badke (2007: 58) defined plagiarism as representing someone's ideas as one's own, constituting misrepresentation and fraud. Plagiarism includes a mixture of legal, intellectual, social, professional, and moral issues as well as matters of reputation, acceptance, shame, economic loss, self esteem and indignation (Hannabuss 2001: 311).

Unintentional plagiarism occurs when students use the words or ideas of others but fail to quote or give credit, usually because they do not know how. Examples of unintentional plagiarism include omitting a citation or citing inaccurately, paraphrasing by only changing the sentence structure of the original text or by changing the sentence structure but not the words, and putting quotation marks around only a part of a quotation (Harris 2001: 11; Park 2003: 476; Pecorari 2003: 318; Strayer University iCampus 2010a). Unconscious or unintentional plagiarism is difficult to study because no laboratory analogue has been constructed to prove it (Marsh & Bower 1993: 673).

Intentional plagiarism occurs when a student knows that he or she is passing off someone else's words or ideas as their own. Purchasing pre-written research papers via the internet is a blatant form of intentional plagiarism. Other examples include fabricating a quotation or a source, copying an essay or article from the internet, on-line source or electronic databases without quoting or giving credit, and cutting and pasting from more than one source to create a paper without quoting or giving credit (Strayer University iCampus 2010b).

2.1 Forms of plagiarism

Cheating is copying, borrowing, purchasing or obtaining another person's work, with or without their consent, and claiming or pretending it as your own work. This form of plagiarism is committed deliberately, which means the writer had the intention to deceive. There are various practices that constitute cheating such as paraphrasing an argument or wording without proper acknowledgement of the original source, submitting the same or very similar work more than once to gain academic credit, presenting group work as an individual effort, submitting bought re-written papers as original work, falsification of data or making up of statistical results (Colin 2007: 29; Howard 1995: 799).

Patch writing is "copying from a source 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: 29). It also involves copying text from a source, deleting some words, changing grammar, plugging in one-for-one synonyms, using an un-cited idea, copying an organizing structure (Howard 1993: 233). Pecorari (2003: 338) justified patch writing because it does not have an element of intentional deception and people guilty of it are usually inexperienced students using sources inappropriately.

Non-attribution of sources involves writing a paper including passages copied exactly from the work of another, regardless of whether the work is published or unpublished or whether it comes from a printed or electronic source, without providing firstly footnotes, endnotes, in-text-references or parenthetical notes that cite the source, and secondly quotation marks or block indentation to indicate precisely what is copied from the source (Howard 1995: 799). According to both Colin (2007: 29) and Howard (1995: 799) it is sometimes the result of inexperience regarding referencing and academic writing skills by students.

2.2 Plagiarism in South African higher education institutions

Recent research has indicated that the acts of plagiarism, whether intentionally or unintentionally, are on the increase among university students in South Africa (Coetzee & Breytenbach 2006: 38; Cronin 2003: 253; Ellery 2008: 508). Various forms of plagiarism were found. Difficulties with in-text referencing, citing, direct quotation and paraphrasing were identified. The causes of plagiarism were pressure to produce research, freely available information on the internet, inexperienced multicultural students, inaccurate citing and referencing, use of English (not mother tongue) for academic writing and laziness (Beute, Van Aswegen & Windberg 2008: 201). According to Ellery (2008: 514) first year students are inexperienced about what constitutes plagiarism. She recommended that if higher education institutions are serious about improving student academic skills and preventing plagiarism, they should incorporate plagiarism into an academic writing framework in which clear instruction will be provided.

3 Causes determined from the literature of plagiarism in higher education institutions

3.1 School instruction

The roots of plagiarism can be traced to high school instruction as learners have earned good grades because their teachers have approved their work that they copied from encyclopaedias and other reference books or accepted purchased assignments (Logue 2004: 42, Sisti 2007: 220; Walker 1998: 93; White 1993: A44). This is especially true in South African (Davids 2009: 23-24).

3.2 Subjective and objective factors

Eckstein (2003: 43) stated that plagiarism is caused by subjective and objective factors. Subjective causes include the trend towards fraud, attitudinal and individual circumstances, ambition and competitive energies of participants of

academic life and ignoring the rules and conventions that represent what is right and what is acceptable. Objective causes include pressures and expectation directed at individuals by society, family and other external sources. It also includes society's demands for skilled and educated workers and professionals. Inconsistencies in defining proper behaviour and lack of rules to maintain and enforce this behaviour will also play a role. Lack of adequate subject knowledge can force students to rewrite exactly from sources.

The study conducted by Devlin and Gray (2007: 184-185) indicated a wide range of contributing reasons for plagiarism. One reason was that higher education institutions do not have adequate admission criteria and will admit students with no background for the courses they are doing. Most of these students have no understanding of what constitutes plagiarism and what it means in practice. A large percentage of the students had no academic writing skills. They were unable to demonstrate, for example research, writing, referencing and time management skills. If assessment methods for students are poorly designed, students may feel that they have too many assignments, most of them due at the same time. Lack of adequate subject knowledge can force students to rewrite exactly from sources. Because tertiary education fees are expensive, students will rather spend money on buying assignments online than risking failure (Devlin & Gray 2007: 187).

In Asia and Greece many students plagiarise because when they receive good marks, they have better chances of finding a good job. The chances of receiving scholarships and bursaries when they are planning to study in different countries within postgraduate programmes are also higher. Greek students suggested that they are forced to cheat because they have lost trust in Greek academics in terms of treating all students fairly and consistently. Some students for example were given examination papers by their academics (Hayes & Introna 2005: 224).

There are students who are more likely to plagiarise than others (Park 2003: 480). Females cheat less than males (Davis, Grover & Becker 1992: 17; Newstead, Franklyn-Strokes & Armead 1996: 230). Motivated students and students studying for personal reward are less likely to cheat, because they have a stronger sense of moral responsibility (Newstead, Franklyn-Strokes & Armead 1996: 230).

According to Kenny (2006: 16) most older or mature students have families, children and full-time jobs. As it becomes difficult to juggle parenthood, being a student and working, these students tend to cheat more often than younger ones (Ellery 2008: 510).

While Straw (2002) concluded that young male business students compared to students in other disciplines are most likely to cheat, Newstead, Franklyn-Strokes and Armead (1996: 230) indentified students studying science and technology as the most likely candidates for plagiarism because they are likely to manipulate data related to their discipline. Straw (2002) experienced that students with lower grades tend to cheat more often than students with higher grades. As it is difficult for students to juggle demands of their academic and social lives, plagiarism is more common amongst students who party a lot and have very active social lives.

Plagiarism is also more common among students who have negative attitudes towards their classes and feel that the subject is unimportant and uninteresting or that tasks are not challenging (Park 2003: 480). When students have to complete multiple assignments in a short amount of time and time was not managed properly, they might resort to plagiarism as shortcuts to completing assignments. Students also indicated that they will plagiarise since everybody is doing it. To some students the benefits of plagiarising are more important than the risks, especially if they know that there is little chance of getting caught and there is little or no punishment if they are caught (Park 2003: 479).

3.3 Referencing skills

Lloyd (2007: 52) and Dordoy (2002) stated that many students do not posses academic writing skills. Students need to be constantly reminded why referencing is important. Referencing methods, referencing techniques and acknowledging all forms of intellectual material must be taught (Brown, Dickson, Humphreys, McQuillan & Smears 2008: 140). Research done by Wang (2008: 753) and Madry (2007) showed that most students, even after instruction, do not know how to cite online sources or how to keep track of online sources used.

3.4 Assignments

Sutherland (2004: 5) suggested that plagiarism can be reduced if a lecturer puts effort into setting the assignments. Topics must, for example, not be too generic. The same topics must not be given every year and assignments with similar topics must not be easily found on the internet.

3.5 Use of the internet

The internet is highly accessible and allows easy storage, manipulation and reproduction of ideas (Baruchson-Abbi & Yaari 2004: 2). As the internet is a public domain, and citation rules of internet sources are not well known yet, students perceive information on the internet as free to use. With so much information on the internet, it is easy for students to fabricate (Townley & Parsell 2004: 272). The internet has made plagiarism easier (Austin & Brown 1999: 21; Scanlon &

Neuman 2002: 374) because you can cut and paste information directly into word processed documents, because complete essays, assignments and articles can be downloaded either for free or for a fee (Coetzee & Breytenbach 2006: 40; Lathrop & Foss 2000: 22-24).

4 Research design and methodology

For this study the participants were hundred and thirty nine students from the Faculty of Applied Sciences. The departments of Chemistry and Mathematical Technology were used in this study. The respondents were undergraduate students studying at a higher education institution in South Africa. The strata represented in the study were full-time first, second and third year students.

The questionnaire that addressed plagiarism had a total of nineteen closed questions and two open questions. In order to establish why students plagiarise, reasons such as the difficulties student face when writing assignments and reasons for not referencing properly were investigated. The questionnaire consisted of four sections. The aim of section A was to collect demographic data such as age, gender, home language, level of education, marital status and country of origin. Section B collected data on the awareness of plagiarism among students, how they define plagiarism, their understanding of different forms of plagiarism, different plagiarism sources, internet usage and how often and where they access the internet.

Section C was designed to collect data on the causes of plagiarism. Section D was designed to collect data on student plagiarism policies at the higher education institution involved. It focused on collecting data on student awareness of faculty guides to avoid plagiarism and penalties for plagiarizing. Finally students were given the opportunity to comment on their general understanding of plagiarism.

To ensure full concentration, adequate time to complete the questionnaires and effective response, permission to use lecture time to administer questionnaires was gained from the lecturers in the departments of Chemistry and Mathematical Technology. The date and time for the administration were negotiated with the lecturers involved via e-mail and face to face follow-up.

The survey was conducted in March 2010, during the first term of the year when most of the first year students had limited experience of the academic environment. A brief introduction to the study was given to students outlining the objectives of the study and assuring anonymity. Consent of students was obtained verbally. To increase the validity of the study, students were asked not to mention their names, student identification numbers or the name of the higher education institution. All the students participated voluntarily. One hundred and thirty nine questionnaires were distributed and received back. The 139 questionnaires represent 100% of the students who attended the selected lectures on the day.

The data was entered in a Microsoft Excel 2007 spreadsheet and manually checked for accuracy. Once the accuracy of the data was verified, data was imported into a statistical package for social science (SPSS) file for analysis. The data was analysed with both Microsoft Excel and SPSS to ensure validity and accuracy. Data analysis involved breaking up the data into manageable themes. The findings of this research are presented in tables and graphical forms as bar and tables that present data in an easy to understand format.

6 Results and discussion

The results are presented and discussed in the following sections.

6.1 Seriousness of plagiarism

Figure 1 reflects the responses to the question *how do respondents rate the seriousness of plagiarism*? Approximately 41% of respondents indicated that plagiarism is serious and 28% thought it is very serious, while 19% did not know. Six per cent of the respondents indicated that plagiarism is not a serious problem at all, and 19% didn't know, while 6% did not respond to this question. This relates to the findings by Mandry (2007) where 74% of respondents were unaware of the seriousness of plagiarism. Reasons might be that because students lack information literacy skills, they are therefore unaware of how to work ethically, economically and legally with information.
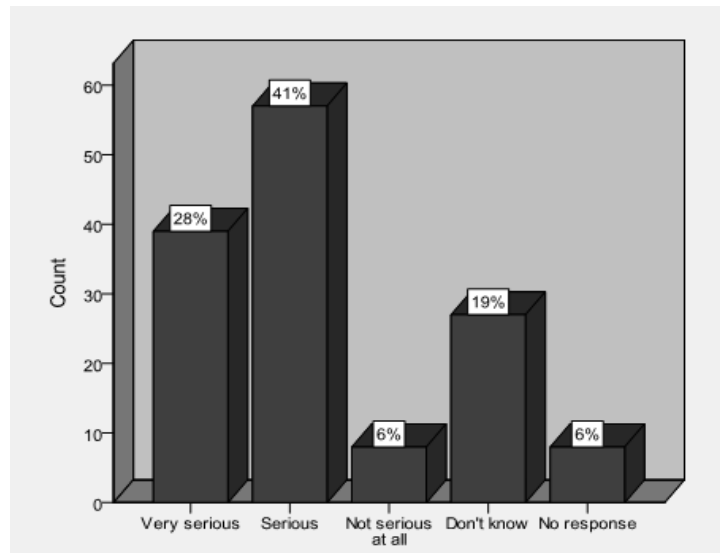
Figure 1 Plagiarism seriousness

6.2 Forms of plagiarism

The students were asked to indicate which of the forms of plagiarism listed they have committed while studying in this higher education institution when doing assignments. Respondents had to choose from the options *always, frequently, sometimes, rarely* or *never* for each question. Table I lists the results of responses in numbers and percentages.

Table I Forms of plagiarism committed by the students

Student activities		Always	Frequently	Sometimes	Rarely	Never	No response
Paraphrased without acknowledging the source	Count	2	16	54	20	38	9
	%	1.4	11.5	38.8	14.4	27.3	6.5
Summarizing a text without acknowledgement	Count	9	18	40	26	38	8
	%	6.5	12.9	28.8	18.7	27.3	5.8
Copy a text without acknowledgement	Count	2	11	27	33	59	7
	%	1.4	7.9	19.4	23.7	42.4	5
Submitted someone's work without their permission	Count	1	0	6	8	118	6
	%	0.7	0	4.3	5.8	84.9	4.3
Invented or altered data	Count	5	11	35	28	46	14
	%	3.6	7.9	25.2	20.1	33.1	10.1
Writing an assignment for your friend	Count	4	1	12	13	105	4
	%	2.9	0.7	8.6	9.4	75.5	2.9
Using quotation marks without proper acknowledgement	Count	7	2	32	36	55	7
	%	5	1.4	23	25.9	39.6	5
Invented references or bibliography	Count	16	14	40	21	41	7
	%	11.5	10.1	28.8	15.1	29.5	5
Submitted work as an individual while written by a group	Count	11	10	21	13	77	7
	%	7.9	7.2	15.1	9.4	55.4	5
Copy a work from the internet & submit as one's own	Count	8	7	27	26	62	9
	%	5.8	5	19.4	18.7	44.6	6.5

Only two students admitted that they have always paraphrased without acknowledging the source, 16 students (11.5%) did it frequently and 54 students (38.8%) did it sometimes. Thirty eight students (27.3%) have never engaged in this form of plagiarism. The reason that the majority of students had been guilty of paraphrasing to some extent without acknowledging the source might be that many students are entering into higher education without paraphrasing and analysing skills (Mandry 2007).

The majority of students admitted that they have used summarised text in assignments without acknowledging the source. Of these students, 9 (6.5%) reported they have always, 18 (7.9%) frequently and 40 (28.8%) sometimes summarised without acknowledging the source.

A relative low percentage of respondents admitted that they always (1.4%), frequently (7.9%) or sometimes (19.4%) copied text without acknowledging the source. In contrast the majority of students (39.6%) indicated that they will acknowledge the source if they have quoted. Seven students (5%) admitted to have always used a quotation without referring to the original author. Students might think that paraphrasing, summarising or copying text without acknowledging the source is acceptable and that it is only necessary to acknowledge the author if it is a direct quote.

Submitting someone's work without their permission is a serious offense, and the majority (84.9%) of students have never committed this type of plagiarism. Most students (75.5%) also indicated that they have never written an assignment for a friend. Only 4 students (2.9%) acknowledged that they are guilty of it. Students (39.6%) have admitted to submitting group work as if it was their individual work, while the 55.4% said they will never do it.

Although inventing data or references is regarded as fraud, students admitted to being guilty of inventing or altering data always (4%), frequently (8.8%) or sometimes (28%). The majority of students admitted to inventing references always (11.5%), frequently (10.1%) or sometimes (28.8%). The reasons for the high occurrence might be that students do not know how to reference or neglected to record the information about the sources used (Madry 2007; Wang, 2008: 753).

Although it is easy to copy work from the internet and submit it as your own work (Errey, 2002: 18), 44.6% students indicated that they have never done it, 18.7 percent of students admitted to have done it rarely. A total of 29.5% of students admitted that they have done it always (5.8%), frequently (5%) or sometimes (18.7%).

6.3. Sources used for assignment writing and possible plagiarism

Respondents were asked to indicate which resources they have used for assignment writing and will use as potential source when engaging in any of the activities mentioned in the previous question. Findings are listed in Table 2.

From Table 2 it is clear that most students (71.9%) will always use the internet for assignment writing and activities related to plagiarism. Thirty seven percent of students will always use books, while 4.3% use journal articles and 3.6% newspaper articles. Students choose to use the internet because it is easy to copy and paste and therefore takes very little effort (Sisti 2007: 224). With adequate access to the internet, computer literacy and internet navigation skills, students can engage in plagiarism with ease if they choose to.

Table 2 Sources of assignment writing and possible plagiarism

Sources		Always	Frequently	Sometimes	Rarely	Never	No response
Journal articles	Count	6	18	40	39	22	14
	%	4.3	12.9	28.8	28.1	15.8	10.1
Books	Count	46	48	29	5	1	10
	%	33.1	34.5	20.9	3.6	0.7	7.2
Internet	Count	100	28	9	0	0	2
	%	71.9	20.1	6.5	0	0	1.4
Newspapers	Count	5	14	41	39	30	10
	%	3.6	10.1	29.5	28.1	21.6	7.2

6.4 Use of internet

Students had to score their frequency of using the internet. Results indicated in Figure 2 that a large percentage of students (39%) use the internet several times a day, while 36% will use it once per day. Nineteen percent of respondents indicated that they use it once a week and 4% only once a month. Academic staff should be concerned about the high use of the internet as information source for writing assignments (Scanlon & Newman 2002: 374).
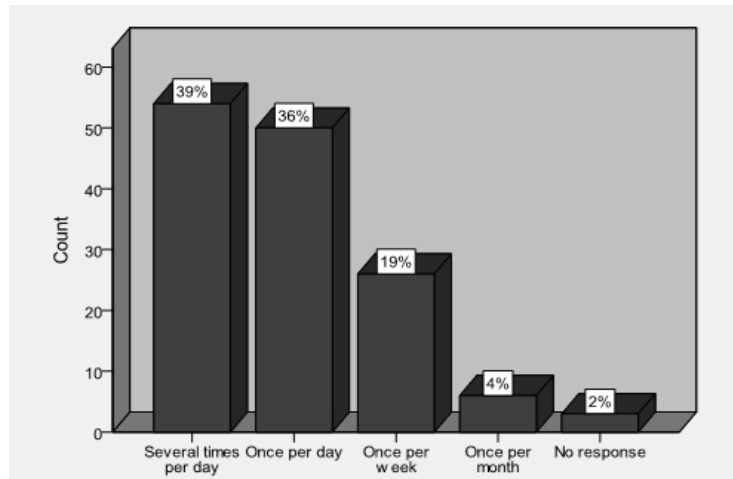
Figure 2 Internet usage frequency

6.5 Causes of plagiarism

The aim of this section was to identify and understand the different causes of plagiarism as well as to attempt to determine the underlying reasons why student plagiarise. Results are summarised in Table 3. Forty two students strongly agreed that laziness and/or bad time management is the reason for plagiarising. This is followed by 36 students indicating that they strongly agree that they plagiarise in order to gain better marks. Twenty five students agreed strongly that they plagiarised because they do not understand assignments, while 21 students indicated that the reason for them plagiarising was because they did not understand plagiarism. Seventeen respondents strongly agreed that they might have poor writing skills and 12 respondents strongly agreed to the lack of referencing skills.

Other reasons that students agreed strongly to, were because everybody is doing it (11), pressure from family and friends (11), education costs (10) and the teaching and learning methods used (8). From previous studies laziness and bad time management were identified as two of the common reasons for plagiarising (Errey 2002: 17; Wilhoit 1994: 162). It might be that students put off their assignments until the last moment. The quickest way out is to plagiarise.

Table 3 Reasons for plagiarising

Reasons for plagiarising		Strongly agree	Agree	Disagree	Strongly disagree	Don't know	No response
Poor writing skills	Count	17	54	27	11	11	19
	%	12.2	38.8	19.4	7.9	7.9	13.7
Lack of referencing skills	Count	12	57	29	10	8	23
	%	8.6	41	20.9	7.2	5.8	16.5
Teaching and learning methods	Count	8	42	35	12	21	21
	%	5.8	30.2	25.2	8.6	15.1	15.1
Laziness/bad time management	Count	42	32	21	16	8	20
	%	30.2	23	15.1	11.5	5.8	14.4
Don't understand assignments	Count	25	36	37	15	7	19
	%	18	25.9	26.6	10.8	5	13.7
Education costs	Count	10	17	35	31	24	22
	%	7.2	12.2	25.2	22.3	17.3	15.8
Pressure from family & friends	Count	11	20	33	41	14	20
	%	7.9	14.4	23.7	29.5	10.1	14.4
To obtain better marks	Count	36	46	19	13	4	21
	%	25.9	33.1	13.7	9.4	2.9	15.1
Poor understanding of plagiarism	Count	21	35	22	22	18	21
	%	15.1	25.2	15.8	15.8	12.9	15.1
Everybody is doing it	Count	11	19	32	40	20	17
	%	7.9	13.7	23	28.8	14.4	12.2

If the number of students who strongly agreed as well as those who agreed were added together, most students (82) indicated that they plagiarise to gain better marks. It is followed by 74 students who will plagiarise because of laziness and/ or bad time management, 71 because of poor writing skills, 69 because of lack of referencing skills and 61 because they did not understand the assignment. Fifty six students agreed in total that poor understanding of plagiarism was the reason for plagiarising, while 50 students blamed teaching and learning methods. Because "everybody is doing it", 30 students thought that it is acceptable for them to plagiarise as well. Devlin & Gray (2007: 187) also concluded that students might be plagiarising because they do not understand what constitutes plagiarism.

A total of 139 students indicated that they strongly agreed or agreed that the reasons for plagiarising were because of educational costs (27), family and friends (31) as well as to get better marks (82). It seems as if pressure to perform well in order to pass courses, were causing students to plagiarise intentionally.

6.6 Difficulties experienced with assignment writing

Table 4 indicates the main difficulties students face when writing different assignments. Most students (39) identified the lack of resources as the major difficulty experienced when doing assignments. This is followed by 31 respondents who indicated that the lack of ideas, the challenges of the task (26), the problem with contents (24) and because tasks given were de-motivating as major difficulties when writing assignments.

The majority of students (105) indicated that the lack of ideas caused low, medium as well as major difficulties. A total of 103 students identified the challenges of tasks, problems with contents (91), tasks as de-motivational (89) and lack of resources (84) as low, medium or major difficulties.

Table 4 Difficulties students experienced when writing assignments

Difficulties when writing		Major difficulty	Medium difficulty	Low difficulty	Not a difficulty	Don't know	No response
Content problem	Count	24	36	31	27	3	18
	%	17.3	25.9	22.3	19.4	2.2	12.9
Task challenges	Count	26	50	27	17	3	16
	%	18.7	36	19.4	12.2	2.2	11.5
Lack of ideas	Count	31	49	25	14	1	19
	%	22.3	35.3	18	10.1	0.7	13.7
De-motivating tasks	Count	17	40	32	19	14	17
	%	12.2	28.8	23	13.7	10.1	12.2
Lack of resource	Count	39	28	27	21	6	18
	%	28.1	20.1	19.4	15.1	4.3	12.9

6.7 Reasons for not referencing properly

Table 5 summarises the results of question where respondents were asked to indicate the reasons they can not reference properly. Of the respondents, a total of 78 indicated that the reason for not referencing properly is because they lost track of where the information came from. Fifty five students thought the reason was because internet sources are too difficult to reference, while 54 students were never taught how to reference properly. For both the reasons too much effort and time involved, a total of 47 students agreed or strongly agreed.

Table 5 Reasons for not referencing properly

Reasons for not referencing		Strongly agree	Agree	Disagree	Strongly disagree	Don't know	No response
Never taught how to reference properly	Count	16	38	36	26	6	17
	%	11.5	27.3	25.9	18.7	4.3	12.2
Lost track of where the information come from	Count	21	57	26	14	3	18
	%	15.1	41	18.7	10.1	2.2	12.9
Referencing internet sources is too difficult	Count	21	34	43	19	4	18
	%	15.1	24.5	30.9	13.7	2.9	12.9
Too much effort	Count	9	38	35	20.1	10	19
	%	6.5	27.3	25.2	20.1	7.2	13.7
Time it takes is not worth the marks received	Count	14	33	42	25	8	17
	%	10.1	23.7	30.2	18	5.8	12.2

In the study by Brown *et al.* (2008: 144) 74.5% of respondents reported that they were never taught about referencing and 62.7% lost track of information when writing their assignments. Referencing internet sources was a problem for 56.9% of the respondents. In the study by Mandry (2007), the majority (69%) of students stated that they did not know how to cite online sources. Wang (2008: 753) concluded that because students lost track of their information sources, unintentional plagiarism occurred. It is clear from the results that students did not think that referencing techniques were important. It is too much effort for them and that the marks they will receive are not worth the effort.

7 Discussion of findings

The results from the survey with regards to the research questions asked can be summarised as follows. The majority of students were aware of plagiarism as well as the seriousness of plagiarism. Although the majority agreed with the definition of plagiarism provided by this higher education institution, it seems students did not have a clear understanding of plagiarism. Not understanding the concept might be an underlying reason for students plagiarising. Students admitted to the following forms of plagiarism:

- Paraphrasing without acknowledging the sources
- Inventing references
- Summarising without acknowledging the sources
- Inventing or altering data
- Copying work from the internet and submitting as their own work.

Most students at this South African higher education institution had committed some forms of plagiarism during their studies, mainly by using the internet as a source for assignment writing and a possible source of plagiarism. The majority of students accessed the internet from computer laboratories or the library at their higher education institution. Students thought that information from the internet belongs to the public, and because it has no restrictions it did not require citation

Reasons students plagiarise intentionally were to gain better marks, to save time because of laziness and bad time management and because everybody else is doing it. Because of the high costs to study at a tertiary institution, students are under pressure from family and friends to pass. To gain better marks they will opt to plagiarise instead of trying to do their own work.

Students plagiarise unintentionally because of poor writing skills, lack of referencing skills, poor understanding of assignments due to the teaching and learning methods used by lecturers as well as poor understanding of the concept of plagiarism. In assignment writing, students experienced difficulties with limited resources, lack of ideas, challenges of the task, problem with contents and de-motivating aspects of tasks.

Reasons for not referencing properly were that students lost track of where information was found, they did not know how to reference internet sources and they were never taught how to reference. Some students also indicated that it is too much effort and time consuming to do the referencing properly.

The majority of students was unaware of or was not sure about the policies and guidelines regarding plagiarism created by their higher education institution. They were also not aware of or not sure about faculty guides to avoid plagiarism. Although the majority of students agreed with the provided definition of plagiarism, they were therefore unaware of what plagiarism entailed, how to avoid it and what the penalties for plagiarism were.

Although some students regarded plagiarism as acceptable, the majority thought being given a warning is a fair and appropriate penalty. Some students indicated that students guilty of plagiarising must be penalised.

8 Conclusion

Plagiarism is a complex issue and is misunderstood by most students. There is no simple solution to this problem. Academic staff should focus on ways to reduce plagiarism. To raise awareness about plagiarism, the issue must be explained to students. Special attention should be given to why it is unacceptable (Born 2003: 224) and how to avoid being accused of plagiarising (Wilhoit 1994:161).

Although it is the responsibility of the higher education institution to prevent plagiarism, Austin & Brown (1999: 23) suggested that the academic staff in cooperation with the library can prevent or minimise plagiarism by designing assignments correctly and adopting teaching methods and instructions. Understanding why students plagiarise can help academic staff to consider how to reduce plagiarism in their classrooms.

Students need to understand what plagiarism is, how to avoid it and why they should penalise for it. Referencing and academic writing skills must be taught by all lecturers at all levels. Special attention should be given to the function and

purpose of writing, reliability of information, ethical aspects of using information and how to become thoughtful, careful and critical writers (Born 2003: 224; Coetzee & Breytenbach 2006: 49; DeVoss & Rosati 2002: 201).

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