



Cheating and Whistle-blowing among Students at the University of Mauritius

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Abstract

This paper focuses on cheating and whistle-blowing among students at the University of Mauritius while taking into account Social Desirability Response Bias (SDRB). Furthermore, the study examines whether variables such as gender, SDRB, the belief about doing more about cheating, prior cheating behavior and prior whistle-blowing will affect student intent to whistle-blow. Data was collected using a questionnaire administered to 300 students at the University of Mauritius. Among these respondents, 119 were males and 181 were females. Findings suggest that students who have engaged in cheating are more likely to cheat in the future compared to those who have not. Students who stated that, measures should be taken to stop cheating are more likely to whistle blow in the future. With respect to Social Desirability Response Bias, female students have a tendency to respond in a more socially desirable manner. The study was conducted in one university so generalisation of the result should be done with care.

Key Words: Cheating, Whistle-Blowing, Social Desirability Response Bias

Field of Research: Management, Accounting and Ethics

1.0 INTRODUCTION

I would prefer even to fail with honor than to win by cheating-Sophocles

These are honourable words by Sophocles which few of us will put into practice. In the history of mankind, for as long as social structures have existed, there have been cheaters. In today's modern society, as highly developed as we would like to think we are, this essential aspect of human trait has not changed. Cheating has become an ongoing theme that society must deal with because "dishonesty in business and government confronts us daily", (Bernardi et al. 2008). Although, "cheating is almost universally condemned, it is widely engaged in, if self- report are taken as credible", (West et al. 2004).

According to the magazine Maclean.ca, "when General Motors realized that Chevrolet Cobalt coupes lacked sufficient airbag padding, it recalled 98,000 cars and moreover when Sony found out its laptop batteries tended to overheat and catch fire, it recalled 9.6 million packs before launching a global replacement program". This is a common practice in the business world, standards must be met and guaranteed, or customers will lose faith leading to business failure. The same applies to academia.

The main goal of universities is to produce graduates like doctors who will cure us, engineers who will build our bridges and buildings and CEO's who will generate our wealth. Prior to having completed the required course of study a person is tested and assessed by appropriate authorities. Yet studies have shown that there is a worrisome increase in the number of students who cheat in Universities. For example, Christensen-Huges and McCabe (2006) found that seventy-three per cent of university students reported instances of serious cheating on written work while in high school. Fifty-three per cent of undergraduate and thirty-five per cent of graduate students admit having cheated on written work. The value of a degree is being debased, and there is mounting evidence that a lack of integrity in the university system will have a far-reaching effect on the economy in the years to come.



The research in academic whistle-blowing is relatively new, hence the importance in establishing a definition of a whistle-blower. The term whistle-blowing comes from the phrase “blow the whistle,” which refers to a whistle being blown by a police officer or a referee to indicate an activity that is illegal or foul. According to Near and Miceli (1984), a student informing his/her instructor and/or appropriate dean that another student has cheated is known to be a whistle-blower. This is how these two words whistle-blowing and cheating are related. Although the lecturers and deans at the University of Mauritius recognise the importance of ethical behavior, there is still little attention devoted to the topic. To the best of my knowledge no prior research has been undertaken pertaining to cheating and whistle-blowing at the University of Mauritius. Keeping in mind this lacuna this study proposes to assess the ethical behavior of the University of Mauritius students’.

2.0 LITERATURE REVIEW

2.1 DISHONESTY IN ACADEMIA

Cheating in universities appears to be a mounting dilemma throughout our educational system. According to the Josephson institute report in 2008, cheating is universal and it pervades high school life. According to Moffat (1990), the university at the undergraduate level sounds like a place where cheating comes almost as naturally as breathing, where it is an academic skill almost as important as reading, writing and math. Cheating is an act of dishonesty or unfairness in order to win some profits or advantages (Ehrlich et al., 1980). Recent surveys show that academic dishonesty among university students is widespread and epidemic (Cizek 1999); epidemic in the sense that increasing numbers are engaged in it (Collison 1990). The former goes even further by stating, that, nearly every research on cheating, whether the data is obtained by a carefully designed study, a survey of self reported behavior, a randomized response technique approach, or questionnaire regarding perception of cheating on the part of another has come to the conclusion that cheating is indeed rampant. Cheating has become a major problem because dishonesty in business and government confront us daily, (Bernardi et al. 2008). High cheating rates have persisted through the generations with the most comprehensive studies and meta-analyses (Bowers 1964, McCabe and Trevino 1993, Whitley 1998, Whitley et al. 1999) depositing the numeral between 70 % and 75 %. In a 2006 survey of 5,331 students at 32 graduate schools in the United States and Canada, 56 % of business students admitted having cheated at least once in the previous year (McCabe et al. 2006). A survey of college students in general revealed that 70 percent admitted to some sort of academic cheating, and 37 percent used the Internet to plagiarize, (McCabe 2005).

Burton and Near (1995) point out that “student cheating and reporting of that cheating represents one form of organizational wrongdoing and subsequent whistle blowing in the context of an academic organization”. The extent to which students will whistle blow is uncertain as “organizational members have been well socialized to believe that organizational dissidence is undesirable”, (Miceli & Near 1984). Thus students are reluctant to whistle blow, their fellow counterparts’ wrongdoings. O’Clock & Okleshen (1993), found that students “considered ‘not reporting others’ to be generally acceptable behavior.”

2.2 FORMS OF ACADEMIC DISHONESTY

2.2.1 PLAGIARISM AND IMPERSONATION

Plagiarism is the "use or close imitation of the language and thoughts of another author and the representation of them as one's own original work", (Robert 2007). It involves the reproduction or adoption of unique brainy creations like ideas, concepts, methods and pieces of information of another author without proper referencing, in contexts where originality is acknowledged and rewarded, (Cosima Rughinis 2010). The mounting quantity of information on the Internet and the simplicity with



which students have access to this information has fashioned an increasing pull for students to download Web content, alter it and submit it as their own unaided work, (Austin 1999). The Franklyn-Stokes and Newstead (1995), taken as the British higher education baseline found that more than 50 percent of all students are agreeable to acknowledge to having plagiarized at some stage of their academic course, . Other known form of cheating is impersonation. As per the oxford dictionary to impersonate means “to pretend to be another person for entertainment or in fraud” here in a cheating context, it involves a person other than the student assigned a work or exam completing it.

2.2.2 FABRICATION AND DECEPTION

Fabrication is on purpose. In an academic exercise, it is an unlawful distortion, perversion or creation of facts and figures, data, or illustration. Inventing data or facts for an assignment, changing the outcome of a lab experiment or survey, citing a source in a bibliography that was not used, affirming your own opinion as a precisely confirmed fact, submitting bogus information about a scholastic exercise to a lecturer is known as deception. Deception is hard to detect. One motive why this matter has become so central today is that media awareness to a number of issues of deception, from the wearing-away of business principles to the growth of cheating among students and adults, has contributed to increasing public skepticism about the prevalence of sincerity and truthfulness in public affairs, (Burgoon et al. 1994). Several researchers have found that in detecting deception, people are frequently no more accurate than they would be by chance alone (Bauchner et al. 1980).

2.2.3 BRIBERY AND SABOTAGE

According to the World Educational Forum 2000, “Corruption is a major drain on the effective use of resources for education and should be drastically curbed. Corruption in academia is for the most part detrimental because it jeopardizes a country's community, economic and political prospects. Owing to its long term effects, corruption in academia is more harmful than other forms of corruption. Sabotage in academia can take the form of; hiding library reading books from other students or tearing an important chapter in a particular book in a library so that other cannot get access; students refusing to help out a friend if they are having trouble and to the extreme, student making propaganda or even students purposefully being fed bad information so they are unsuccessful. This type of cheating is usually only found in extremely competitive, ruthless environments, where there is much at stake, for example scholarships.

2.3 HIGH TECH CHEATING

Everything has gone digital, so has cheating. According to Harkins and Kubic (2010), the Benenson Strategy Group, in 2009, carried out a nationwide study of high-tech cheating. From a sample of 1013 students aged 13-18 and also 1002 parents of 30 or above years of age, it was found that:

- a) “More than a third of teens with cell phones admitted to cheating at least once with them and two-thirds of all teens (65 percent) [said] others in their school cheat with them.”
- b) “Half (52 percent) of teens admitted to some form of cheating involving the internet” –most notably, more than a third (38 percent) had copied text from web sites and turned it in as their own work.
- c) “There were no significant differences in the frequency of cheating [in] private v/s public school or honors students v/s non-honors students.”
- d) “Many students didn’t consider these activities serious cheating offenses, and some didn’t consider them cheating at all.”



Kasprzak and Nixon(2004) are supportive to the fact that high tech cheating is on the rise. They were able to conclude that 89 percent of students agreed that plagiarism using text obtained from the internet is wrong. However, ironically, 25 percent of those same students engaged in this activity.

2.4 FACTORS ENCOURAGING CHEATING

Comprehensive studies, (Bowers 1964, McCabe and Trevino 1993) have shown that reported peer cheating behavior most powerfully predicts student cheating, proving significantly more influential than individual factors such as GPA, gender, age, and participation in extracurricular activities, (McCabe and Trevino 1997; McCabe et. al. 2001).

McCabe et al. (2001) stated that students believe cheating is a way to balance the equation because of strong opposition and the fear of failure. According to Malgwi and Rakovski (2009), there are 12 pressure factors namely: the danger of failing a course; loss of financial aid; fear of parents cutting financial and other support; avoidance of embarrassment; the desire to impress friends or peers; high grade; the desire to land a good paying jobs; to be competitive with others; dependence by family members; competition on job market and the risk of losing a job. .

2.5 WHISTLE-BLOWING

Ralph Nader (1972) defined whistle-blowing as follows; ‘An act of a man or woman who believing in the public interest overrides the interest of the organization he serves, and publicly blows the whistle if the organization is involved in corrupt, illegal, fraudulent or harmful activity’. For the current research on Cheating and Whistle Blowing among Students of University Of Mauritius, the definition of Miceli and Near(1985), is more appropriate which is: “disclosure by organization members (former or current) of illegal, immoral or illegitimate practices under the control of their employers, to persons or organizations that may be able to effect action”. This definition is deliberately broad, allowing for a wide initial conception of whistle blowing and for the many variations in form that whistle blowing can take, (Miceli et al. 2001). It is also the most commonly accepted and widely used definition in related empirical research. Bernardi et al. (2009) paraphrased, Near and Miceli’s (1984) definition as follows “A student (students) informing his/her instructor and/or appropriate dean that another student (other students) has (have) cheated.”

Here at the University of Mauritius, students do not have direct access to the dean of their particular faculty. So the above definition can be amended as follows: A student (students) informing his/her instructor and/or appropriate lecturer or Programme Coordinator (PC), that another student, (other students), has, (have), cheated.

2.6 TYPES OF WHISTLE-BLOWING-FORMAL V/S INFORMAL, IDENTIFIED V/S ANONYMOUS & INTERNAL V/S EXTERNAL

Formal whistle blowing is an institutional form of reporting wrongdoing, following the standard lines of communication or a formal organizational protocol for such reporting. When an employee identifies wrongdoing and tells close associates or someone she/he trusts about the matter is regarded as an informal whistle blower. Rohde-Liebenau (2006), suggest a classification of unauthorized v/s authorized whistle blowing and formal whistle blowing would be an example of the latter.

Identified whistle blowing is an employee’s reporting of a wrongdoing using his or her real identity (or in some other form giving information which might identify him or her) whereas in anonymous whistle blowing the employee provides no information about himself or herself, and may use a fictitious name.



Internal whistle blowing occurs when an employee skips immediate supervisors to inform higher management of issues of wrongdoing. External whistle blowing is the employee's reporting issues of wrongdoing to outside individuals or groups such as reporters, public interest groups or regulatory agencies. These three dimensions lead to eight typologies to blow the whistle [Park et al, 2008], see figure 1 below.

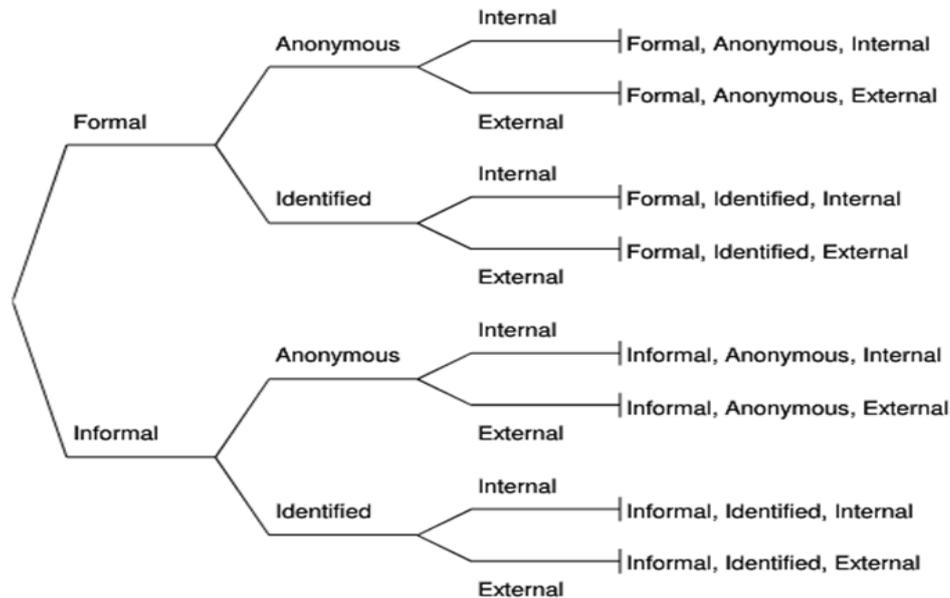


Figure 1

2.7 STUDENTS AND THEIR BEHAVIOUR

Cizek (2003) identifies three categories of cheating behaviours. Firstly, "giving, taking, or receiving information," secondly, "using any prohibited materials," and thirdly "capitalization on the weaknesses of persons, procedures, or processes to gain an advantage" on academic work. Arguing for, whether the student tendency to get involved in whistle-blowing is affected by the student's ethical judgment and moral development, remains uncertain. Brabeck (1984) concluded that "whether or not one blows the whistle . . . is related to one's moral judgment level." In disagreement to the fact as mentioned above is the study of factors that influenced students' perceptions of ethical actions by Allmon et al. (2000) that suggested "it seems likely that the salience and intensity of classrooms or job demands are so great that individuals' thoughtful ethical positions are besieged. Sherrill et al. (1971) instituted that cheaters proved a more positive mind-set towards cheating than those who are not, and were also less alarmed about cheating as a setback. Looking to the other side of the coin, it can be argued that if a student is displeased with cheating by his peers, then the student may be less apt to personally slot in such behavior. In addition if a student has formerly cheated, that individual may be less likely to report cheating by his peers.

Whistle blowing varies by the type of wrongdoing and the involvement of the potential whistle-blower, (Miceli et al. 2008). Evidence from Miceli et al. (2008), presents that the gravity of the unlawful activity and organizational climate were significant prophets of whistle blowing. Consequently, students who perceive cheating as a severe act of wrongdoing are considered as impending whistle blowers. The rate is increased if these students also perceive the cheating as being disadvantageous. It is also worth noting that for his or her interest, a student may engage in whistle-blowing thereby increasing one's power or statue in the organization, (Miceli et al. 2008)



2.7.1 PERSONAL VALUE V/S GROUP NORMS

Norms can be defined as attitudes and behaviors familiar to members of a particular group, or what they believe is “normal”, whereas our values are what are significant to us. According to Rokeach (1972), an individual’s personal values includes a ranking of the beliefs that one holds about his environment. Although socialization takes place in universities, 68 percent of respondents in a survey indicated that their most influential value, are family acquisitions, Willey (2000).

2.7.2 ETHICAL JUDGMENT WITH REGARD TO CHEATING AND WHISTLE BLOWING

Rest (1994), a moral psychologist, recognizes four basics of ethical action. He developed his four elements model by inquiring: “What must come about psychologically for moral behavior to take place?” He concluded that fair action is the artifact of these psychological terms: moral recognition, moral opinion or reasoning, moral motivation and moral character. Finn (1995) personalised Rest’s four element model from a whistle-blowing point of view. He derived the following: is the action performed ethical and tolerable, unethical and tolerable, and unethical and intolerable? Sims (1993) points out that cheating in school transfers to how they act in professional world.

2.8 VALIDITY WHEN CONDUCTING RESEARCH WITH SELF REPORTS

Socially desirable responding is the tendency for participants to demonstrate a positive picture of themselves (Johnson and Fendrich, 2002). Randall and Fernandes (1991) point that those who answer in a socially desirable style tend to over-report good actions or under-report bad actions. According to Paulhus (1991), a response bias is a systematic tendency to respond to a range of questionnaire items on some basis other than the specific item content. Socially desirable responding is apt to arise in responses to socially sensitive questions (King and Brunner 2000). Social desirability response bias influences the soundness of a questionnaire (Huang et al 1998). According to Randall and Fernandez (1991) “SDRB pose an even greater threat to the validity of findings in ethics research than in more traditional organizational behavior research topics”. An instrument is convincing if it perfectly measures what it seeks to measure, (Beanland et al 1999). Between 10% and 75% of the variance in participants’ answers can be explained by SDRB (Nederhof 1985) which can mystify interaction among the variables of interest by restraining relationships among variables or fabricating artificial interaction between variables, (King and Brunner 2000). Only the research done by Bernardi and La Cross(2004) has taken SDRB into consideration However, Tibbetts (1999) acknowledges that SDRB is a problem and involves some limitations with survey research on cheating. Bernardi and La Cross (2004) find that SDRB is significant in students’ self-reported cheating behavior in a sample of students from the United States; those students who were more (less) prone to react in a socially desirable manner reported a lower(higher) rate of cheating. This is so because socially desirable reporters underreport conduct that is socially undesirable for instance cheating .Female students were more liable to react in a socially enviable manner according to Bernardi (2006). As a result, while sexual category may connect with moral perceptions, this finding may be the outcome of not scheming for SDRB.

2.9 GENDER DIFFERENCES

Gender differences have acknowledged mounting interest as a possible forerunner variable to ethical judgment, with unconvincing findings (David et al. 1994, Poorsoltan et al. 1991, Lund 2008). Several studies wind up that women lean to be more ethically susceptible than men in both the office and in colleges, (Davis et al. 1992; Michaels & Miethe, 1989; Newstead et al. 1996). Non-surprisingly, Sherron Watkins was the core whistle-blower at Enron. Lane (1995), points out that”females and older students respond more ethically in a majority of situations.” Contrary to other researches (Millhanet et al. 1970), conclude that females cheat more than males. Klein et al. (2007), found no considerable



distinction in gender when unethical behavior is raised. According to Whitley et al. (1990), even though men and women convey different mind-sets and views about cheating, both are equally likely to slot in such behavior. Supportively, Dieknoff et al. (1999) point out that sexual characteristic was “probably relatively unimportant”. As regards sanction upon cheating behavior, Malgwi and Rakovski (2009) note that male and female students diverge in opinion. For example, female students alleged stronger penalties should be imposed, anonymous tip lines, and parental notification while male students proposed that penalties should be enacted by the lecturer and that cheaters will be cheaters no matter what is done to prevent them to cheat.

3.0 METHODOLOGY

3.1 THE QUESTIONNAIRE

The questionnaire was drawn largely from past researches on cheating as well as whistle blowing (Bernardi et al. 2011). Section A consisted of a very brief background of the participant that included age, gender and course study, moreover. section B included questions on cheating whistle-blowing based on Salter et al. (2001) and Bernardi et al. (2011). Finally section C incorporated the measure of Social Desirability Response Bias (SDRB) using Paulhus’s (1991) Impression Management Subscale). All previous researches in the field of cheating have used questionnaires as a data collection method (Bernardi and LaCross 2004, Tibbetts and Myers 1999) this research is no exception. Concerning section C, though there are a number of instruments available to measure Social Desirability Response Bias, Impression Management Subscale (IMS) of Paulhus’ (1991) was used. Its raison d’être was mainly for three solid reasons. Originally, IMS has the uppermost overall correlation among four different measures of socially desirable responding, Randall and Fernandes (1991). Secondly, the IMS is the most recent techniques used. Finally, the IMS offer an overall scale that contains 13 items less than the Marlow-Crowne scale (Crowne & Marlowe 1960) with similar internal consistency “0.75–0.86 for Paulhus’ IMS versus 0.73–0.88 for the Marlowe-Crowne scale”, (Bernardi and Adamaitis 2007). The Paulhus’s IMS consisted of twenty statements. The students had to choose on a seven-point Likert scale that uses number 1 as “not true”, number 3 as “somewhat true” and number 7 as “very true”. The Likert scale works as follows; take for example the first statement on the Paulhus’s (1991) Impression Management Subscale: “Sometimes I tell lies if I have to.”, if a student picked number one or two in the Likert scale, he would be considered to be answering in a socially desirable manner for that statement, this is so because everybody tends to tell a lie and is not considered to be a desirable behavior. Moreover statement number two, “I never cover up my mistakes.”, if a student picked number 6 or 7, he would be judged as to be answering in a socially desirable manner (SDM). For statement 3, SDM is on 1 and 2, statement 4, SDM is on 6 and 7, statement 5 SDM is on 1 and 2, statement 6 SDM is on 6 and 7, and goes on like that. The SDM reverse from far left, (1-2), to far right, (6-7), for every response.

A sample size of 300 students was chosen on a random basis in line with Roscoe (1975) who states that, sample size between 30 and 500 are appropriate for most researches.

3.2 VARIABLES

3.2.1 EXPLANATORY VARIABLES

As there were many explanatory (independent) variables, we used a factor to represent a cluster of variables thus reducing the number of variables. For logistic regression purposes gender, male was coded as “1” and female was coded as “0”. Question 1 in section B of the questionnaire, the responses for “yes” was coded as “1” and “0” for those who chose “No”. Questions number 2, 3, 9, 10, 11, 12, 13 were also coded as “1” for having answered “Yes” and “0” for having answered “No”. The group of variable which constituted question number 4(major test), 5(minor test), 6(major assignment), 7(minor assignment), deal with pre-cheating behavior. This group of questions is referred to as “PRE-CHEAT”.



The latter has range of 0-4. If one student reported no cheating behavior, he would score “0”, if he reported one cheating behavior, for example if he encircled “Yes” in any question in that group, he would be entitled to have score “1” and up to a maximum of “4”. In other words a summation is done. Paulhus’s (1991) impression management subscale constituted of 20 questions. Respondents who selected “1 or 2” or “6 or 7”, it would be coded as “1=bias response” in SPSS and those who picked “4, 3 or 5”, would be coded as “0=non-bias response”. For example the first statement in Paulhus (1991) Impression management subscale, the socially desirable manner is found on the “1” and “2” of the Likert scale, thus a student who picked “1” or “2”, would score “1”, if he did not pick ‘1’ or ‘2’, he would score “0”. Moreover, the SDM on the second statement is found on the “6” and “7”, if a student would picked either 6 or 7 he would score “1” and if not so he would score “0”. If a student get 0 out of 20 as a score he would be considered as one who did not respond in a social desirable manner and if he scored 20 out of 20, he would be responding in an awfully social desirable way. Hence higher the score, higher would be the degree of answering in a social desirable manner.

3.2.2 RESPONSE VARIABLES

The remaining two variables would be dependent variables. Therefore, question number 8 and 14 were to be considered as dependent variables. They were coded as “1” for those who answered “Yes” and “0” for those who have answered “No”.

4.0 DATA ANALYSIS AND FINDINGS

Respondent profile

The majority of participants were female, with a percentage of 60.3% (181) and 39.7% (119 for males). Among the 300 participants, 217 (72.8%) were from the Faculty Law and Management, 8 (2.7%) students were from the Faculty of Agriculture. The Faculty of Engineering registered 33 (11%) participants while 10 (3.3%) students were from Faculty of Science. Finally, the Faculty of Social Studies and Humanities had 32 (10.7%) respondents.

4.1 PRELIMINARY ANALYSIS OF THE QUESTIONNAIRE

TABLE 1

QUESTIONS		YES		NO	
		%	Freq	%	Freq
1	Have you ever observed another student cheating on an exam?	82	246	18	54
2	Have you ever observed another student cheating on a project or a written assignment?	65	195	35	105
3	Do you know anyone who routinely cheats on exams?	49	147	51	153
4	Have you ever cheated on a major exam (70% or more of the final grade)?	21	63	79	237
5	Have you ever cheated on a minor exam (less than 30% of the final grade)?	52.7	158	17.3	142
6	Have you ever cheated on a major project or assignment (70% or more of the final grade)?	15.3	46	84.7	254
7	Have you ever cheated on a minor project or assignment (less than 30% of the final grade)?	32	96	58	204
8	Do you think you will cheat in the future?	26.3	79	73.7	221
9	Have you ever been caught cheating?	9.3	28	90.7	272
10	Do you think more should be done to stop cheating?	80.3	241	19.7	59
11	Do you believe cheating is a direct result of the competition for grades?	61	183	39	117



12	Do you believe cheating is wrong, dishonest, or unethical?	92	276	8	24
13	Have you ever witnessed someone else cheating and reported it?	16	48	84	252
14	Would you report someone whom you witnessed cheating?	22.7	68	77.3	232

The answers to questions in Section B of the questionnaire are shown in table below.

The questions 4 to 7 have been summed up to gauge the level of cheating ranging from 0 to 4 with 0 representing no cheating and 4 being the highest level of cheating. This can be illustrated as follows

Table 1(b)

LEVEL OF CHEATING	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE %
0	118	39.3	39.3	39.3
1	78	26	26	65.3
2	60	20	20	85.3
3	14	4.7	4.7	90
4	30	10	10	100
TOTAL	300	100	100	

118 students have reported having never cheated in any exams or test since they have answered "NO" to each of these 4 questions. Thirty (5 females and 25 males), students have reported the highest level of cheating in the sense that they had responded "YES" to each of the previously mentioned questions. Out of the 118 students, 90 of them were female and only 28 were males.

Table 3
Reported cheating

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid YES	182	60.7	60.7	60.7
Valid NO	118	39.3	39.3	100.0
Total	300	100.0	100.0	

Thus Table 3 shows that the self-reported cheating rate is 60.7% at the University of Mauritius. Prior research such as Bernardi et al (2011) found a self-reported cheating rate of 64.7%.

4.1.1 Impression Management Subscale (Paulhus, 1991)

Female respondents were more apt to answer in a socially desirable manner, with a mean score of 6.34 compared to male respondents, with a score of 4.97. The mean score for the whole population was 5.8, which is consistent with Bernardi et al. (2011) score of 5.9. The relationship between gender and SDRB was investigated using Pearson product-moment correlation coefficient. There was weak positive correlation between the two variables, $r = 0.213$, $n = 300$, $p < 0.001$. The table below shows the total score on the impression management subscale. Only 11 students responded in an extremely non-biased way by scoring 0 and only 1 student responded in an extremely biased way by scoring 20 out of 20.

Table 4

SCORE ON IMS	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE %
0	11	3.7	3.7	3.7
1	12	4	4	7.7
2	16	5.3	5.3	13
3	36	12	12	25
4	36	12	12	37



5	35	11.7	11.7	48.7
6	36	12	12	60.7
7	35	11.7	11.7	72.3
8	29	9.7	9.7	82
9	17	5.7	5.7	87.7
10	13	4.3	4.3	92
11	11	3.7	3.7	95.7
12	7	2.3	2.3	98
13	4	1.3	1.3	99.3
16	1	0.3	0.3	99.7
20	1	0.3	0.3	100
TOTAL	300	100	100	

**4.2 Hypothesis testing concerning the first dependent variable
(Tendency to cheat in the future)**

HA1: Students who have formally cheated are more apt to cheat in the future.

HA2: Students who have not formally cheated will be less likely to cheat in the future.

HB1: Students who think that concrete action should be taken about cheating to indicate that they are less likely to cheat in the future.

HC1: Students who score higher on Paulhus' measure of social desirability response bias will be less likely to say they intend to cheat in the future.

HC2: Students who score lower on Paulhus' measure of social desirability response bias will be more likely to say they intend to cheat in the future.

The relationship between students who have reported cheating (pre-cheating) and cheat in the future; those who think that concrete action should be taken about cheating and cheat in the future, SDRB and cheat in the future and finally gender and cheat in the future were investigated using Pearsons product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of assumptions of normality, linearity and homoscedastidity.

Table 5

INDEPENDENT VARIABLE	DEPENDENT VARIABLE	R	N	SIG.(2-TAILED)	RELATIONSHIP
TOTAL OF QUESTION 4.7(PRE-CHEAT)	FUTURE CHEAT	0.57	300	0.000	Non-inverse
MORE ACTION SHOULD BE TAKEN	FUTURE CHEAT	-0.294	300	0.000	inverse
TOTAL SCORE IN PAULHUS IMS SCALE	FUTURE CHEAT	-0.166	300	0.004	inverse
SEX	FUTURE CHEAT	0.273	300	0.000	Non-inverse

As shown in the table above, there is a strong, positive correlation between the two variables, pre cheat and future cheat, $r = 0.57$, $n = 300$, $p = 0.000$, the positive sign indicates that there is a non-inverse relationship. Secondly there is a weak, negative correlation between the two variables, more action should be taken and future cheat $r = -0.294$, $n = 300$, $p = 0.000$, the negative sign indicates that there is an inverse relationship. Concerning the third one, there is a weak, negative correlation between the two variables, $r = -0.166$, $n = 300$, $p = 0.004$, the negative sign indicates that there is an inverse relationship. Finally, there is a weak, positive correlation between sex and future cheat, between the two variables, ($r = 0.273$, $n = 300$, $p = 0.000$) the positive sign indicate that there is a non- inverse relationship.



4.2.1 FURTHER ANALYSIS

Direct logistic regression was performed to assess the impact of a number of factors on the likelihood that respondents would report that they intended to cheat in the future. The first model contained four independent variables (pre-cheating behavior, action toward cheating, SDRB and gender). However, the Hosmer-Lemeshow Goodness of Fit Test revealed that there was a poor fit, the significance was less than 0.05 see table below.

Table 6

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	15.933	8	.043

Thus in order to achieve a significance level of more than 0.05, gender was not accounted for. The next model contained all predictors which were statistically significant. The model was able to distinguish between respondents who reported and did not report that they intend to cheat in the future.

Table 7

Classification Table ^{a,b}					
	Observed		Predicted		
			FUTURE CHEAT		Percentage Correct
			no	yes	
Step 0	FUTURE CHEAT	no	221	0	100.0
		yes	79	0	.0
	Overall Percentage				73.7

a. Constant is included in the model.
b. The cut value is .500

The Hosmer-Lemeshow Goodness Of Fit Test revealed that there was a quite good fit with the significance level being greater than 0.05(refer table 8).

Table 8

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	13.412	8	.098

The model as a whole explained between 29.8% (Cox and Snell R Square) and 43.5% (Nagelkerke R squared) of the variance in future cheating and correctly classified 83%(table 10) with an increase of (83-73.7=9.3%) in the number of cases.

Table 9

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	239.913 ^a	.298	.435

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Table 10

Classification Table ^a					
	Observed		Predicted		
			FUTURE CHEAT		Percentage Correct
			no	yes	
Step 1	FUTURE CHEAT	no	208	13	94.1
		yes	38	41	51.9
	Overall Percentage				83.0

a. The cut value is .500



With reference to the table 11 below, two of the independent variables namely totalpre_cheat and more_action with $p=0.000$ and $p=0.006$ respectively made a statistically significant contribution to the model. The strongest predictor of reporting intention to cheat in the future was total “pre cheat”, recording an odds ratio, $(Exp(B)=2.72)$ approx to the power of the coefficient which is the B value)(table 11), of 2.850 implying that when the independent variable totalpre_cheat increases by one unit the odds that the case can be predicted increase by a factor around 2.9 times, when other variables are controlled. This indicate that respondents who had cheated in the past(pre_cheat) were 2.850 times more likely to report an intention to cheat in the future than those who did not report cheating behavior, controlling for all other factors in the model. If the total_SDRB would have been significant with $p<0.05$, the odds ratio of 0.932 for SDRB taken was less than 1, indicating that for every increase in the score of SDRB respondents were 0.932 times less likely to report that they would cheat in the future problem controlling for other factors on the model, but that’s NOT the case.

Table 11

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	totalpre_cheat	1.047	.145	52.156	1	.000	2.850	2.145	3.787
	more_action(1)	-1.044	.377	7.658	1	.006	.352	.168	.737
	total_SDRB	-.071	.057	1.565	1	.211	.932	.834	1.041
	Constant	-1.407	.550	6.542	1	.011	.245		

a. Variable(s) entered on step 1: totalpre_cheat, more_action, total_SDRB.

By analyzing the B value, which shows the direction of the relationship in the table above, the following can be deduced. The B value for total_precheat is 1.047, which is a positive value, meaning that students who reported having cheated will be more apt to respond “YES” to whether they would cheat in the future and those who have not reported any cheating behavior would be more apt to respond “NO” as to whether or not to cheat in the future. This can be supported by the following table:

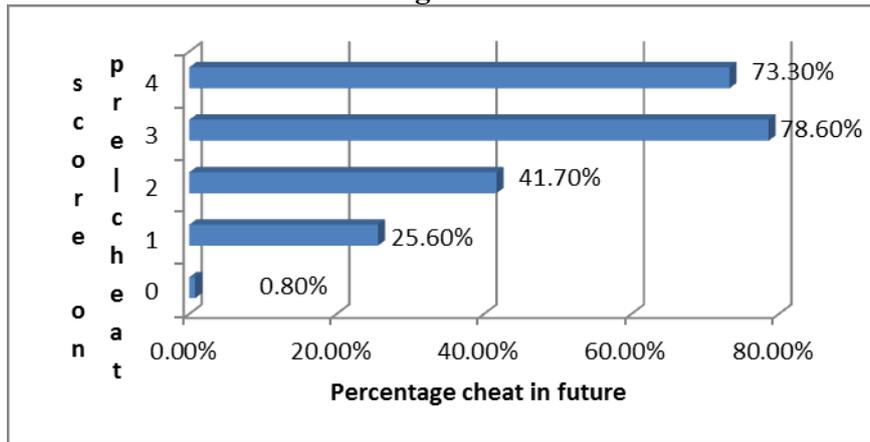
Table 12

FUTURE CHEAT * total of question 4-7 Cross tabulation							
Count							
		total of question 4-7					Total
		0	1	2	3	4	
FUTURE CHEAT	no	117	58	35	3	8	221
	yes	1	20	25	11	22	79
Total		118	78	60	14	30	300

The Table shows that only one student has reported that he would cheat even if he have not cheated in the past, implying that those who have not formally cheated would be less likely to cheat in the future in line with Bernardi et al.(2011) and Bernardi and Adamaitis (2007). The diagram below also illustrated that the higher the score on total pre_cheat the more likely to cheat in the future.



Figure 2



The B value (table 11) of whether more should be done to stop cheating is -1.044, implying that there would be an inverse relationship between independent variable (more_action) and the dependent one, cheat in the future. This can be interpreted as follows: students who said that more should be done prevent cheating were less likely to cheat in the future. The odd ratio was 0.352 meaning that those who reported that more should be done were 0.352 times not likely to report an intention to cheat in the future than those who did not report that more should be done, controlling for all other factors in the model.

4.3 Hypothesis testing concerning the second dependent variable (Tendency to whistle-blow in the future)

HA2: Students who have cheated in the past will be less apt to whistle-blow in the future.

HA2: Students who have not cheated in the past will be more apt to whistle-blow in the future.

HB2: Students who think that concrete action should be taken about cheating to indicate that they are more likely to whistle-blow in the future.

HC2: Students who score higher on Paulhus' measure of social desirability response bias will be more likely to say they intend to whistle-blow in the future.

HC2: Students who score lower on Paulhus' measure of social desirability response bias will be less likely to say they intend to whistle-blow in the future.

HC3: Students who report having whistle-blown in the past will be more likely to whistle-blow in the future.

HC3: Students who report not having whistle-blown in the past will be less likely to whistle-blow in the future.

The relationship between students who have reported cheating (pre_cheating) and whistle-blowing in the future, those who think that concrete action should be taken about cheating and whistle-blowing in the future, SDRB and whistle-blowing in the future and finally gender and whistle-blowing in the future were investigated using the same techniques as stated with the first dependent variable.

Table 13

INDEPENDENT VARIABLE	DEPENDENT VARIABLE	R	N	SIG.(2-TAILED)	RELATIONSHIP
TOTAL OF QUESTION 4.7(PRE-CHEAT)	Would you report someone else	-0.234	300	0.000	inverse
MORE ACTION SHOULD BE TAKEN	Would you report someone else	0.248	300	0.000	Non inverse
TOTAL SCORE IN PAULHUS IMS SCALE	Would you report someone else	0.196	300	0.075	Not significant
WITNESSED AND REPORT SOMEONE	Would you report someone else	0.133	300	0.021	Non inverse
SEX	Would you report someone else	-0.179	300	0.002	inverse



Compared to the model used in Bernardi et al.(2011),the only missing variable was SDRB(total IMS scale) which was not significant since P was greater than 0.05 making it difficult to compare(see table 13 above). For instance the predictive variables were pre_cheat (total of question 4-7), more action should be taken, student who have whistle-blow in the past and sex.

4.3.1 FURTHER ANALYSIS

As with the first dependent, direct logistic regression was performed to evaluate the impact of multiple factors on the chances that respondents would report that they intended to whistle-blow in the future. The model contained four independent variables(pre-cheating behavior, action toward cheating, whether they have whistle-blown and sex) SDRB was not included as it was not statistically significant (see table above). The full model contained all predictors and was statistically significant $X^2(4, N=300) 77.3\%$ (see table 14), $p < 0.005$, indicating that the model was able to distinguish between respondents who reported and did not report that they intended to whistle-blow in the future.

Table 14

Classification Table ^{a,b}					
Observed		Predicted			
		would you report someone else		Percentage Correct	
		NO	YES		
Step 0	would you report someone else	NO	232	0	100.0
		YES	68	0	.0
Overall Percentage					77.3

a. Constant is included in the model.
b. The cut value is .500

The Hosmer-Lemeshow Goodness Of Fit Test revealed that there was a good fit as the significance was greater than 0.05(see table below)

Table 15

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	4.060	7	.773

The model as a whole explained between 14.3% (Cox and Snell R Square) and 21.8% (Nagelkerke R squared) (ref Table 16) of the variance in future whistle-blowing and correctly classified 78.3 % (table 17) of cases.

Table 16

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	281.625 ^a	.123	.188

a. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.

Table 17

Classification Table ^a					
Observed		Predicted			
		would you report someone else		Percentage Correct	
		NO	YES		
Step 1	would you report someone else	NO	229	3	98.7
		YES	62	6	8.8
Overall Percentage					78.3

a. The cut value is .500



As shown in table 18, The Wald criterion made a statistically significant contribution to the model ,total pre-heat with $p=0.07$ more-action with p value of 0.008, whistle-blow2-past whistle-blowing with $p=0.08$). However gender was not a significant predictor having p value of 0.125. The strongest predictor of reporting action toward cheating was whether more action should be taken, compared to Bernardi et al. (2011) who reported that past whistle-blowing behavior was the strongest predictor. More_action recorded an odds ratio (Exp(B)) of 15.143. Respondents who think that more action should be taken towards cheating were over 15.143 times more likely to report an intention to whistle-blow in the future than those who did not report that more should be done to stop cheating, controlling for all other factors in the model. The odds ratio of 0.650 for students having reported cheating behavior was less than 1, indicating that for every unit increase in the score of totalpre_cheat respondents were 0.65 times less likely to report that they would whistle-blow in the future problem controlling for other factors on the model.

Table 18

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	totalpre_cheat	-.431	.160	7.223	1	.007	.650	.475	.890
	more_action(1)	2.718	1.029	6.981	1	.008	15.143	2.017	113.692
	whistleblow2(1)	1.003	.375	7.138	1	.008	2.726	1.306	5.690
	sex(1)	-.526	.343	2.359	1	.125	.591	.302	1.156
	Constant	-3.319	1.041	10.168	1	.001	.036		

a. Variable(s) entered on step 1: totalpre_cheat, more_action, whistleblow2, sex.

By evaluating the B value, which shows the direction of the relationship, in the table above the following can be deduced. The B value for total_preheat is -0.431, which is a negative value, meaning that students who reported having cheated will be less apt to respond “NO” to whether they would whistle-blow in the future and those who have not reported any cheating behavior would be more apt to respond “YES” as to whether or not to whistle-blow in the future. Concerning as to whether more action should be taken toward cheating(more_action) the b value is a positive one which is 2.718, this indicates that those who reported that more should be done toward cheating were more apt to say “YES” as to whether or not to whistle-blow in the future. Those who have (have not) whistle-blow in the past has a B value of 1.003, a positive one. This indicates that those who answered that they have whistle-blown, would be more apt to whistle- blow in the future than those who did not whistle-blow. Moreover those who reported that they had whistle-blow in the past they were over 2 times more likely to whistle-blow in the future

5.0 Summary of findings

The research was conducted in order to assess the opinion and to obtain facts about cheating and whistle-blowing among students at the University of Mauritius and the findings were as follows.

- ✓ Eighty two percent of students have witnessed cheating in exams, which reveal that cheating is indeed widespread within the premises of the University Of Mauritius.
- ✓ Even though the percentage of students who knows someone who routinely cheats on exam is lower than those who don't know, 49% is considered to be quite worrisome.
- ✓ Since 60.7% of students have reported an element of cheating this proves that that cheating is present.
- ✓ Only 9.3% of students reported that they have been caught.
- ✓ The study also revealed that there is competition for grade at the University of Mauritius as 61% of the students believe that cheating is a direct result of competition for grades.



- ✓ Students were reluctant to blow the whistle on offenders.
- ✓ Students were quite ethical and reported that cheating is wrong and dishonest. Although they responded in such manner, they tend to cheat. However, 8% believed that cheating is a socially acceptable behavior.
- ✓ Females responded in a more socially desirable manner than males.
- ✓ Students who have cheated in the past are more likely to cheat in the future.
- ✓ Students who have cheated in the past are less likely to whistle-blow in the future.
- ✓ Students who have reported that concrete action should be taken about cheating are less likely to cheat in the future.
- ✓ Students who have reported that concrete action should be taken toward cheating are more likely to whistle-blow in the future.
- ✓ Students who have reported having whistle-blow in the past are more likely to whistle-blow in the future.
- ✓ SDRB was not significant in both cases.

6.0 Recommendations and Future Research

The goal is to prevent the situation from worsening further and also to find a remedy for the present situation which becomes more severe when student practise the same dishonest behaviors in their professional life negatively impacting on the organization culture, (Nazir and Aslam,2010). Here are some recommendations that would help to achieve these objectives.

Students will try to invent new ways to cheat. To be able to detect such malpractices, invigilators must be accustomed to how they cheat and to the tricky methods students employ to cheat in exams. The first recommendation is that invigilators must do their work with more conviction; more conviction in the sense that the technique used to detect students who cheat must be effective. A student will be unwilling to cheat if the invigilator constantly watches him. However, the invigilator cannot do so for all the students at the same time. The best techniques is to watch for wandering eyes as in exams conditions students should focus on their paper only and not anywhere else. Invigilators must be more alert to noises in the examination room taking a closer look where they come from. Obviously, the more invigilators there are the more students will be reluctant to cheat. Secondly, the setting up of a complaint reporting mechanism will make students think twice before cheating in an exam. Potential whistle-blowers could feel free to report cheating behavior. Secondly more punitive action must be taken, the higher the degree of misconduct, the higher the punitive action should be.

Those who wish to carry out research in the field of cheating can investigate further. For example in this particular research Paulhus's impression management subscale has been used to measure SDRB but in this particular context it is not significant in both intention to cheat in the future and whether to whistle-blow in the future. Future research can use Marlow-Crowne scale to measure SDRB (Crowne& Marlowe 1960). Moreover, the validity of the results could be enhanced by taking a sample which is representative of the population of students at the University of Mauritius. The research could be extended to other tertiary institutions operating in Mauritius. Age factor has not been discussed in this particular research, so future research may consider this variable. such approach but then the research should take post graduates students under consideration. The study was mainly conducted in order to achieve certain goals and the majority of them have been achieved. The relationships have been explored fully. From the results obtained, it is found that a large majority reported that cheating is wrong practice but nevertheless they reported a cheating behavior. This is a worrying sign as students are ready to go against their own ethical thinking. Even though the University Of Mauritius stresses out not to cheat, with signboards on walls of all faculties with severe penalties imposed, students continue to cheat. There is no doubt that cheating is omnipresent at the University Of Mauritius. It is indeed an alarming problem and changing that particular mindset of students has become one of the



biggest challenges. Effective measures must be implemented to reduce the number of cheating cases to uphold the credibility of undergraduate degrees.

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