To what extent do student characteristics and situational factors influence academic dishonesty amongst economic and business students in a sample at three South African universities?

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COMPULSORY DECLARATION:

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works of other people has been attributed, cited and referenced.

Signature: …….. Date: …….

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Abstract

This study examines the situational and personal characteristics that predict academic cheating. It examines the situational characteristics such as the perceived likelihood of getting caught and punished when cheating, the perception of how much peer cheating takes place and the standards and culture of integrity that exists at the institution. The personal characteristics are the level of intrinsic motivation of the student, gender, grade point average, year of study and the perceived cost or benefit of cheating. A descriptive design was used and a survey administered at three different universities in the Western Cape, South Africa. The results indicated that all of the factors except the year of study and the grade point average of the student influence the frequency of academic dishonesty. This gives universities greater insight into what to look for when attempting to prevent academic dishonesty. A number of limitations did exist in the method of data collection and the need to remain ethically compliant which didn't allow for a cross-university comparison.

Introduction

Academic dishonesty has become a topic of conversation for many academic institutions worldwide (De Jager & Brown, 2010; McCabe & Treviño, 1997; Megehee & Spake, 2008; O' Rourke, Barnes, Deaton, Fulks, Ryan & Rettinger, 2010). The majority of the body of knowledge in this area resides in North America and Europe with far less existing in the South African context.

This study aims to add to this body of knowledge examining both the situational and personal characteristics that play a role in predicting academic dishonesty. It looks more specifically at the South African context and amongst economics and business students. A study by Teixeira and Rocha (2010) was used as a model for this study as it examined the issue of academic dishonesty across the world and is seen as a highly reputable piece of research. Although different in many ways, the general method of the present study follows a similar path to this one.

Academic institutions increasingly have to find ways of eradicating academic dishonesty, and this study aims to add to the body of research on the topic that would then aid institutions in their knowledge of what leads to dishonesty and therefore what they can do to prevent it.

A review of the literature in the area is followed by the method of the study, along with the results of the survey and a detailed discussion and interpretation of what these results indicate.

Literature Review

Introduction

Academic dishonesty is acknowledged as a problem at universities worldwide and increasing numbers of studies are being conducted in academia to assess the link between acts of academic dishonesty and future unethical behaviours in business (Brown, Weible & Olmosk, 2010; Chapman, Davis, Toy & Wright, 2004; McCabe, Treviño & Butterfield, 2001; McCabe & Treviño, 1995; Rakovski, Carter & Levy, 2007). By understanding the prevalence of dishonesty and the factors that may give rise to it, academic institutions will have more information as to how to prevent it taking place. A key thrust in the research in this area involves an understanding what individual factors and situational variables have an impact on academic dishonesty (Chapman, Davis, Toy & Wright, 2004).

The most popular way of measuring academic dishonesty has been to ask students whether they have been involved in cheating behaviours. Cheating includes: exam cheating, plagiarising, submitting others' work and assisting others illegally, in the university environment (Al-Qaisy, 2008). There is some difficulty in measuring cheating as often self – report surveys are relied upon, which show large variance in results, making the findings difficult to generalise (Nowell & Laufer, 1997). Students may also not be honest in their responses in this form of survey. This being said, across many different studies in the field of academia some generalisations have been possible and it appears that general trends have appeared, as will be discussed in this chapter. The results of studies in this field appear to confirm that situational and personal characteristics play a role in influencing the likelihood of academic dishonesty.

There has been much research on the influencers of academic dishonesty: looking firstly at personal characteristics that influence the prevalence of cheating and then secondly the situational characteristics (Al Qaisy, 2008; Chapman et al., 2004; Gallant, 2008; Iyer & Eastman, 2008; Jordan 2001; Liddell & Fong, 2008; Lucas & Friedrich, 2005; McCabe, 2005; McCabe & Treviño, 1997; Murdock & Anderman, 2006; Rettinger & Kramer, 2009). Personality characteristics that are common in the available research include: motivational factors, gender, age, background, intelligence, the perceived cost or benefit of cheating as

well as prior achievement (McCabe, 2005; McCabe, Treviño & Butterfield, 2001; Murdock & Anderman, 2006). Looking at personal characteristics as influencers assumes that individuals have some or other inherent characteristics that predispose them to engage in dishonest behaviour (McCabe & Treviño, 1997). Situational characteristics have been shown to also influence the prevalence of academic dishonesty. The situational characteristic influencers of academic dishonesty include the likelihood of punishment, and the severity of that punishment, the perceptions of cheating that takes place amongst peers, the honour codes that exist and the culture that exists at the institution. (McCabe, Treviño & Butterfield, 2001; Murdock & Anderman, 2006). They in turn state that the situational characteristics have more bearing on the likelihood of students cheating than personal characteristics. The peer-related factors, such as perceptions of the likelihood of being caught or the perceptions of the frequency of peers cheating have been shown to be most significant predictors of academic dishonesty (McCabe & Treviño, 1997).

This chapter will provide a review of the available research in this area and build a framework for understanding of what academic dishonesty is and then examine the current literature surrounding the different situational and personal characteristics that may influence academic dishonesty.

Understanding academic dishonesty

Definitions

How academic dishonesty is defined, and therefore what is construed as an act of dishonesty, influences the actual reported frequency of dishonest behaviours (Nowell & Laufer, 1997). Plagiarism has been defined as "a form of dishonesty which involves taking the ideas of someone else and presenting them as your own work" (Liddell & Fong 2008, p.1). Similarly it can be seen as intellectual theft, where a person presents someone else's work as their own without citing the source (Megehee & Spake, 2008). Looking more generally at all forms of academic dishonesty, Kisamore, Stone and Jawahar (2007) define it as "a construct that encompasses multiple forms of academic deviance including but not limited to test cheating, plagiarism, and inappropriate collaboration" (P. 382). It has also been stated that cheating can be evident in exams and tests, where copying takes place in the use of 'crib' notes, finding out what is in the test from someone who had taken it

previously and plagiarising work in written assignments (McCabe, Butterfield & Treviño, 2006). Looking at dishonesty in a broader sense, Sheard, Markham and Dick (2003) regard academic cheating as an act, or series of acts, that contravene institutional practices or are seen as illegal, immoral or unethical.

These definitions, although all different in some way, point to the use of knowledge other than the person's own and talk of dishonesty and immorality. In this study it was decided not to confine academic dishonesty to any particular type of behaviour, but rather to look at a wide range of behaviours that contravene university rules and that are generally perceived by the institution to be morally wrong.

Frequency of cheating

Etter, Kramer and Finn (2006) have noted a rising amount of dishonesty recently, aided by technology and more specifically the internet. The increasing concern about values in the field of education as well as how this may transfer into the corporate world has brought about further study in this area throughout the world. McCabe and Treviño (1997) found that as many as 80 % of students cheat, or have cheated, in their high school years and that that figure remains consistent through their undergraduate period, as they found in a study of nine different universities in the USA. Similarly, Whitely (1998) found that at least 70 % of college students had admitted to at least one form of academic cheating. McCabe (2005) surveyed over 50,000 undergraduate students in the United States of America and found that 70 % had reported to have cheated in some way and one-quarter of them had cheated in a test. College students surveyed by Murdock and Anderman (2006) openly admitted that cheating has become an expected practice at all levels. According to Roig and Marks (2006) there has been a significant increase in cheating between now and the 1960s. This they inferred by comparing the results and studies from the 1990's by McCabe & Treviño (1993) and McCabe and Treviño (1997) with those reported by Bowers (1964).

More specifically to the business world, there has been a rise in attention to the perceived growth of academic cheating (Kisamore et al., 2007; Rakovski et al., 2007). A study conducted specifically with business students by McCabe, Butterfield and Treviño (2006) examined 5,000 business and non-business students across 32 different universities in Canada and USA through the use of an electronic survey. They found that business students

cheated more than the non-business students. Chapman et al. (2004) found in their study of business students in the USA that 75 % of all students will cheat at some stage in their university career. Teixeira and Rocha (2010), in their study of over 7,000 business students across 42 different universities across the world, reported that on average 62 % of the students had cheated. Megehee and Spake (2008) found that cheating frequency was of a low level among the business students in their voluntary study of over 1,000 students, but that 90 % of the students they surveyed reported that they had cheated at least once.

In another study confirming the prevalence of cheating amongst business students McCabe and Treviño (1997) found that business school students cheated more than others. Bowers (1968) reported in his study of 99 different campuses that business students showed an 8 % higher cheating rate than the next highest group. McCabe et al. (2006) found that undergraduate students who wanted to pursue a career in business showed more dishonest behaviour. They also showed in their study of 32 different colleges that over half the business students admitted to some form of cheating. The research presented here suggests that there is a tendency for business students to have a higher propensity to cheat. When reflecting on the quality of the results of these studies it is important to recognise comparison studies between business and non-business students at the same institutions are more likely to give us an accurate description of the role that being a business student plays.

In offering some thinking around the reasoning for this trend, Caruana, Ramaseshan and Ewing (2000) stated that studies show that students that are doing business majors, regardless of any other personal characteristic show lower ethical values than any other. This they tested by surveying 300 business students in Australia which tested the impact of anomie (morality) on academic dishonesty. There is some theory around why business students in particular cheat, and in fact show higher cheating rates. Although this must be viewed with caution, Ghosal (2005) declared that curricula within business schools emphasise wealth rather than attention to all societal stakeholders, and this may firstly remove a sense of moral responsibility and secondly affect their behaviour. Frank, Gilovich and Regan (1993) surmised that exposure to the self-interest model in economics played a part in students acting in a more self-interested way and therefore cheating. They did this via a comparative study of first-year economics students and first-year astronomy students

where the decline in honesty among the economics students was greater than that of the astronomy students. They also found that significant differences existed in the amount of cheating between business and non-business students in written assignment cheating, whilst on test cheating (crib notes and copying others' papers) it was less significant. This alone may not be grounds enough on which to base a generalisation, but it does complement the findings of Rakovski et al. (2007) where they state that business students are less likely to disapprove of cheating than their peers. Gaining an understanding of cheating trends, and what causes them in business students, is important as this may have a direct impact on their behaviours in their future workplace (McCabe et al., 2006)

The literature summarised above suggest that business students cheat more than their peers and that they are less likely to disapprove of cheating as well (Nowell & Laufer, 1997; Rakovski et al., 2007).

Having investigated the differences between business and non-business students' propensity to cheat, the literature now focuses on the different situational and personal characteristics that may influence the frequency of cheating behaviours that take place. These are divided into two distinct sections: situational, which incorporates perceived severity of punishment, the institutional academic policies and codes that exist and the perceived amount of cheating that takes place amongst peers. Personal characteristics incorporate the motivation style of the student, the perceived internal costs of benefits of cheating, the gender, age, and the grade point average of the student.

Situational variables

Research in this area has identified a number of variables comprising external factors within the context of the university or environment at large that affect the cheating trends that exist.

Punishment severity and the likelihood of getting caught

Some studies have focused on the severity of punishment for cheating, and the perceived consequences of getting caught, which have been shown to influence the degree of academic cheating that takes place (Bisping, Patron, Roskelley, 2008; Texeira & Rocha, 2010). Leung (1995), in analysing a wide array of literature, found that the likelihood of

getting caught and the severity of the punishment were both deterrents to cheating, but that the likelihood of that punishment is more of a deterrent than the perceived severity of that punishment. Students also felt that in-class dishonesty was more serious than out-of-class dishonesty and cheating in an exam to be more serious than course-based cheating And were then said to engage less in what they perceived to be more serious acts of dishonesty, such as exam and test cheating (Rakovski et al., 2007). This indicates that with the increase in the seriousness of dishonest acts, the more likely they perceived the punishment to be. Even in situations where strict academic cheating policies and honest cultures exist, deterrence theory suggests that for cheating to be prevented there must be a perception that cheaters will be caught and that the punishment for that will be sufficiently severe (Gibbs, 1975).

Another factor to emerge from the literature is the conscientiousness with which universities police for dishonesty, then actually follow through with punishment when students are caught and whether this intervention is visible to students. In a study by Graham, O' Brien and Steffen (1994) it was found that students do cheat when there is a low perceived risk of being caught but 20 % of lecturers professed to not watching students during tests, and although 79 % of the lecturers reported having seen cheating taking place, only 9 % of those people actually reported the behaviour. This sort of 'laissez-faire' attitude is more than likely to encourage cheating behaviours as word begins to spread through the student body.

More specifically to studies done with business students, Megehee and Spake (2008) found that the likelihood of getting caught in fact depends on what kind of dishonest act they commit. Teixeira and Rocha (2010) found, in their study of economic and business students across 21 different countries, that students who admit to studying less when they perceive the likelihood of them getting caught to be low, will cheat more. Chapman et al. (2004) also found that the more lecturers reminded students of the cheating policies, as well as acted strongly with the appropriate action against any cheating behaviour, the less likely it would be that cheating would take place. Megehee and Spake (2008) similarly noted that this was the case, but pointed out that consistency across all departments in terms of the punishment handed out for cheating was a key determinant of reduced cheating behaviours.

According to Evans, Forney and Guido-DiBrito (1998), students may well be deterred from cheating only for the sake of not being caught and not because they feel morally compelled not to cheat. Therefore the likelihood of being caught may play a role in cheating levels. If students see the university taking no action on cheaters they are likely to perceive cheating to be more common place, as well as to be reluctant to report cheaters (an awkward act in itself) in line with a university's desired integrity culture (McCabe et al., 2006; O' Rourke, Barnes, Deaton, Fulks, Ryan and Rettinger, 2010). O'Rourke et al. (2010) believe that even the fear of getting caught can combine with a neutralising attitude (an act of self-justification), where students convince themselves that the punishment may be worth it or not that bad.

H1: The more likely students are to get caught cheating, the less likely they are to cheat.

H2: The more severe punishment is perceived to be, the less likelihood there is of cheating.

University Environment

Honour codes

After a review of the literature there appears to be a large amount of research in the field of honour codes globally, but not much in the South African context. Only some insight into the field has been given due to it being heavily researched and influential in academic dishonesty. Bowers (1964) described the honour code system as one where students agree to abide by a stipulated code as well as to take responsibility for the policing and punishing of offenders. He noted that this system brought about a major decrease in cheating (McCabe & Treviño, 1993). This has been confirmed in more recent studies as well across over 42 universities in 21 different countries (McCabe, Butterfield & Treviño, 2002; Teixeira & Rocha, 2010). These results seem to suggest that honour codes can impact the predictability of dishonesty outside of the USA as well as within it.

There is strong support for the theory that honour codes bring about a decrease in academic dishonesty in further studies (Bowers, 1964; McCabe, et al., 2002; McCabe et al., 2006; McCabe & Treviño, 1993; Teixeira & Rocha, 2010). All of these studies have used multi-campus surveys to ascertain the impact of the honour code system and found the implementation of them to correlate with reduced occurrence of academic dishonesty.

These studies found that universities that do have honour codes show a more positive attitude to academic integrity. They also show a more trusting approach in the system taking care of disciplining students. Chapman et al. (2004) suggested that an emphasis on academic integrity and the forming of student groups to uphold the policies and codes would decrease cases of academic dishonesty. This they deciphered from holding discussion groups with undergraduate business students, as well relying on other similar research.

McCabe and Treviño (2001) suggested that students in an environment where honour codes exist are, less likely to cheat, more likely to emphasise the importance of academic integrity and morality as well as be less likely to justify cheating. They also felt that students preferred to be part of a university that ascribes to a code than one that places more emphasis on punitive measures. Results show that this does indeed have an impact on the prevalence of cheating. The explanations for this are possibly that the definition of dishonesty becomes clearer and that the responsibility for policing it falls more with the students than the universities – and thus less cheating takes place as students respond to this responsibility (McCabe et al., 2002).

McCabe et al's. (2002) study in 21 different institutions with a wide range of academic policies, showed that an honour code of any sort ranked second in importance in terms of cheating deterrents, where first was the perceptions of peer behaviour. Both of these, however, acted as good predictors of cheating behaviour amongst students. Having honour codes in place has been shown to be important but some literature has still pointed to the fact that the likelihood of getting caught and the perceived severity of the punishment act as a larger deterrent than the code itself (Clayton, 1999).

The bottom line, according to McCabe (2005), was that whether an honour code is in place or not, the stronger the culture of academic integrity, the less likely cheating is to occur. This, in conjunction with visible action by universities against cheaters was seen to have the greatest impact on academic cheating frequency.

Institutional standards and needs/classroom norms

Researchers have found that the ability of the institution to develop and publicise their academic integrity policies had a profound impact on perceptions of peer cheating which

then decreased acts of cheating (McCabe & Treviño, 1993). The lower the understanding of the policies by students the higher the prevalence of cheating was likely to be. They also found that this need not only be in the form of a formal code, as mentioned in the previous section, as one of the lowest rates of cheating was found at a non-code university. Universities where academic dishonesty is a major focus during orientation and where they make a major effort to inform students about the policies often leads to lower cheating frequency.

Bisping et al. (2008) found that educating students about what constitutes cheating plays a role in the amount of cheating that takes place. Students who view academic dishonesty as being widely prevalent will see the culture of integrity in a low light and are therefore more likely to display misconduct themselves (Kisamore et al., 2007). In line with this view, universities that view dishonesty as widely prevalent are more likely to go to greater efforts to stop it, by acting swiftly on those that cheat, as well as attempting to design work in such a way that hinders cheating (Hard, Conway & Moran, 2006). Therefore although certain situational or personal characteristics may impact the likelihood of academic cheating, the perceived frequency by the institution of the amount of cheating that takes place will influence the severity with which they try to stop it. This perception held by the university thus has a role to play in the frequency of cheating that exists.

Classroom factors

Chapman et al. (2004) indicate in their study conducted using discussion groups with marketing students that certain classroom factors that can have an impact on cheating. A relationship environment, the interest of lecturers and the respect they had garnered all were linked to a decrease in cheating. They felt that respect for the instructor would mean that students would not want to betray trust by cheating. They also felt that were there to be low respect shown by the lecturers to the students then the students would be more likely to cheat. Al Qaisy (2008) found that students who perceive their lecturers to be actively interested in their progress would also be less likely to cheat. It has also been found that some lecturers will not follow strict policies and procedures should they not see them to be fitting and thus there is inconsistency in the law being applied (De Jager & Brown, 2010). This may also impact on the perceived likelihood of punishment, and perceived

likelihood of being caught, in the students' eyes which would then impact on their propensity to cheat.

H3: *The stronger the institutional standards and more widely known that they are, the less likely students are to cheat.*

Peer Perceptions

The influence of the perceived prevalence of peer cheating

Despite the research on institutional standards as reviewed above, multiple studies in the field indicate that students seem to be more concerned with what their peers feel about cheating than they do about the views of the actual university (McCabe et al., 2002; McCabe, Treviño & Butterfield, 2001; McCabe & Treviño, 1993; McCabe & Treviño, 1997). Bowers (1964), in his early study across 99 different institutions surveying over 5,000 students in the field of academic dishonesty amongst business students found that peer behaviour had an influence on academic dishonesty, stating that the more a person sees a peer cheating, the more acceptable it appears to them. From this study it was surmised that individuals can learn to accept some behaviours as right or wrong, specifically within particular social groups and thus display these behaviours in those groups. He went on to note that people who disapprove strongly of dishonesty are likely to make their feelings known, which means that the overall feeling of disapproval will be collectively strong. He also noticed in his study of students from the different colleges that disapproval of dishonesty in the environment is still a deterrent in spite of the individual's feelings about cheating may be.

Erickson (1988) describes the social contagion theory, where values and beliefs are not formed exclusively by individuals but more by the social influence of others. The analysis of social contagion therefore predicts that if students believe their peers to be cheating, they in turn will cheat more. Teixeira and Rocha (2010) also found there to be a direct link between the perceptions of others cheating and cheating behaviours. Jordan (2001) found that cheaters perceived there to be more cheating taking place within the university than non-cheaters did. Conversely, McCabe et al. (2006) state that if students see each other making honesty pledges and educating each other about integrity then cheating is less

likely. Chapman et al. (2004) found that the people who cheated the most were the ones who believed cheating to be more widespread than it actually was.

In a study of graduates across 32 different universities in North America, it was found that the perception of peers cheating was the biggest predictor of dishonesty, more so than perceived likelihood of getting caught and the perceived severity of the punishment for being caught (McCabe et al., 2006). The researcher's interpretation was that seeing peers cheating almost normalises the behaviour and therefore increases the prevalence of it. In a study by McCabe and Treviño (1993) of over 6,000 students at 30 different universities it was found that the perceptions of peer behaviour was the most influential situational variable.

There is some contention however surrounding the accuracy of the evidence about the peer influence of cheating. The statistical methods used by McCabe and Treviño (1993) have been criticised for not separating the influence of individual on peer group from the influence of the peer group on the individual (Carrell, Malmstrom & West, 2008). Lyle (2007) questioned the existence of the effect of peers in universities as well as whether there is truly enough information surrounding what actually drives peer influence.

There seem to be some complexities in measuring the effects of peer influence in terms of separating the true peer effects from the individual's tendencies. Carrell et al. (2008) see two major problems in measuring the effects of peer influence. Firstly, it is difficult to separate individual influence on group compared to group influence on individual, as mentioned above (Carrell et al., 2008). Secondly it is difficult to measure peer influence as individuals often self-select into groups and thus it is difficult to separate, statistically, the effect peers are having on one another from shared attributes, possibly unobserved, that both cause self-selection into a group and cause observed behaviour (Sacerdote, 2001). This being said, Carrell et al. (2008) found that positive evidence exists indicating a relationship between peer influence and cheating behaviour.

Hypothesis 4: The higher the perceived levels of cheating by peers, the higher the cheating prevalence will be.

These situational characteristics go some way in providing an explanation for dishonesty. It would appear that there is overlap between the different characteristics but that there is strong evidence in the literature that these do play a role in influencing or predicting academic dishonesty. Following on from this, the investigation into the personal characteristics that may lead to academic dishonesty complements the above literature study and offers an alternative view on what may be impacting this problem.

Personal Characteristics

As well as the situational characteristics mentioned above it has been shown that certain individual traits and characteristics may influence the likelihood of cheating as well (Teixeira & Rocha, 2010). These include: the personal motivation style of students, the perceived internal cost or benefit of cheating, the student's gender, age and year of study, as well as the particular background and intelligence level of students.

Personal motivation including extrinsic versus intrinsic motivation styles and how that affects attitudes to cheating

There is a difference between students who seek to gain understanding and mastery of material as opposed to those who wish to show ability through performance (Jordan, 2001; Murdock & Anderman, 2006). Intrinsically motivated people are those who seek to gain knowledge, understanding and personal development from their studies, whilst extrinsically motivated people are motivated by obtaining outcomes or avoiding poor outcomes from learning (Davy, Kincaid, Smith & Trawick, 2007). Research has shown that students who have a desire to learn and master information (intrinsically motivated) are less likely to cheat than those that are driven by performance goals and grades (extrinsically motivated) (Jordan, 2001). The intrinsic model of seeking mastery has been shown to be inversely related to cheating, whilst the more extrinsic desire to perform has shown a proportional relationship to increased cheating (Murdock & Anderman, 2006). Wowra (2007) explains that students who derive motivation from not wanting to be embarrassed are more likely to cheat. He also said that students who attach importance to their morals are less likely to have cheated than those who do not see these as very important to their own identity. It was shown in studies conducted by Murdock and Anderman (2006) and Newstead, Franklyn-Stokes and Armstead (1996) that the intrinsically motivated students reported

fewer types of cheating behaviours than those who were motivated by performance goals, career development and standard of living.

There is not a large body of research around this which may hinder the ability to generalise. However, some research suggests that cheating, to intrinsically motivated students, would go against what they are trying to achieve from their studies as it would detract from their true learning and development (Davy et al., 2007).

The underlying motivation of students may not be exclusively related to personal characteristics. Jordan (2001) found that the levels of dishonesty were not consistent across different classes. This suggests that the class room nature has a role to play in cheating levels. He found that individual motivations differed in different classes; this meant that some students who showed extrinsic motivation in one class may be more intrinsically motivated in another due to the fact that they may be more driven by mastery and intrinsic factors only in certain classes. Whilst universities are seen as a way to professional success the acts of dishonesty may continue, however by repositioning them as a means to personal development, the motivation to cheat decreases (Lim & See, 2002).

H5: The higher the level of intrinsic motivation, the less likelihood there is of cheating taking place.

Perceived costs and benefits of cheating from the student's point of view

In the current climate of job scarcity and tough economic times, there is an increased pressure on students to do well. Success at university is seen as being important to secure solid employment and thus the benefits of doing well become higher (McCabe et al., 2001; Teixeira & Rocha, 2010). These researchers suggest therefore that this competitiveness brings about more of an attraction to cheating behaviour. Whitely (1998) builds on this idea in a norm-referenced grading system. This system results in a certain amount of students receiving high marks and a certain amount low ones, with this competition for marks in place the cost of not cheating becomes higher. Some students may also perceive this system to be unfair and thus may feel more compelled to cheat as they may feel that the results attained are not true reflections of their intelligence or amount of work put in.

There are certain costs and benefits to cheating from the students' viewpoint that need to be investigated when examining what may lead to academic dishonesty. Murdock and Anderman (2006) note about the costs of putting in extra work and missing out on time that could be used for alternative gain. Eccles (1992), discusses the expectancy-value framework where the costs are weighed up against the value of achieving a goal, and that when these costs outweigh the perceived gain, the behaviour will be less likely to take place. Material costs are not the only cost involved in making the decision to cheat. The cost to self-image from a psychological point of view in terms of what people who see someone cheat may think, as well as how someone sees themselves, knowing that they are dishonest, is also highly significant (Murdock & Anderman, 2006). In a study by Stephens (2004), it was shown that the cost to self-image and the embarrassment caused by being caught, sat in the top five reasons for not cheating.

In the eyes of the student, the benefits of cheating become higher in an environment where cheating is perceived to be prevalent as non-cheaters may feel at a disadvantage should they not cheat (McCabe & Treviño, 1993). McCabe et al. (2002) concur by saying that some students will feel that they have no choice but to cheat and use this as justification to cheat – a neutralising behaviour. Teixeira and Rocha (2010) say that the perception of increased grades due to the act of copying will encourage students to cheat.

Tyre (2001) noted as well through studies that the pressure to do well and avoid being disadvantaged in the job field was a motivator for cheating. Emphasis from universities on student achievements, income for research and commercial gain have begun to affect educational and development interests and the increase in sense of community (Eckstein 2003). Gallant (2008) found that some universities have begun to grow commercially dominant cultures where the degree is a sort of product rather than a personal development medium. This sort of environment could encourage cheating behaviours and may influence cheating frequency.

H9: The perceived cost/benefit of cheating is related to student propensity to cheat.

Gender

According to Whitely (2001) there has not been a vast amount of research on whether gender acts as a predictor of academic dishonesty. Robbins and Martin (1993) suggest that women are less likely to go against social norms as this would conflict with their inherent nurturing role and may negatively affect others. Smith, Ryan and Diggins (1972), found that women experience more guilt about cheating than men, and Cochran, Chamlin, Wood and Sellers (1999) found that women showed more shame and embarrassment about cheating. In a study conducted by Whitely (2001) sampling 160 male and female students who had admitted to cheating in the six months preceding the study, measuring men and women's affective responses to cheating, he showed that men indicated gaining more pleasure in getting away with cheating and saw cheating more favourably than women. In Bowers' (1964) study on a multi-campus level, a significant difference was found indicating that women cheated less than their male counterparts.

McCabe and Treviño (1997) as well as Smyth and Davis (2004) showed there to be higher rates of academic dishonesty in males than in females. Whitely (1998) found that females and night-students are less likely to cheat than males and day-students. There have been studies that have shown there to be less difference between the genders however (Crown & Spiller, 1998). Graham et al., (1994) even found that females were more likely to admit to cheating than males.

H6: Females are less likely to cheat than males.

Age and year of study

McCabe and Treviño (1997) found that younger students are more likely to engage in acts of academic dishonesty. Diekhoff, LaBeff, Clark, Williams, Francis and Haines (1996) and Rakovski et al. (2007) showed there also to be less cheating as students progressed through the years. McCabe and Treviño (2001) suggested that first and second year students are more likely to cheat but that this may be because of the larger class sizes or the fact that students are taking electives that they possibly are not particularly interested in, which helps them rationalise the behaviour.

H8: The higher the year of study, the less likelihood there will be of cheating.

Grade average of the student

There seems to be some research suggesting that intelligence and grade averages have an influence on who cheats, with the lower intelligence and grade average students showing more likelihood of cheating (Crown & Spiller 1998; McCabe & Treviño, 1997; McCabe & Treviño 2001; Rakovski et al., 2007). Hrabak, Vujaklija, Vodopivec, Hren, Marusic and Marusic (2004) found that students with higher grades had a more negative attitude to cheating than those with lower ones. This is backed up by the theory of McCabe and Treviño (1997) who felt that the higher achievers had more to lose by cheating. Whitely (1998) stated that poor study skills and ability to work meant that standard work-loads then became relatively large to these students and therefore cheating becomes more attractive.

H7: The higher the grade point average (GPA) of the students the less likely they are to cheat.

Conclusion

The literature in many of the areas to be studied is extensive however it is almost all from studies outside of South Africa, and more specifically from North America. It has been indicated that much of the literature is gained from studies done with business students, but not all of it is. It was felt that this would still give an accurate representation as although there are differences between business students and non-business students, this particular study does not test both groups and therefore the comparison of the two groups (business and non-business students) is not a focal point.

The study suggests hypotheses as based on the literature and will aim to find support in the South African context for these.

Method

A descriptive study using a survey method was used. It was cross-sectional in nature. The descriptive nature of this study allowed me to make a tentative foray into the subject rather than to find any definite causal relationships (Grimes & Schultz, 2002). The information gained from the method used is valuable in making inferences about any correlations between the characteristics that influence academic dishonesty and the dependent variable, academic dishonesty. These inferences could then form the basis of further study that could look more closely at any significant relationships found.

Participants

The sample was self-selected from three tertiary institutions in the Western Cape, South Africa. They were undergraduate students in the fields of business and economics from University of Cape Town, Cape Peninsula University of Technology and University of the Western Cape. The total sample was 571 people of which 261 were male, 224 female and 85 did not report their gender. Of the respondents, 484 reported their age and the average age was 21.55, with the youngest being 17 and the oldest, 49. The population characteristics are not known as they were not available from the institutions involved.

Survey and scales

The survey used investigates a number of constructs and characteristics that have been shown to be associated with academic dishonesty and it measures the frequency of cheating that takes place currently. The dependent variable is the magnitude and nature of cheating. The independent variables have been divided into two separate categories; the situational and the personal characteristics. The situational characteristics include: the perceived level of punishment at the institution, the perceived amount of cheating amongst peers and the codes and institutional standards that exist. The personal characteristics include; the motivation style of the student, the perceived cost and benefit of cheating in the students' eyes, gender, age and grade average of each student level.

The study made use of a collection of different questions which were adapted and combined to form one large survey. In order to measure the magnitude of cheating (the dependent variable), an adapted set of questions were sourced from the study done by O'

Rourke et al. (2010). This was a 17-item scale that asks students if they engaged in certain behaviours such as "I copied from someone in a test" and "I turned in an assignment written by someone else" among others. These don't mention "cheating", but rather refer to behaviours that are commonly thought of as dishonest. This allowed for the analysis of specific behaviours that take place amongst the larger academic dishonesty concept. The Cronbach's alpha on the standardised items was .81, but correlations among items ranged from .11 to .77 (O' Rourke et al., 2010). This indicates that there is reliability within this scale on overall performance despite some items showing low levels of reliability.

The survey adapted and used questions from a study done by Teixeira and Rocha (2010) to ascertain information on some of the independent variables. This survey largely uses Likert-type questions where students are asked to answer about whether they cheat, whether they have seen others cheating, whether they see academic dishonesty as a problem, the perceived benefits they see in cheating and the severity of punishment they feel they would receive were they to be caught cheating. This method was termed by Teixeira and Rocha (2009, p.675), "the inquiry via direct questions method". I used these questions as this study was found in a high standing, peer-reviewed international publication that carried a high credibility. This method does not account for self-reporting bias nor does it show sensitivity in the way it asks questions, but it is the most commonly used method for its simplicity and ease of use (Sheard et al., 2003).

The intrinsic or extrinsic motivation style is tested using an adapted version of the Academic Motivation Scale (AMS) (Vallerand, Pelletier, Blais, Briere, Senecal & Vallieres, 1992). The predictor of intrinsic motivation used a separate scale that has been shown to be accurate in measuring this construct. It is made up of 28 items divided up into 7 sub-scales and looks at intrinsic, extrinsic and amotivation in its full version. For this study I looked only at the intrinsic motivation, and therefore used only 3 of the subscales – Intrinsic motivation 'towards accomplishment', 'to experience stimulation' and 'to know'. It has been shown in the literature that people with high intrinsic motivation are less likely to cheat and thus this was one of our chosen hypotheses (Jordan, 2001). This meant that a choice was made to survey only intrinsic motivation, in line with the literature. Previous studies have shown this

scale to have a mean Cronbach's alpha of above 0.8, a high test-retest reliability and a high construct validity (Fortier, Vallerand & Guay, 1995; Hegarty, 2010; Vallerand et al., 1992).

Procedure

Due to the sensitivity of the topic there were a number of ethical considerations for the undertaking of this study. Stringent measures were therefore taken to ensure the ethical requirements were met. Ethics clearance was sought and received from all participating institutions' Ethics in research committees in order for the students from the respective institutions to participate in the study. This was a voluntary study and therefore no participant was forced in any way to take part. A covering letter accompanied the survey (see Appendix A) to explain the purpose of the study and the processes that would take place to ensure compliance with good ethical practice. The sample was made up of commerce students from the three different institutions but upon request from the institutions there is no identification of which university the student came from and therefore this question was eliminated from the survey prior to it being distributed.

The survey itself was a compilation of a number of different scales. The survey was used by three different researchers who conducted studies in the field of academic dishonesty. The items examined this study but also a study on the role of anti-intellectualism on academic dishonesty and a study on the impact of theory of planned behaviour on academic dishonesty. The order of the questions and which research topic each one pertained to was not known by the sample.

Prior to the survey being activated, the researchers and supervisors trialled it to look for errors and ascertain the length of time it would take to complete so as to ensure a high completion rate. Minor amendments were made after this trial in order to shorten the length and to eliminate any unnecessary items.

The survey was administered online for ease of use by the students, ease of distribution by the researcher and ease of data collection upon completion. The survey used the program *Survey Monkey* as the distribution platform. Students were notified of the study via e mail and were encouraged to take part with the use of an incentive. An assurance of anonymity was given to students prior to completion of the survey, and all identifiers were stripped

prior to the data being accessible to the researcher. A lottery for the prize of R1000 in cash was used as an incentive whereby students could fill in their e mail address after they had completed the survey. This was done separately to the survey so that anonymity was ensured.

A cut off date was set and all surveys completed by the cut off date were used in the study. The data was gathered and cleaned of all respondents that had completed less than 40 % of the questionnaire, leaving a final sample of 571 people.

Analysis

The statistical program SPSS was used to collate descriptive statistics that allowed us to find patterns in the data. A selection of different analysis techniques were run to test the scales as well as formulate inferences from the data received via the survey. These will be reported in the results section below.

Results

Introduction

The results section is organised according to hypotheses and therefore divided up into nine different sections. Within each section there will be a report on the particular descriptive statistics that were derived and then an analysis on whether null hypothesis is rejected or not (where the *p*-value is less than .05). If the null hypothesis is rejected it can be inferred that a significant difference in the distribution of the variable of interest between groups (for example male or female, or agree or disagree etc) exists and therefore a relationship exists between the independent and dependent variables. Alternatively we do not reject the null hypothesis (where the *p*-value is greater than .05) and infer no significant difference. Within each section, the relevant hypothesis is addressed with respect to the specific questions included in the survey. Relationships between variables are then explored using various statistical tests. These tests are outlined in the section 'overview of statistical analysis' below. For the sake of brevity, for the most part, only the statistically significant relationships have been reported and discussed, any other relevant analyses will be included in the appendix.

Overview of statistical analysis

The use of comparative statistical methods or hypothesis testing was limited to testing whether or not the average or median cheating score differed by the various categories of other variables (e.g. gender, perceived amount of cheating). Because the cheating score was not normally distributed (checked using visual diagnostics), non-parametric tests were required. To this end, I used Mann-Whitney U (MWU) tests to determine whether the average cheating score differed with respect to variables with two categories, (e.g. by gender), and I used Kruskall-Wallis (KW) tests to determine whether the average cheating scores differed with respect to variables with multiple categories (for example on a scale examining the extent to which the respondent agrees or disagrees with a statement). For both of these tests, the null hypothesis is that the average cheating score does not differ between groups/for the various categories of other variables. Should the test statistics return a p-value less than 0.05, this null hypothesis is rejected and a statistically significant difference between the categories or groups is inferred (Hair, Babin, Money & Samouel, 2003).

Relationships between two continuous variables were explored using correlation tests, specifically, the Spearman correlation test for instance in which the variables were not normally distributed. For questions regarding the intrinsic motivation of the respondents, and the relationship between the variable and the cheating score, a composite scale variable was used for the AMS. Item reliability and factor analysis were used to explore the internal reliability of this scale and the potential underlying constructs.

Results: Hypotheses

Situational Variables

Hypothesis 1: The more likely students are to get caught cheating, the less likely they are to cheat.

This hypothesis was examined with respect to two questions. Each of these was individually analysed, and conclusions were drawn from the overall results.

The first question (Question 14 in the survey) had several sub-questions: (Q1) **"What are the chances of being caught if looking at another student's answers during an exam?"**, (Q2)**"What are the chances of being caught if falsifying information in an assignment"**, (Q3)**"What are the chances of being caught if plagiarising an assignment",** (Q4)"**What are the chances of being caught if lying to a lecturer about missing an exam"** and (Q5) "**What are the chances of being caught if receiving an illicit, advance copy of an exam",** each of which had seven categories, ranging from "No chance" through to "Certain".

The frequency distribution of the responses to these questions may be seen in Table 1 in the attached Appendix B. For the first three of these questions, the median cheating score was determined to be statistically significantly different across the various categories with Kruskall-Wallis (KW) values of (H(6, N = 511) =31.39, p <.0001), (H(6,N = 511) = 31.11, p <.0001) and (H(6, N = 511,) = 30.07, p<.0001) respectively. For all three the lowest median cheating score was found in the "No chance" category ((Mdn = 1, IQR = 0-4), (Mdn = 1, IQR = 0-3.), (Mdn = 1, IQR = 0-3.5)). The highest median cheating score was found in the "Low" category ((Mdn = 5, IQR = 2-8), (Mdn = 5, IQR=3-7), (Mdn = 5, IQR = 3-8)). A graphical representation of these relationships can be found in the box and whisker plots (fig 1-3 in Appendix B). The average cheating score was not found to differ between the categories of the remaining questions.

The final question related to this hypothesis is that of Question 28 of the survey: **"At this university, it would be fairly easy for me to cheat"**, which had five response categories ranging from "Strongly disagree" to "Strongly agree". The frequency distribution of this can be found in Table 4 in Appendix B. The average cheating score was found to be significantly different between the categories with a KW value of (H(4, N = 436) = 27.52, p < 0.0001)). The lowest median cheating score was found to be the "strongly disagree" (Mdn = 3, IQR 1-5) and the "not sure" (Mdn = 3, IQR = 1-6) categories whilst the highest median cheating score (Mdn = 6, IQR = 4-9) was found to be in the "Strongly agree" category. The box and whisker plot (fig 4 in Appendix B) represents this visually. The full information may be found in Table 5 in Appendix B.

These results suggest that that there is inconclusive evidence to support the hypothesis that the more likely students are to be caught, the less likely they are to cheat.

Hypothesis 2: The more severe the punishment is perceived to be, the less likelihood there is of cheating

In the analysis of this hypothesis, we looked at Question 15, which included the sub-questions: (Q1) "**What are the chances of being punished if caught lying to a lecturer about missing an exam"**, (Q2) "**What are the chances of being punished if caught receiving an illicit, advance copy of exam**", (Q3) **What are the chances of being punished if caught looking at another student's answers during an exam**", (Q4) **What are the chances of being punished if caught falsifying information on an assignment**" and (Q5) **What are the chances of being punished if caught plagiarising an assignment**". These questions had seven categories of responses ranging from "No chance" through to "Certain".

The frequency distributions for these questions are in Table 6 in Appendix B. The median cheating score was seen to be significantly different among the categories in Q1 and Q4 with KW values of (H(6,N = 512) = 15.53, p = .016) and (H(6, N = 511) = 18.08, p = .006) respectively. For Q1, examination of the box plot as seen in Fig.5 in Appendix B of the cheating score over the categories of this question shows that the highest average cheating score (*Mdn* = 5, *IQR* = 3-7) was found for the "Low" category whilst the lowest average cheating score was found for the "Moderate" (*Mdn* = 3, *IQR* = 1-5), "High" (*Mdn* = 3, *IQR* = 1-6) and "Very High" (*Mdn* = 3, *IQR* = 0-5) categories. For Q4 examination of the box and whisker plot as seen in Fig. 6 in Appendix B shows that the highest average cheating score (*Mdn* = 4.5, *IQR* = 3-7) was found for in the "moderate" category whilst the lowest (*Mdn* = 2, *IQR* = 0-7) was found for the "No chance" category. Full information may be found in Table 7 in Appendix B.

The average cheating score was not seen to be significantly different among the groups in the other questions.

There therefore appears to be inconclusive support for the hypothesis that the higher the likelihood of being punished the less people cheat.

Hypothesis 3: *The stronger the institutional standards and more widely known that they are, the less likely students are to cheat.*

This hypothesis was examined in the context of a single question (Question 34), where respondents were asked to respond with "Yes" or "No", to the following statements: (S1) "**I have received information on my university's academic dishonesty policy**", (S2) "**I have read information about academic dishonesty at my university**", (S3) "**I understand the academic dishonesty policy at my university"**, (S4) "**At my university there are no sanctions regarding academic dishonesty**" and (S5) "**Lecturers turn a blind eye towards academic misconduct**".

Table 8 in Appendix B shows the frequency distributions for the above question. Using Mann-Whitney U tests, the statement "Lecturers turn a blind eye towards academic misconduct" was the only one to show a statistically significant relationship with the student's propensity to cheat.

The statistically significant results, Z = -2.168, p = .03, showed that those who said 'Yes' (*Mdn* = 5*, IQR* = 3-7) cheated more than those who said 'No' (*Mdn* = 4*, IQR* = 2-5*)*.

This indicates that knowledge of policies and perceived strength of institutional standards has inconclusive influence and thus the hypothesis is not supported

Hypothesis 4: The higher the perceived levels of cheating by peers, the higher the cheating prevalence will be.

Four different questions were used to test for this hypothesis all with different formats. (Q2) **"How frequently have you observed other students copying in exams**" used a five category Likert-type question with categories ranging from "Never" to "Always". (Q6) "**Do you know someone who usually copies in exams**" was answered either "Yes" or "No". (Q7) **From your experience in multiple choice exams what is the percentage of students that you think might copy in that type of exam**" used a 6 category Likert-type question with categories ranging from "no more than 1%" to "more than 50%". Finally (Q10) "**In your opinion at your university copying in exams"** used a 4 category style question with categories ranging from "Is not a problem" to "Is a serious and widespread problem".

The frequency distributions of these questions are shown in Tables 9-12. The average cheating score was seen to be statistically different among the categories for Q2, Q7, Q10 and Q6 with KW values of (H(4,N = 559) = 52.203, p = .000), (H(5, N = 559) = 21.732, p=

.001), *(H*(3, N = 559) = 20.56, p = .000) as well as an MWU score of *Z* = -6.264, p = .000 respectively.

Looking at the box and whisker plot in Fig 7 in Appendix B of the cheating score over the categories for Q2, shows that the highest average cheating score existed equally in the "Always" (*Mdn* = 5, *IQR* = 3.5-10), "Many times"(*Mdn* = 5, IQR = 3.25-7) and "Sometimes" (*Mdn* = 5, *IQR* = 2-8) categories whilst the lowest average cheating score (*Mdn* = 2, *IQR* = 0-4) existed in the "never" category. Full information on these descriptive statistics can be found in Table 13 in Appendix B. For Q7, the box and whisker plot (Fig 8 in Appendix B) of the cheating score over the categories shows that the highest average cheating score (*Mdn* = 6, IQR = 4-8) was found for in the "more than 50%" category whilst the lowest in the "no more than 1%" (*Mdn* = 3, IQR = 0-4) and "Between 1% and 10%" categories (*Mdn* = 3, *IQR* = 1-5). Full information on these descriptive statistics can be found in Table 14 in Appendix B. For Q10 the box and whisker plot (Fig 9 in Appendix B) of the cheating score over the different categories shows that the highest average cheating score (*Mdn* = 5, *IQR* = 2-7) was found in the "Is a trivial problem of low importance" category whilst categories "Is not a problem" (Mdn = 3, IQR = 0-5), "Is a serious and widespread problem" (Mdn = 3, IQR = 1-5) and "Is a problem" (Mdn = 3, IQR = 1-5). Full information on these descriptive statistics can be found in Table 15 in Appendix B. In Q6 those who said "Yes" (*Mdn* = 5, *IQR* = 3-7) were shown to cheat more than those that said "No" (*Mdn* = 3, *IQR* = 1-5).

These results show that there is inconclusive evidence to show that a significant relationship exists between students' perceptions of how much their peers cheat and their own propensity to cheat.

Personal Characteristics

Hypothesis 5: The higher the level of intrinsic motivation, the less likelihood there is of cheating taking place.

Reliability and Factor analysis

Question 1, which makes use of statements from the Academic Motivation Scale (AMS) was used in the analysis relative to this hypothesis. Since there were several items assumed to be related to intrinsic motivation, an item reliability analysis was run to assess the internal

reliability of the adapted scale. This analysis assesses whether all the questions collectively are able to measure the same construct. A Cronbach alpha of above .70 was accepted as sufficiently reliable (Hair et al., 2003). The Cronbach alpha for the scale as a whole was .909 which therefore showed strong internal reliability.

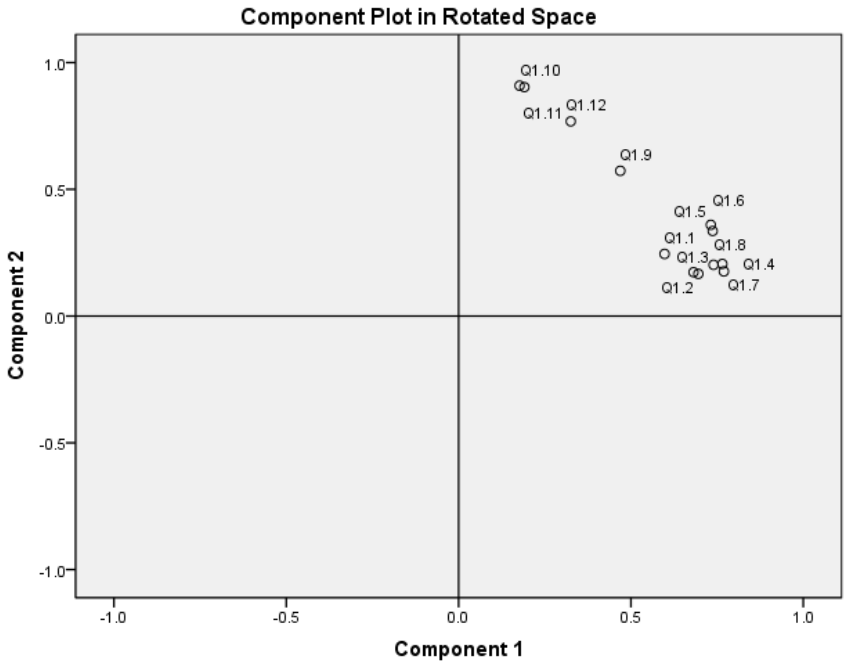
An exploratory factor analysis was conducted to identify any underlying latent (or unmeasured) factors/constructs that may exist. Prior to this analysis, the intrinsic motivation section of the AMS which was used in the survey was broken up into intrinsic motivation – to know, intrinsic motivation – towards accomplishment and intrinsic motivation – to experience stimulation (Vallerand et al., 1992).

The initial factor analysis revealed 3 factors using the Kaiser criterion, which states that only factors with an eigenvalue greater than or equal to one should be retained (Hair et al., 2003). These three factors cumulatively explain 71.92% of the initial variance. From the Scree plot (Fig 10 in Appendix B) however, two factors were identified as sufficient (62% of variance). The two factor solution was seen to be efficient and interpretable as seen by the high loadings on one factor and low loadings on the other, and vice versa for the other factor. Full factor loadings are in Appendix B (Table 16).

Meaningful factors are ordinarily identified as those which have greater than three high factor loadings, and a loading of 0.6 was chosen in this analysis as sufficiently "high".

From the loading plot (Fig 11) and the initial rotated component loadings we can see that variable 1.9 does not load highly on either of the factors, and can thus be removed from the factor analysis.

Figure A



Component plot including item 1.9

The factor analysis was rerun, excluding question 1.9, and manually extracting only two factors. The rotated component loadings are depicted below in Table A and the component plot for two factors is in Fig A above.

Table A

Rotated Component Matrix[a]

	Component	
	1	2
AMS_TA1	.603	.234
AMS_TA2	.700	.152
AMS_TA3	.686	.171
AMS_TA4	.769	.198
AMS_TK1	.736	.350
AMS_TK2	.739	.326
AMS_TK3	.774	.167
AMS_TK4	.743	.175
AMS_TES2	.210	.903
AMS_TES3	.195	.916
AMS_TES4	.346	.768

The two factors correspond to those statements related to “experiencing stimulation”, and to a combination of the statements related to “to know” and “towards achievement” respectively (Fig 12 in Appendix B).

Despite the observation of the two distinct factors, a single composite score was used as a measure of the intrinsic motivation. This was done for ease of interpretability (a single well understood measure as opposed to two factor scores which would be open to subjective and difficult interpretation). The initial internal reliability analysis serves to justify this decision, in that the high Cronbach alpha value indicates that the questions in this particular scale do measure the same underlying construct. We look at intrinsic motivation as a whole without the use of the particular subsections of it, which for the purposes of this study is of an acceptable standard to use.

Correlational analysis

This section looks at the relationship between the cheating score and the composite AMS score calculated from the sum score of the questions in question 1. These questions had seven answer categories ranging from “Does not correspond at all” (1) to “Corresponds exactly ” (7) A Spearman correlation was used because neither of the two continuous variables were normally distributed (Hair et al., 2003). The AMS composite score (*Mdn* = 56, *N* = 526, *IQR* = 46-67) and cheating frequency score (*Mdn* = 3, *N* = 571, *IQR* = 1-5) showed a correlation coefficient of -.155 as indicated in Table B below.

Table B

Intrinsic motivation correlation

			Cheating Score	AMS composite score
Spearman's rho	Total cheating score	Correlation Coefficient	1.000	-.155
		Sig. (2-tailed)	.	.001
		N	483	447
	AMS score	Correlation Coefficient	-.155	1.000
		Sig. (2-tailed)	.001	.
		N	447	526

This shows a weak, in terms of Cohen’s classification of Correlation sizes, but significant negative correlation (p = .001) between intrinsic motivation and cheating frequency. Although the correlation is weak, it still supports the hypothesis that the higher the intrinsic motivation, the lower the likelihood of cheating.

Hypothesis 6: Females are less likely to cheat than males.

To test this hypothesis an MWU test was used. The results of the analysis were significant, Z = -2.526, p = .012, showing that on average males (*Mdn* = 4, *IQR* = 2-6, *N* = 261) cheated more than females (*Mdn* = 3, *IQR* = 1-5, *N* = 224).

Hypothesis 7: The higher the grade point average (GPA) the less likelihood there is of cheating.

The GPA score can fall anywhere from zero to 100. The data on student's reported Grade point average (GPA) had some outlying figures however that fell below 10 (highly unrealistic) and over 100 which is not possible and were therefore removed. These 22 responses were removed from the data prior to the analysis and the resulting GPA had average (*Mdn* = 61, *IQR* = 55-68). No significant correlation was found between the GPA and cheating scores when using a Spearman correlation test.

Hypothesis 8: The higher the year of study, the less likelihood there will be of cheating.

Students were given an option of 1st year to 6th year of study to choose from. There was shown to be a significant difference in median cheating score between the different year groups. A KW test showed a value of (H(5, N = 485) = 17.21, p = .004). Looking at the box and whisker plot (Fig 13 in Appendix B) of the cheating score over the categories shows that the highest median cheating score (*Mdn* = 4.5, *IQR* = 3-7.75) was found for the "5th year" category whilst the lowest existed in the "6th year" category (*Mdn* = 2, *IQR* = 0-4). Table 19 in Appendix B has a full list of frequency distributions. Table 20 in Appendix B shows information on the descriptive statistics.

This data shows that although there was a significant difference between groups, the results do not necessarily support the hypothesis and the relationship, according to this study, between year of study and cheating propensity is not as stipulated in the hypothesis.

Hypothesis 9: The perceived cost/benefit of cheating is related to student propensity to cheat.

To investigate the hypothesis five different statements (Question 13) were used, each with a Likert-scale response format with categories ranging from "Strongly disagree" to "Strongly

agree". (S1) **"I would cheat if doing so helped me retain financial assistance", (**S2) **"I would cheat to avoid letting my family down",** (S3) **"I would cheat to avoid getting a poor mark or failing a grade in class"**, (S4) **"I would cheat in a class if it seemed that everyone else was cheating"** and (S5) **"I would cheat if there was no way that I could get caught"**.

The frequency distributions of the responses to these statements are attached in Table 20 in Appendix B. The median cheating score was seen to be statistically different among the categories for all the statements above. Table C below shows the KW values for all the statements.

Table C

Kruskall-Wallis values for hypothesis 9

	H	df	N	p-value
S1	56.343	4	512	<.0001
S2	44.724	4	511	<.0001
S3	65.728	4	510	<.0001
S4	58.493	4	511	<.0001
S5	79.797	4	511	<.0001

Examining the box and whisker plots (Fig 14-18 in Appendix B) for the cheating score over the categories for S1-S5 showed that there was a difference among the respective statements. S1-S4 all showed the "strongly agree" category to have the highest median cheating score whilst S5 showed the "agree" category to have the highest median cheating score. For S1, S4, S5 the lowest median cheating score existed in the "Strongly disagree" category, whilst for S2 and S3 the lowest median cheating score existed in both the "Strongly disagree" and "disagree" categories. Table 22 in Appendix B details the relevant statistics.

There appears therefore to be a significant relationship between the perceived benefit of cheating and cheating propensity as well as between the perceived cost of cheating and cheating propensity. The results indicate that the higher the perceived benefit the more likely people are to cheat and the lower the perceived cost of cheating the less more likely they are to cheat.

The following section will go into detail about what these results mean and what we can discern from them.

Discussion

This study aims to give additional insight into the situational and personal characteristics that may lead to academic dishonesty among business students and economic students. The survey administered gathered students' thoughts on the different areas and on the whole provided some useful information from which we could analyse and investigate the validity of the hypotheses in this context. There is some evidence that certain characteristics play a role in the propensity of students to cheat and thus, this information could be of use to universities in formulating plans and policies that attempt to curb the amount of cheating.

The discussion looks at each specific hypothesis and evaluates the results gained against the literature that already exists in the field. There will then be a summary of the potential limitations of the study and recommendations for future study in this area.

Situational Variables

Likelihood of getting caught

The results indicate inconclusive evidence to suggest that the students who perceived a higher likelihood of getting caught plagiarising, falsifying information in an assignment and copying in an exam, and those who generally felt it was more difficult to cheat at their university were less likely to cheat. This was not the same for all acts of dishonesty as those who perceived being caught lying to a lecturer or having received an advanced copy of an exam to be more likely, showed no sign of cheating any more frequently, whilst the other forms of cheating indicated some, although minor, evidence to support the hypothesis. Therefore only some of these results are in line with what was said by Megehee and Spake

(2008) who found that the different acts of dishonesty elicit different responses. The researcher here did not ask students whether they felt cheating was right or wrong but rather whether the likelihood of getting caught was high or low. Evans et al. (1998) found that students who are inclined to cheat may only resist cheating due to the likelihood of getting caught, which is supported by the results of this study. The strength of the findings gives only some indication that universities which come across as strict to their students, through any means available to them are more than likely going to see decreased levels of cheating. It could be said that these results indicate that universities should endeavour to promote their methods of policing for dishonesty so as to increase the perception among students that being caught cheating is highly likely. The implementation of their cheating policy is therefore of great importance so that students do not see an inconsistency in application of policy which may lead to a higher likelihood of cheating.

Likelihood of punishment

The likelihood of being caught is a deterrent to cheating, but the likelihood of actual punishment after being caught is equally important (Gibbs, 1975). Chapman et al. (2004) also found that the more lecturers at universities followed through with punishment upon catching offenders, the less likely students would be to cheat as their perception of the likelihood of punishment was higher. The results from this study support this premise in some ways but not in others. The question about lying to a lecturer about missing an exam, and the question about falsifying information in an assignment were the only ones that indicated support for the hypothesis that those who perceive the likelihood of being punished would be less likely to cheat. This therefore does not show a trend in how the perceived likelihood of being punished across all dishonest acts will influence the propensity to cheat. Rakovski et al. (2007) suggested that the severity, or perceived severity, of dishonest acts may influence these results, but this theory is not fully supported by the results. There is some evidence however, that universities should ensure that students perceive a likelihood of punishment as well as a likelihood of being caught.

Strength and knowledge of institutional standards

The honour code, as discussed in the review of literature, that acts as a deterrent to academic dishonesty is not in place in any of the universities surveyed in this study (Bowers,

1964; McCabe, Treviño & Butterfield, 2002; McCabe et al., 2006; McCabe & Treviño, 1993; Teixeira & Rocha, 2010). It was therefore more pertinent to analyse the level of knowledge of the university's policies and standards amongst students, and the strength of these policies and standards, and how these may both influence cheating behaviours. Three universities were sampled in this study but the respondents were not required to indicate from which university they came. This decreased the usefulness of the information derived from the questions pertaining to this hypothesis, as no comparison could be made between particular institutional standards and the cheating behaviours that take place at that particular university. It was found however, that those who felt that lecturers turned a blind eye to academic dishonesty cheated more than those that didn't. This is aligned with another study indicating that the perceptions students have of how much attention lecturers pay to academic dishonesty has a bearing on cheating propensity (McCabe, 2005). Another question asked in order to investigate whether the wide circulation of academic policy, and the knowledge of it, actually reduces cheating levels as suggested by McCabe and Treviño (1993) and Bisping et al. (2008), showed there to be no link between circulation of academic policy, and the knowledge of it, and academic dishonesty.

The hypothesis, however, was not directly proven across all levels, and therefore there is inconclusive evidence to suggest that strength of the institutional standards plays a role in reducing the propensity to cheat.

Perceived amount of cheating by peers influencing cheating behaviours

The results of this study suggest limited support for the idea that those who perceive more cheating are more likely to cheat. It was found that those who said that they knew someone who copied in exams showed higher levels of cheating themselves, but on the whole the evidence was inconclusive. This therefore lends little support to the suggestion made in the study by Chapman et al. (2004) that those who believe cheating to be more widespread are more likely to cheat. They also stated that those that believed that a large number of students copied in multiple choice exams as opposed to very few, also had higher cheating frequency. In two major studies it was shown that this variable was the most influential in predicting cheating behaviours (McCabe et al., 2006; McCabe & Treviño, 1993). This study did not aim to rank the variables and their strength of influence, and therefore cannot

certainly support the premise above, and the results give limited evidence to suggest that that the perception of peer cheating highly influences cheating behaviour.

However, the respondents who indicated that they had seen other students copying in exams either always, many times or sometimes, appeared to show a large difference in their own cheating scores compared to those who perceived it never to happen. This also relates to prior literature claiming the direct link between peer perceptions and cheating behaviour and also conversely that those who cheat perceive there more cheating to be taking place in their university (Jordan, 2001; Teixeira & Rocha, 2010).

Perceived costs and benefits of cheating

The perceived benefit of cheating and cost of not cheating appears to be a strong motivator for cheating behaviours as indicated by the results reported. Respondents that said they would cheat if it were to ensure that they would keep their financial assistance showed higher cheating levels themselves. This indicates that perhaps when money comes into the equation justification for cheating becomes easier as the costs of not cheating are purely financial and thus easily measurable. This study showed support to what McCabe and Treviño (1993) found, that students would most likely cheat if they felt that everyone else was cheating as they would be disadvantaged should they not, and thus the costs high. This may link into a previous finding by this study and previous ones that perceptions of peer cheating have a strong influence on academic dishonesty (Chapman et al., 2004).

Should the perceived costs of cheating be low the likelihood of cheating is higher. This is supported by the fact that the students who stated that if the likelihood of getting caught was zero that they would definitely cheat, had higher cheating scores. Reasons for this may be in line with what Gallant (2008) reported, that universities are becoming commercially minded and the degree is now a product to enhance the chances of getting jobs rather than an opportunity for personal development. The idea of perceived benefits and perceived lack of costs to cheating is a difficult one for universities as it is difficult for them to measure these perceptions and thus implement suitable measures to limit cheating behaviours. Students also showed strongly that they would cheat to avoid letting down their family and to avoid getting poor marks, an opinion also found in a previous study by Teixeira and Rocha (2010). The results showed strong cases for these being credible influencers of academic

cheating and thus, although they may be difficult to control, need to be monitored by universities if they are to reduce cheating.

The following section will look at the limitations of this study that may have impacted on our ability to make strong cases for how strongly these characteristics and variables influence the frequency of academic dishonesty and then give a few brief recommendations for further study.

Personal Characteristics

Intrinsic motivation

There is evidence to suggest that the higher the level of intrinsic motivation, the less likely students will cheat (Jordan, 2001). The results of this study showed a weak negative correlation between intrinsic motivation and cheating behaviour. This relates to prior literature but does not overwhelmingly support it. An observation by Jordan (2001) that levels of intrinsic and extrinsic motivation may vary from class to class, may hold credence in this case, as no distinction was made between classes which may have made the scores less valid. There may also have been a bias here towards what may be a more socially acceptable answer and therefore the intrinsic motivation scores may have been inflated. This is a cautious opinion rather than fact however. The use of a single composite score for intrinsic motivation despite the existence of two factors when conducting a factor analysis on the AMS scale may also have impacted the accuracy of these results.

Gender

The difference between cheating levels for males and females was not large, but as suggested by the literature, men were found to cheat more than women (Bowers, 1964, McCabe & Treviño, 1997; Smyth & Davis, 2004; Teixeira, & Rocha, 2010). Caution must be shown in the interpretation of these results as it has been suggested that women showed more shame and embarrassment about cheating and therefore may be less likely to admit to cheating (Cochran et al., 1999).

Grade point average and Year of study

Very little was indicated in the study pertaining to a link between grade point average or year of study. No significant difference was found between the groups for the hypothesis that the higher the GPA, the less likely students are to cheat. Some outliers were found in the responses for the GPA score and this may suggest that on the whole the surveys were not accurately filled completed which may have affected the ability to find a relationship. McCabe and Treviño (1997) based on empirical study that higher achievers had more to lose by cheating and used this as justification for their view, however this may not in fact be true as all students have much to lose if one looks at potential punishments and consequences of being caught cheating.

Suggestions made that the higher the year of study, the less likely the student is to cheat, are not supported in this study. The 5th years were shown to be the highest cheaters with the 6th years as the lowest. These results may be skewed by the smaller sample of 5th years, and the fact that the 6th years have a particularly low sample meaning that it may be difficult to make any reliable inferences from this. The data on the whole does not support the hypothesis as the 1st and 2nd year students showed lower cheating scores than the 3rd, 4th and 5th years.

Limitations and recommendations

The study has brought to light some interesting observations that may be used in future research. It has hopefully added some data to the debate about academic dishonesty among business students in the South African context which is limited in comparison to what is available internationally. Only three universities were surveyed which meant that the results lack generalisability to the general South African population and in future, greater randomisation must be sought. Further limitations that detracted from the validity of the study and the ability of it to measure what it set out are detailed below.

Concerns around research ethics played a large role in the formulation of the survey design and the subsequent collection of the data. This meant that we were not able to gather data about which university each student attended as the respective universities did not see this as acceptable. They felt that should the levels of reported dishonesty be higher at their

institution this would impact negatively on them. The problem with this was that in doing the analysis of the captured data we were unable to cluster students into categories and make accurate inferences across universities. The different institutions may have differing standards and norms as well as different student perceptions on the subject of academic dishonesty as questioned in the survey, but the absence of the each student's university meant that no significant differences could be found between them. A study done on multiple universities by McCabe et al. (1999) gained information on where each respondent was at university and then they were able to make comparisons on areas such as institutional standards and honour codes, as some universities had a formal code whilst others didn't. This allowed for significant differences to be found between the two groups and inferences to be made about the use of such codes. The unavoidable absence of such categories and distinction in this study therefore limits the substance of the findings.

Ideally permission would be gained from the university to obtain the necessary information, perhaps indicating how this may aid their efforts at decreasing cheating as. This would allow for comparisons to be made between the different universities and therefore we could make more accurate inferences on the influence of different types of institutional standards.

Based on the same lack of information we were unable to make a judgement on the composition of the sample. We cannot tell how many students came from each institution, so although we know that all three institutions are represented we are not sure of the proportions of each.

The magnitude and frequency of academic dishonesty, the dependent variable of the study was measured using a scale taken from a study by (O' Rourke et al., 2010). This listed 17 different types of cheating behaviours and asked students to answer 'yes' or 'no' as to whether they had engaged in such behaviours, without ever referring to them as cheating. According to Jordan (2001) and O' Rourke et al. (2010) this is a useful way to measure cheating as a dependent variable. The limitation of such a measure is that it examines mainly how many different types of cheating behaviours (a count) a student may display rather than the frequency and magnitude of cheating that takes place. This method although based on the literature, limits the ability to make accurate inferences about the

personal and situational characteristics influencing frequency of academic cheating. A composite score was used to add up the amount of cheating behaviours indicated and this was then used as the dependent variable – this may however give a skewed representation of the amount of times a student cheats, as one student may cheat numerous times but in the same way, thus showing a low 'cheating' score. Another student may have cheated in many different ways, but perhaps less severe, and be seen as a high-frequency cheater. There was also no time-frame put in the survey so it in all likelihood would be construed as cheating behaviour at any time in their university life, thus increasing the possibility of higher scores on the composite score of cheating behaviours but not necessarily giving an accurate reflection of frequency and magnitude of cheating currently.

A recommendation here would be to perhaps use a different measure for cheating that allows us not so much to look at the different types of cheating behaviours used but rather at the amount of times people cheat in a given time-frame. This would, as indicated, potentially give us different results and allow interpretations to be made based on the knowledge of how much cheating is taking place.

An obvious limitation is the descriptive nature of the study, which uses a survey looking for correlational relationships rather than cause and effect relationships between variables (Hard et al., 2006). The impact that each dependent variable may have on other dependent variables is difficult to measure and thus true validity in terms of the relationships that are claimed may not have always been possible. An example would be the level of intrinsic motivation of each student. It had been said that the more intrinsically motivated the student, the less likely that student would be to cheat; but students' motivation style may in fact be influenced by the nature of the course they are doing or the particular methods of punishment used in each specific class, causing variable levels in each class, whilst the survey was more general. This meant that it was difficult to gauge which variable in fact related to academic dishonesty more. This merging of variables may have impeded our ability to make valid assumptions around the relationship between the student and situational characteristics and academic dishonesty. This skewing of results would impact on the validity of the relationships found between the specific variables. We are therefore only able to find correlational relationships and not any causal relationships. The term 'predicts'

in the title of the study is thus loose, as we were unable to truly find predictors, but rather were able to find low strength relationships.

Another possible limitation was that the study was specifically aimed at investigating business students. Although we did this exclusively, without examining a control group of non-business majors it is difficult to find the extent of difference between business students and others. This may cause a threat to the external validity of the study in terms of generalising the results of business majors against others. It is recommended that should the wish be to find the true influence of being a business student or not on academic dishonesty, that a control group be set up of non-business students as well so that comparisons can be made.

A common error when conducting studies that rely on a self-reporting survey method is the error of social desirability. This describes the tendency for people to attempt to describe themselves in a good light and in what they feel is the most socially acceptable way (Fisher, 1993). Academic dishonesty is widely considered to be morally wrong as well as being punishable by universities thus making a study in this field susceptible to results that have been skewed by a social desirability bias. Although anonymity and confidentiality were ensured in the study there may have been a reluctance of the sample to answer honestly (McCabe & Treviño, 1993). This may be more of a problem with the online nature of the survey, where students may have felt that the likelihood of detection was higher and therefore showed a reluctance to answer honestly, if at all. The amount of participants in online surveys has been shown to be on the decrease already and, paired with the fact that this survey asks people to report behaviour such as cheating, the response rate may have been poorer than it could have been had it been done by a different method (Stephens, Young & Calabrese, 2007).

No social-desirability scale was included in the survey as length of survey was an issue but this may be a limitation in getting a true reflection of how much socially desirable responding took place. It is recommended that such a scale be included even if it means cutting down on the number of hypotheses being investigated as it may give more reliable results. The Marlow-Crowne scale although lengthy is a widely accepted scale that is used for this purpose and may be useful in future research in this area (Reynolds, 1982).

Conclusion

It appears through this study that trends exist in relation to what predicts academic dishonesty at universities and therefore universities can confidently put measures in place to prevent it taking place. The nature of cheating amongst business students in comparison to other students has not been compared in this study, but based on previous literature there is evidence to suggest that they cheat more than other students and thus more needs to be done to curb cheating amongst them than with other types of students.

The strength of the perceptions of how much cheating takes place by other indicates that much work lies ahead in creating a culture and word of mouth within universities that dismisses cheating as an acceptable or normal behaviour. Seeing high benefit and low cost in cheating was also shown as a strong predictor of academic cheating and for this reason it is important that students see the cost of cheating (i.e. punishment severity, and likelihood of getting caught) as high to ensure that they don't see cheating as a viable option. This research does not bring to light any new theory or contradict the existing theory, but rather confirms what has already been suggested and further emphasises that the international trends are as prevalent in the South African context.

Challenges will continue to remain in place for people wanting to conduct further research in this field due to the sensitivity of the topic and therefore it is important that all measures possible are put in place to obtain as accurate information as possible when conducting research of this kind.

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Appendix B

Tables

Table 1

Frequency distribution - Question 14

Question 14: What are the chances of being caught if doing the following:					
	Statement				
Category of response	Lying to a lecturer about missing an exam	Receiving an illicit, advance copy of the exam	Looking at another student's answers in an exam	Falsifying information in an assignment	Plagiarising an assignment
No chance (Frequency) (%)	6.65	9.45	5.68	3.91	3.33
Very Low (Frequency) (%)	12.52	14.17	9.59	12.13	8.02
Low (Frequency) (%)	15.85	14.76	14.09	17.42	9.59
Moderate (Frequency) (%)	24.66	18.98	22.5	23.87	15.46
High (Frequency) (%)	19.96	17.81	23.48	22.5	20.16
Very high (Frequency) (%)	13.89	18.11	19.18	15.26	25.05
Certain (Frequency) (%)	7.05	6.5	5.48	4.89	18.4
Total number of responses	511	508	511	511	511

Table 2

Descriptive Statistics – Question 14

Question 14: What are the chances of being caught if doing the following:					
	Statement				
Category of response	Lying to a lecturer about missing an exam	Receiving an illicit, advance copy of the exam	Looking at another student's answers in an exam	Falsifying information in an assignment	Plagiarising an assignment
No chance (Median (IQR))	2(0;5)	2.5 (1;5)	1 (0;4)	1 (0;3)	1 (0;3.5)
Very Low (Median (IQR))	4(2.25;7)	4 (3;7)	4 (2;5.5)	4.5 (3;7.25)	5 (2;7.5)
Low (Median (IQR))	5(3;6.5)	4 (3;6)	5 (2;7.75)	5 (3;7)	5 (3;8)
Moderate (Median (IQR))	3.5(1;6)	3 (1;6)	4 (2;7)	4 (2;6)	5 (2;6)
High (Median (IQR))	3(1;5)	3 (1;5)	4 (2;5)	3 (1;5)	4 (2;7)
Very high (Median (IQR))	4(1;5)	4 (1;5.75)	3 (0;5)	3 (1;5)	3 (1;5)
Certain (Median (IQR))	3.5(1.25;5)	3 (1;5)	3 (2;5)	2 (1;3.5)	3 (1;5)

Table 3

Frequency distribution – Question 28

Question 28: At this university it would be fairly easy for me to cheat	
Category of response	
Strongly disagree (Frequency) (%)	33.74
Disagree (Frequency) (%)	34.74
Neutral (Frequency) (%)	18.38
Agree (Frequency) (%)	9.9
Strongly agree (Frequency) (%)	3.23
Total number of responses	495

Table 4

Descriptive Statistics – Question 28

Question 28: At this university if would be fairly easy for me to cheat	
Category of response	
Strongly disagree (Median (IQR))	3 (1;5)
Disagree (Median (IQR))	4 (2;6)
Not sure (Median (IQR))	3 (1;6)
Agree (Median (IQR))	5 (3;7.5)
Strongly Agree(Median (IQR))	5.5 (4;9)

Table 5

Frequency distribution – Question 15

Question 15: What are the chances of being punished if doing the following:					
	Statement				
Category of response	Lying to a lecturer about missing an exam	Receiving an illicit, advance copy of the exam	Looking at another student's answers in an exam	Falsifying information in an assignment	Plagiarising an assignment
No chance (Frequency) (%)	2.74	1.76	1.37	1.37	.99
Very Low (Frequency) (%)	5.66	3.13	2.35	2.35	1.58
Low (Frequency) (%)	9.96	2.35	4.12	4.7	4.73
Moderate (Frequency) (%)	19.34	6.65	9.22	17.81	10.65
High (Frequency) (%)	25.98	13.89	20.59	24.85	15.98
Very high (Frequency) (%)	17.38	21.72	27.06	23.39	21.5
Certain (Frequency) (%)	18.95	50.49	35.29	25.64	44.58
Total number of responses	512	511	510	511	507

Table 6

Descriptive statistics – Question 15

	Statement				
Category of response	Lying to a lecturer about missing an exam	Receiving an illicit, advance copy of the exam	Looking at another student's answers in an exam	Falsifying information in an assignment	Plagiarising an assignment
No chance (Median (IQR))	3.5 (.75;5.5)	4 (1.5;6)	4 (0;5)	2 (0;5)	4 (1;7.5)
Very Low (Median (IQR))	4 (2;6.5)	4 (1;5.75)	4 (1;4.75)	3.5 (1.5;4.75)	4.5 (1.5;5.75)
Low (Median (IQR))	5 (3;7)	3.5 (2;4.75)	5 (3;8.5)	4 (3;7)	4 (3;7)
Moderate (Median (IQR))	3 (1;5)	5 (.75;7)	5 (3;6)	5 (3;7)	5 (3;7.25)
High (Median (IQR))	3 (1;6)	3 (2;5)	4 (2;6)	4 (2;7)	4 (1;7)
Very high (Median (IQR))	3 (0;5)	4 (2;6)	3 (1;6)	4 (1;5)	4 (1;5)
Certain (Median (IQR))	4 (2;5)	4 (2;6)	4 (1;5)	3 (1;5)	3 (2;5)

Table 7

Frequency Distribution – Question 34

Question 34: Please indicate your response to the following statements					
	Statement				
Category of response	I have received information on my university's academic dishonesty policy	I have read information about academic dishonesty at my university	I understand the academic dishonesty policy at my university	At my university there are no sanctions regarding academic dishonesty	Lecturers turn a blind eye towards academic misconduct
Yes (Frequency) (%)	80.45	64.7	72.91	21.44	90.61
No (Frequency) (%)	19.55	35.3	27.09	78.56	9.39
Total number of responses	491	490	491	485	490

Table 8

Descriptive statistics – Question 34

	Statement				
Category of response	I have received information on my university's academic dishonesty policy	I have read information about academic dishonesty at my university	I understand the academic dishonesty policy at my university	At my university there are no sanctions regarding academic dishonesty	Lecturers turn a blind eye towards academic misconduct
Yes (Median (IQR))	4 (2;6)	4 (1;6)	4 (1;6)	4 (2;6)	5 (3;7)
No (Median (IQR))	3 (1;6)	4 (2;6)	4 (2;6)	4 (2;5)	4 (2;5)

Table 9

Frequency distribution – Question2

Question 2: How frequently have you observed other students copying in exams	
Category of response	
Never (Frequency) (%)	36.16
Rarely (Frequency) (%)	35.24
Sometimes (Frequency) (%)	19.14
Many times (Frequency) (%)	7.87
Always (Frequency) (%)	1.61
Total number of responses	559

Table 10

Frequency distribution – Question 6

Question 6: Do you know someone who usually copies in exams	
Category of response	
Yes (Frequency) (%)	27.37
No (Frequency) (%)	72.63
Total number of responses	559

Table 11

Frequency distribution – Question 7

Question 7: From your experience in multiple choice exams what is the percentage of students that you think might copy in that type of exam	
Category of response	
No more than 0 % (Frequency) (%)	19.14
Between 1% and 10% (Frequency) (%)	35.42
Between 10% and 20 % (Frequency) (%)	22.36
Between 30% and 40% (Frequency) (%)	14.31
Between 40% and 50% (Frequency) (%)	6.44
More than 50 % (Frequency) (%)	2.33
Total number of responses	559

Table 12

Frequency distribution – Question 10

Question 10 In your opinion at your university copying in exams	
Category of response	
Is not a problem (Frequency) (%)	20.39
Is a trivial problem of low importance (Frequency) (%)	27.91
Is a problem (Frequency) (%)	35.6
Is a serious and widespread problem (Frequency) (%)	16.1
Total number of responses	559

Table 13

Descriptive Statistics

	Question
Category of response	How frequently have you observed other students copying in exams
Never (Median (IQR))	2 (0;4)
Rarely (Median (IQR))	4 (2;6)
Sometimes (Median (IQR))	5 (2;8)
Many times (Median (IQR))	5 (3.25;7)
Always (Median (IQR))	5 (3.5;10)

Table 14

Descriptive Statistics – Question 7

	Question
Category of response	From your experience in multiple choice exams what is the percentage of students that you think might copy in that type of exam
No more than 0 % (Median (IQR))	3 (0;4)
Between 1% and 10% (Median (IQR))	3 (1;5)
Between 10% and 20 % (Median (IQR))	4 (2;6)
Between 30% and 40% (Median (IQR))	4 (2;6)
Between 40% and 50% (Median (IQR))	4.5 (1.25;8)
More than 50 % (Median (IQR))	6 (2;8)

Table 15

Descriptive statistics

	Question
Category of response	In your opinion at your university copying in exams
Is not a problem (Median (IQR))	3 (0;5)
Is a trivial problem of low importance (Median (IQR))	4.5 (2;7)
Is a problem (Median (IQR))	3 (1;5)
Is a serious and widespread problem (Median (IQR))	3 (1;5)

Table 16

Rotated Component Matrix- 2 factors

	Component	
	1	2
AMS_TA1	.628	-.150
AMS_TA2	.662	-.271
AMS_TA3	.654	-.257
AMS_TA4	.741	-.280
AMS_TK1	.804	-.135
AMS_TK2	.794	-.158
AMS_TK3	.728	-.306
AMS_TK4	.718	-.268
AMS_TES1	.715	.191
AMS_TES2	.682	.622
AMS_TES3	.674	.635
AMS_TES4	.713	.434

Table 19

Frequency distribution – Question 35

Question 35: Please enter your current year of study	
Category of response	
1st year (Frequency) (%)	18.97
2nd year (Frequency) (%)	25.77
3rd year (Frequency) (%)	21.44
4th year (Frequency) (%)	21.65
5th year (Frquency) (%)	8.25
6th year (Frequency) (%)	3.92
Total number of responses	485

Table 20

Descriptive Statistics

	Question
Category of response	Please enter your current year of study
1st year (Median (IQR))	3 (1;5)
2nd year (Median (IQR))	4 (2;5)
3rd year (Median (IQR))	4 (2;6)
4th year (Median (IQR))	4 (2;6)
5th year (Median (IQR))	4 (3;7.75)
6th year (Median (IQR))	2 (0;4)

Table 21

Frequency Distribution

Question 13: Using the scale indicate the extent to which you agree with the following statements					
	Statement				
Category of response	I would cheat if doing so helped me retain financial assistance	I would cheat to avoid letting my family down if I failed	I would cheat to avoid getting a poor mark or failing a grade in class	I would cheat in a class if it seemed that everyone else was cheating	I would cheat if there was no way that I could get caught
Strongly disagree (Frequency) (%)	39.06	37.38	37.84	40.31	34.44
Disagree(Frequency) (%)	26.37	30.72	32.16	27.2	25.44
Neutral (Frequency) (%)	17	11.94	13.53	14.68	14.48
Agree (Frequency) (%)	12.3	14.68	12.74	14.87	17.22
Strongly agree (Frequency) (%)	5.27	5.28	3.73	2.94	8.41
Total number of responses	512	511	510	511	511

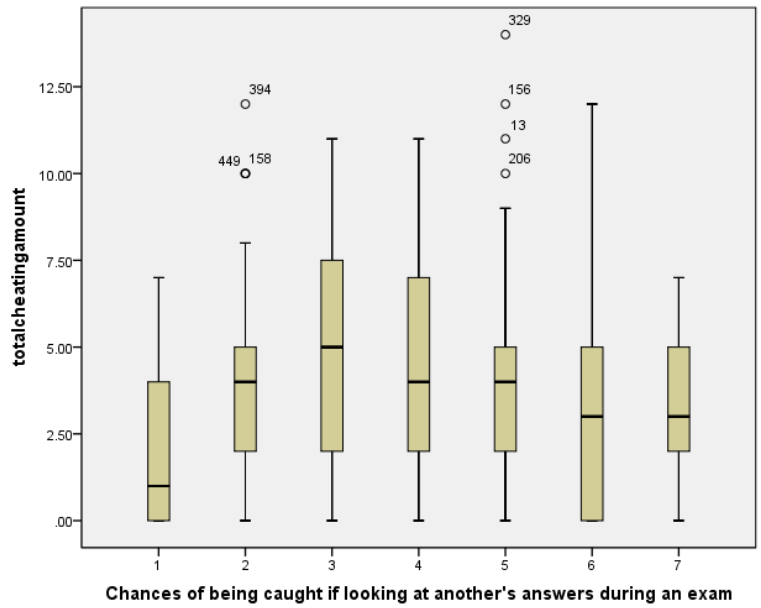
Table 23

Descriptive Statistics

	Statement				
Category of response	I would cheat if doing so helped me retain financial assistance	I would cheat to avoid letting my family down if I failed	I would cheat to avoid getting a poor mark or failing a grade in class	I would cheat in a class if it seemed that everyone else was cheating	I would cheat if there was no way that I could get caught
Strongly disagree (Median (IQR))	2 (1;5)	3 (1;5)	3 (1;5)	3 (1;4)	2 (.25;4)
Disagree (Median (IQR))	3 (2;5)	3 (1.5;5)	3 (1;5)	4 (2;6)	3 (1;5)
Neutral (Median (IQR))	5 (3;7)	4 (3;7)	5 (3;7)	4 (2;6)	4 (2;7)
Agree (Median (IQR))	5 (4;7)	5 (4;7)	6 (4;9)	5 (4;8)	5 (4;8)
Strongly Agree(Median (IQR))	7 (4;9)	6 (4;9)	7 (4;9)	8 (2;9)	5 (3;8)

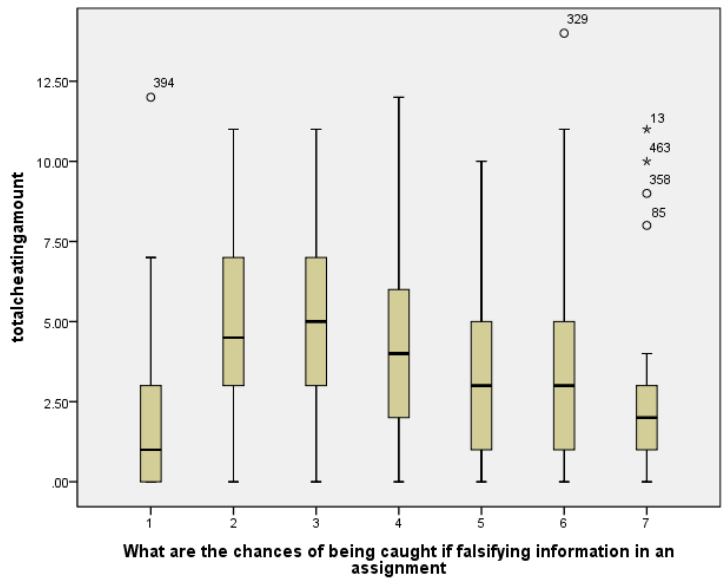
Figures

Figure 1



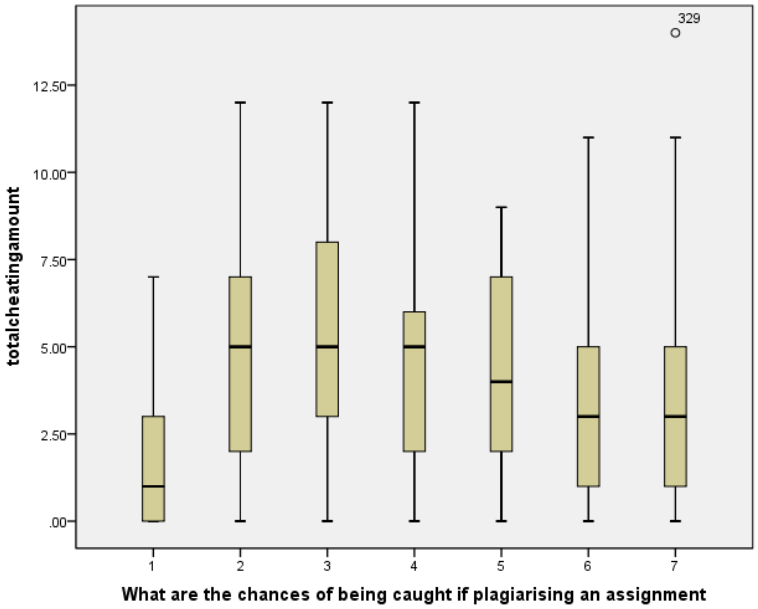
Question 14.3 – Box and Whisker Plot

Figure 2



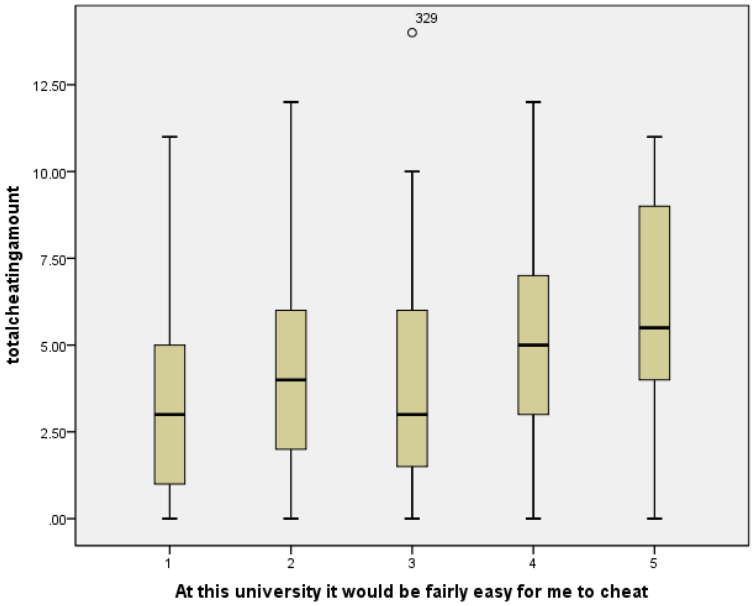
Question 14.4 – Box and Whisker Plot

Figure 3



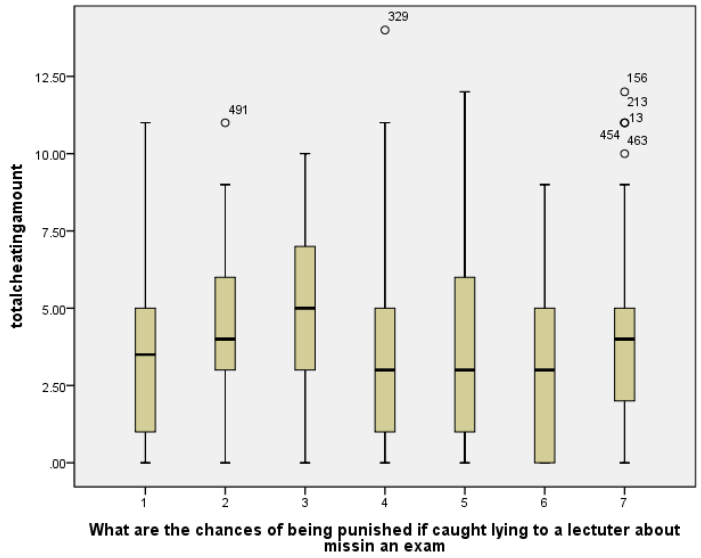
Box and Whisker Plot – Question 14.5

Figure 4



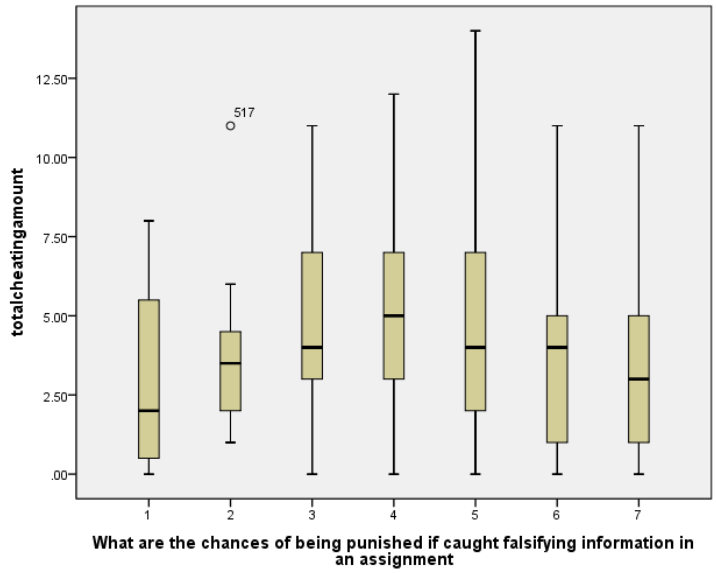
Box and Whisker plot – Question 28

Figure 5



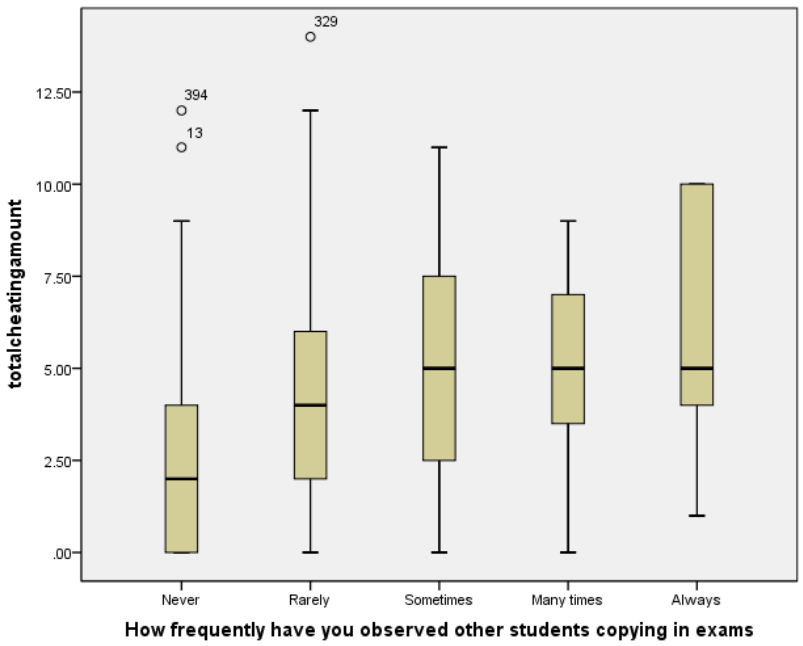
Box and Whisker plot – Question 15.1

Figure 6



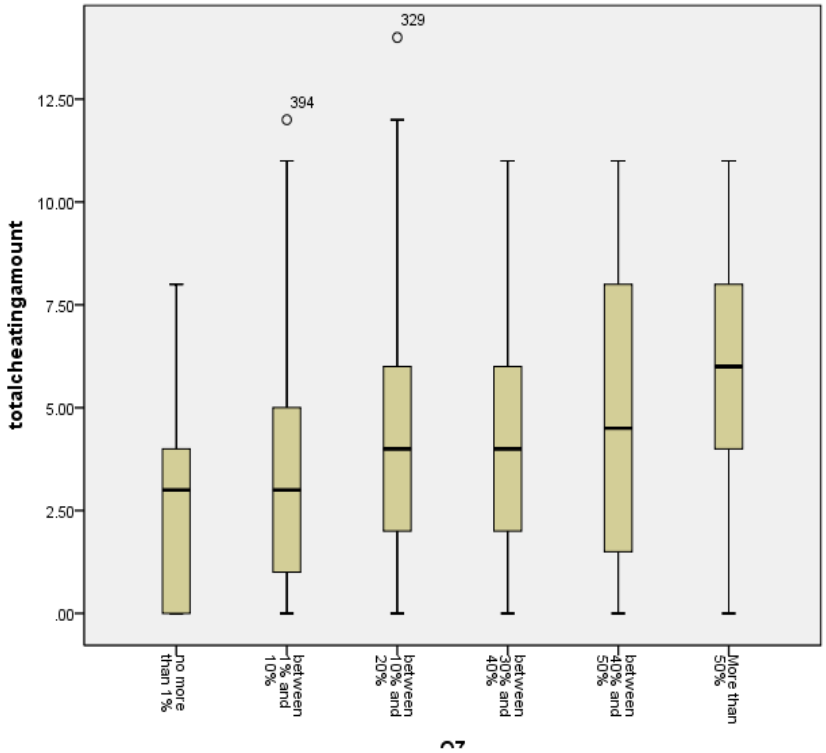
Box and Whisker plot – Question 15.4

Figure 7



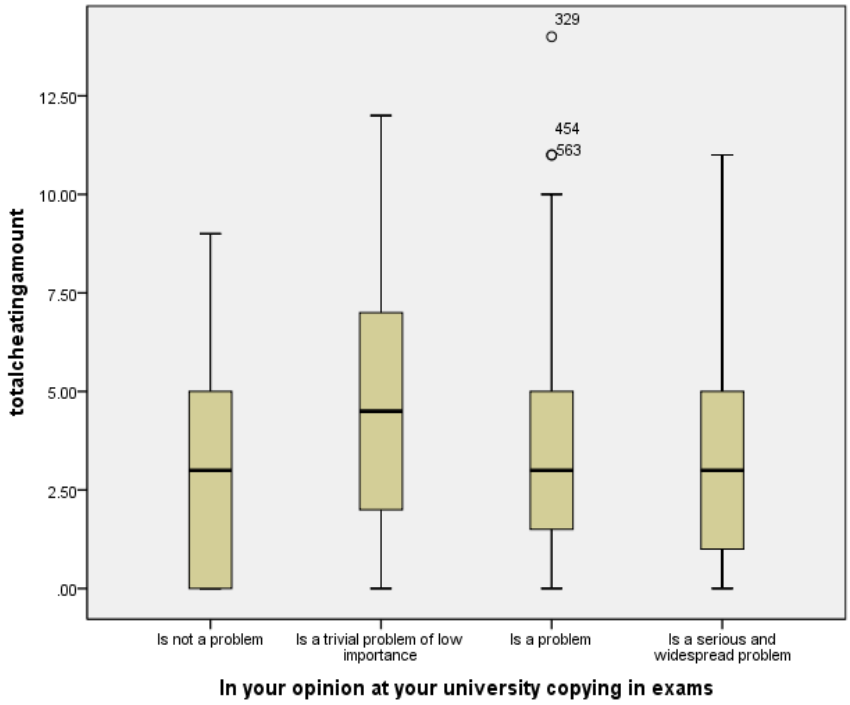
Box and Whisker plot – Question 2

Figure 8



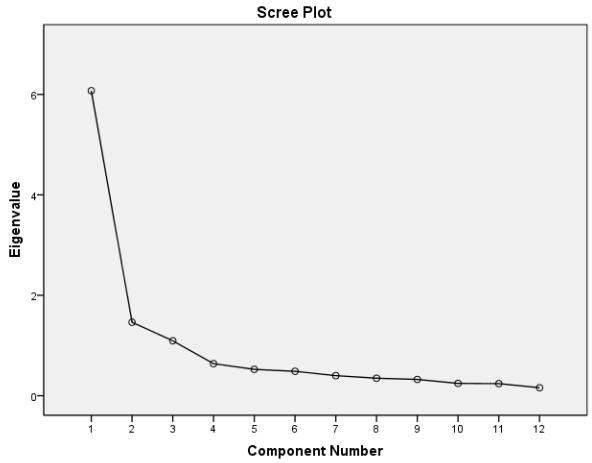
Box and Whisker plot – Question 7

Figure 9



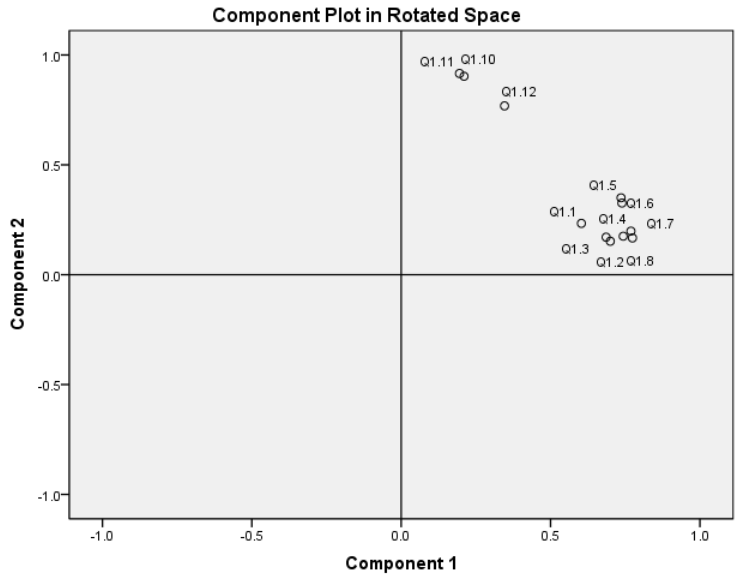
Box and Whisker plot – Question 10

Figure 10



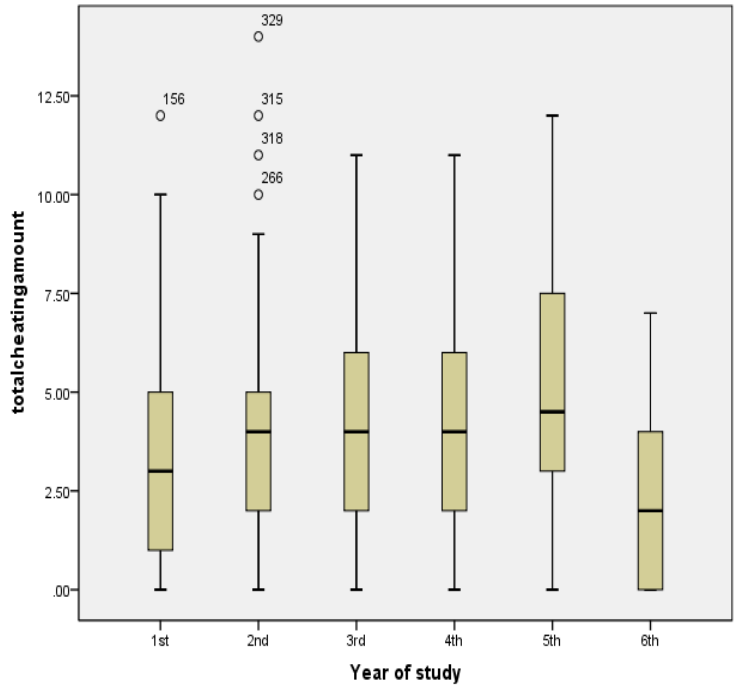
Scree plot – Question 10

Figure 12



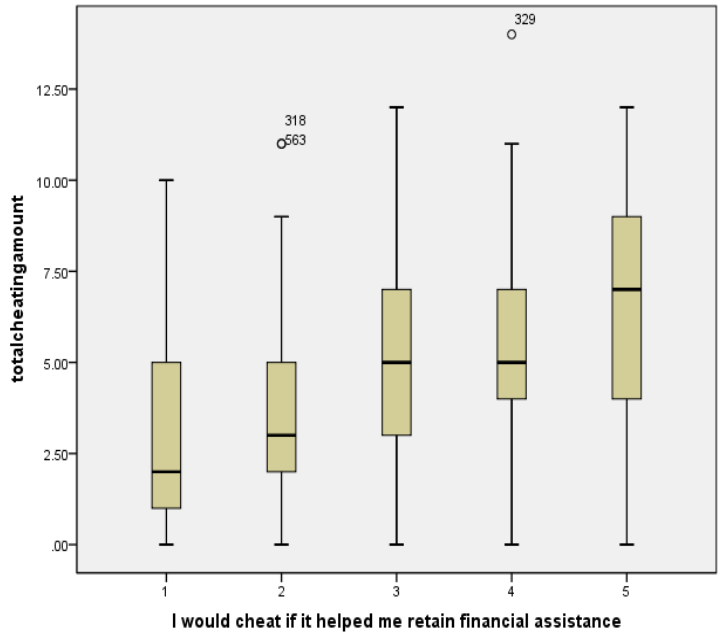
Component plot for two factors

Figure 13



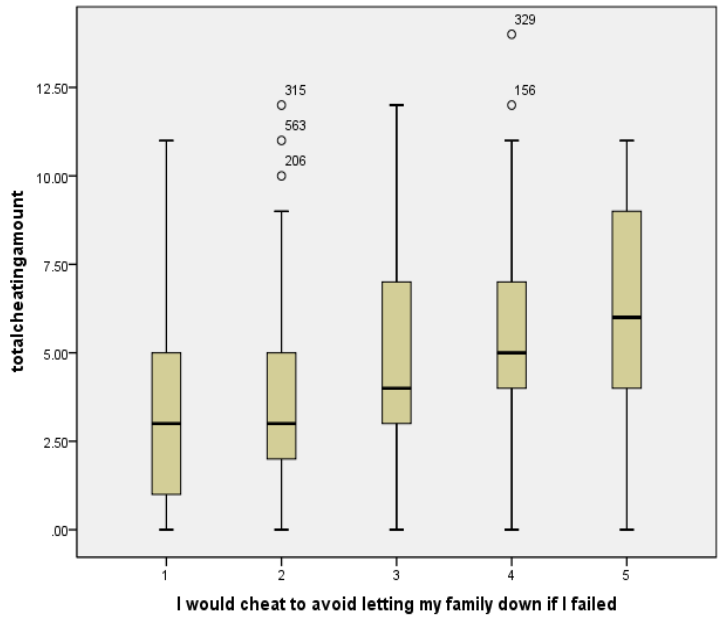
Box and Whisker plot – Question 35

Figure 14



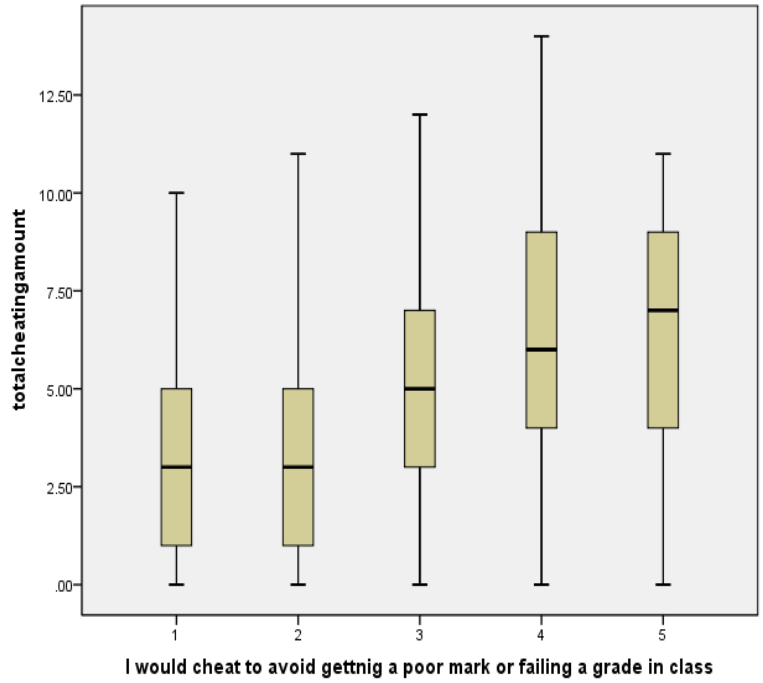
Box and Whisker plot – Question 13.1

Figure 15



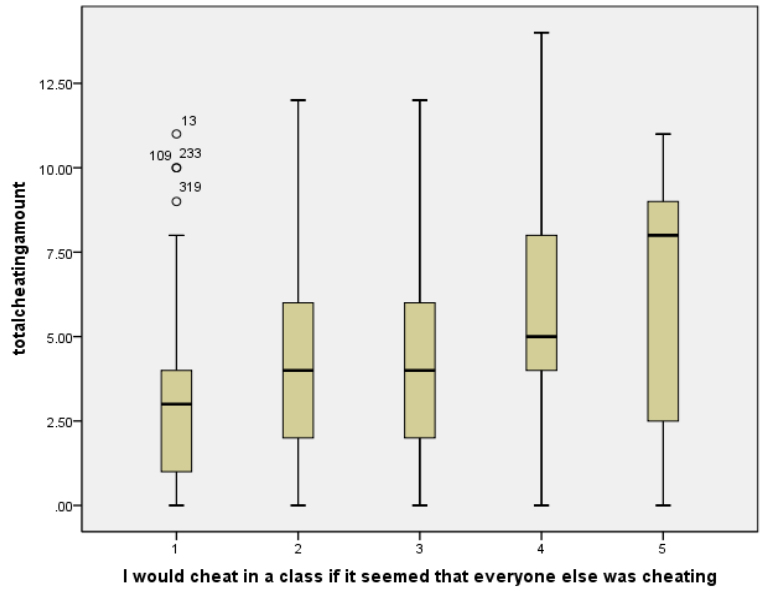
Box and Whisker plot – Question 13.2

Figure 16



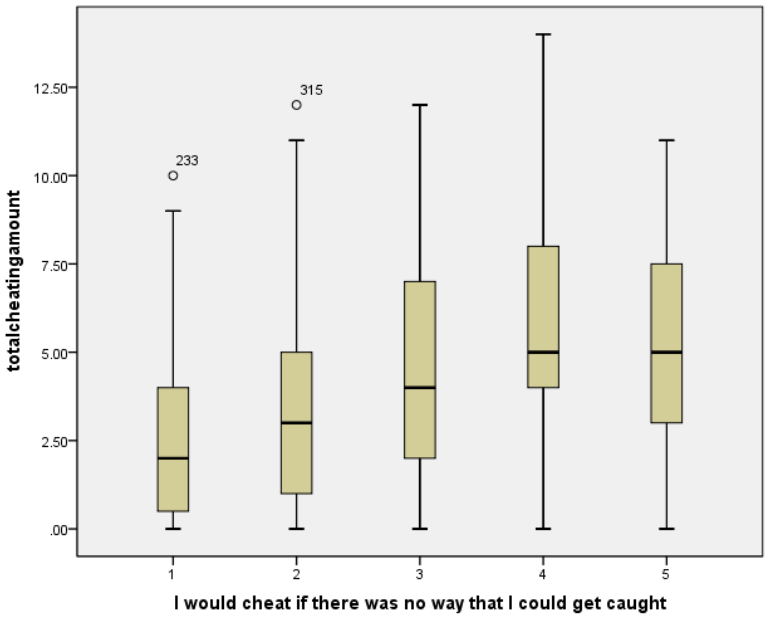
Box and Whisker plot – Question 13.3

Figure 17



Box and Whisker plot – Question 13.4

Figure 18



Box and Whisker plot – Question 13.5

Organisational Psychology Masters Research Project 2011

Dear Respondent

You are invited to participate in an Organisational Psychology Masters research project on cheating.

The questionnaire will take about 10 to 15 minutes to complete.

There are no risks to you if you participate in the survey. Your responses are anonymous and confidential.

Your participation is voluntary. By completing and submitting this questionnaire, you are acknowledging that your participation in this study has been of your own free will.

Clarese Kuhn
Tom Dawson Squibb
Stephanie Pulker

Contact number: 021 6503778

*1. Why do you go to university?

How do each of the following items correspond to one of your reasons for attending university?

	Does not correspond at all			Corresponds moderetly			Corresponds exactly
For the pleasure I experience while surpassing myself in my studies	○	○	○	○	○	○	○
For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments	○	○	○	○	○	○	○
For the satisfaction I feel when I am in the process of accomplishing difficult academic activities	○	○	○	○	○	○	○
Because university allows me to experience a personal satisfaction in my quest for excellence in my studies	○	○	○	○	○	○	○
Because I experience pleasure and satisfaction while learning new things	○	○	○	○	○	○	○
For the pleasure I experience when I discover new things never seen before	○	○	○	○	○	○	○
For the pleasure that I experience in broadening my knowledge about subjects which appeal to me	○	○	○	○	○	○	○
Because my studies allow me to continue to learn about many things that interest me	○	○	○	○	○	○	○
For the intense feelings I experience when I am communicating my own ideas to others	○	○	○	○	○	○	○
For the pleasure that I experience when I read interesting authors	○	○	○	○	○	○	○
For the pleasure that I experience when I feel completely absorbed by what certain authors have written	○	○	○	○	○	○	○
For the 'high' feeling that I experience while reading about various interesting subjects.	○	○	○	○	○	○	○

***2. How frequently have you observed other students copying in exams?**

- ◯ Never
- ◯ Rarely
- ◯ Sometimes
- ◯ Many times
- ◯ Always

***3. Have you seen another student caught copying in exams?**

- ◯ Yes
- ◯ No

***4. How often have you copied in exams?**

	Never	Rarely	Sometimes	Many times	Always
Answer	◯	◯	◯	◯	◯

***5. Have you ever been caught copying in an exam?**

- ◯ Yes
- ◯ No
- ◯ N/A

***6. Do you know someone who usually copies in exams?**

- ◯ Yes
- ◯ No

***7. From your experience in multiple choice exams what is the percentage of students that you think might copy in that type of exam?**

	no more than 1%	Between 1% and 10%	Between 10% and 20%	Between 30% and 40%	Between 40% and 50%	More than 50%
answer	◯	◯	◯	◯	◯	◯

***8. In the last exam you took indicate the mark (rounded between 0% and 100%) that you think you would have obtained if**

	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
You DID copy	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
You DID NOT copy	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯

***9. If you were caught copying or committing some other kind of academic dishonesty in an exam what do you expect might happen to you?**

- ◯ Nothing more than a reprimand
- ◯ Having the final mark limited
- ◯ The exam annulled (given 0%)
- ◯ The exam be annulled (given 0%) and you prevented from carrying out other exams in that subject during the academic year
- ◯ The exam be annulled (given 0%) and you suspended for one year

***10. In your opinion at your university copying in exams:**

- ◯ Is not a problem
- ◯ Is a trivial problem of low importance
- ◯ Is a problem
- ◯ Is a serious and widespread problem

*11. Please indicate a response to the following statements:

	Yes	No	N/A
I used unauthorized notes during an exam	◯	◯	◯
I used unauthorized notes during a test	◯	◯	◯
I copied from someone during an exam	◯	◯	◯
I copied from someone during a test	◯	◯	◯
I gave answers to someone (or allowed someone to copy my answers) during an exam	◯	◯	◯
I gave answers to someone (or allowed someone to copy my answers) during a test	◯	◯	◯
I turned in an assignment or hand-in tutorial written by someone else	◯	◯	◯
I turned in an assignment or hand-in tutorial that I had submitted for another course	◯	◯	◯
I used exact words or ideas from a WWW source without acknowledging the source	◯	◯	◯
I used exact words or ideas from a book or other printed publication without acknowledging the source	◯	◯	◯
I added items to a reference list that were not used in writing the paper	◯	◯	◯
I added items to a reference list even though I had not read them	◯	◯	◯
I copied all or part of someone's assignment or hand-in tutorial work	◯	◯	◯
I had someone do my assignment or hand-in tutorial work for me	◯	◯	◯
I allowed someone to copy my assignment or hand-in tutorial work	◯	◯	◯
I did someone's assignment or hand-in tutorial work for them	◯	◯	◯
I worked with another	◯	◯	◯

student on an assignment or hand-in tutorial that was supposed to be done independently			
I invented or altered data (e.g., entered nonexistent results into a database; adjusted data to get a significant result)	◯	◯	◯

*12. Using the scale below indicate to what extent you agree with the below statements

	Strongly disagree	Disagree	Disagree somewhat	Undecided	Agree somewhat	Agree	Strongly agree
I don't like taking courses at university	◯	◯	◯	◯	◯	◯	◯
I don't enjoy researching new topics	◯	◯	◯	◯	◯	◯	◯
It is a waste of time to study Philosophy	◯	◯	◯	◯	◯	◯	◯
Learning should be career focused	◯	◯	◯	◯	◯	◯	◯
Some professors are too intellectual	◯	◯	◯	◯	◯	◯	◯
Problems require direct answers	◯	◯	◯	◯	◯	◯	◯
Reduce required social science courses	◯	◯	◯	◯	◯	◯	◯
I prefer classes without critical thinking	◯	◯	◯	◯	◯	◯	◯
I am not interested in philosophical issues	◯	◯	◯	◯	◯	◯	◯
I am in a hurry to get my university education over with	◯	◯	◯	◯	◯	◯	◯

*13. Using the scale below indicate the extent to which you agree with the following statements

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I would cheat if doing so helped me retain financial assistance	◯	◯	◯	◯	◯
I would cheat to avoid letting my family down if I failed	◯	◯	◯	◯	◯
I would cheat to avoid getting a poor or failing grade in class	◯	◯	◯	◯	◯
I would cheat in a class if it seemed that everyone else was cheating	◯	◯	◯	◯	◯
I would cheat if there was no way that I could get caught	◯	◯	◯	◯	◯

*14. What are the chances of being caught if doing the following:

	No chance	Very Low	Low	Moderate	High	Very high	Certain
Lying to a lecturer about missing an exam	◯	◯	◯	◯	◯	◯	◯
Receiving an illicit, advance copy of an exam	◯	◯	◯	◯	◯	◯	◯
Looking at another student's answers during an exam	◯	◯	◯	◯	◯	◯	◯
Falsifying information in an assignment	◯	◯	◯	◯	◯	◯	◯
Plagiarising an assignment	◯	◯	◯	◯	◯	◯	◯

*15. What are the chances of being punished if caught:

	No chance	Very low	Low	Moderate	High	Very high	Certain
Lying to a lecturer about missing an exam	◯	◯	◯	◯	◯	◯	◯
Receiving an illicit, advance copy of an exam	◯	◯	◯	◯	◯	◯	◯
Looking at another student's answers during an exam	◯	◯	◯	◯	◯	◯	◯
Falsifying information in an assignment	◯	◯	◯	◯	◯	◯	◯
Plagiarising an assignment	◯	◯	◯	◯	◯	◯	◯

*16. What are the chances of you feeling ashamed of yourself if caught:

	No chance	Very low	Low	Moderate	High	Very high	Certain
Lying to a lecturer about missing an exam	◯	◯	◯	◯	◯	◯	◯
Receiving an illicit, advance copy of an exam	◯	◯	◯	◯	◯	◯	◯
Looking at another student's answers during an exam	◯	◯	◯	◯	◯	◯	◯
Falsifying information in an assignment	◯	◯	◯	◯	◯	◯	◯
Plagiarising an assignment	◯	◯	◯	◯	◯	◯	◯

*17. What are the chances of you losing the respect of people that you care about if caught:

	No chance	Very low	Low	Moderate	High	Very high	Certain
Lying to a lecturer about missing an exam	◯	◯	◯	◯	◯	◯	◯
Receiving an illicit, advance copy of an exam	◯	◯	◯	◯	◯	◯	◯
Looking at another student's answers during an exam	◯	◯	◯	◯	◯	◯	◯
Falsifying information in an assignment	◯	◯	◯	◯	◯	◯	◯
Plagiarising an assignment	◯	◯	◯	◯	◯	◯	◯

***18. I would not report an incidence of cheating by a student whom I consider to be a friend**

- ◯ Strongly agree
- ◯ Agree
- ◯ Not sure
- ◯ Disagree
- ◯ Strongly disagree

***19. Reporting incidences of cheating is NOT necessary just to be fair to honest students who do not cheat**

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Not sure
- ◯ Agree
- ◯ Strongly agree

***20. Students should go ahead and cheat if they know they can get away with it.**

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Not sure
- ◯ Agree
- ◯ Strongly agree

***21. I would let another student cheat off my test if he/she asked.**

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Not sure
- ◯ Agree
- ◯ Strongly agree

***22. In the past year, how often, if ever, have you suspected another student of cheating during a test or exam?**

- ◯ Never
- ◯ Rarely
- ◯ Sometimes
- ◯ Often
- ◯ Very often

***23. In the past year, how often, if ever, have you suspected that another student plagiarized an assignment?**

- ◯ Never
- ◯ Rarely
- ◯ Sometimes
- ◯ Often
- ◯ Very often

***24. How frequently do you think cheating during tests and examinations occurs at your university?**

- ◯ Never
- ◯ Rarely
- ◯ Sometimes
- ◯ Often
- ◯ Very often

***25. How frequently do you think plagiarism occurs at your university?**

- ◯ Never
- ◯ Rarely
- ◯ Sometimes
- ◯ Often
- ◯ Very often

***26. If I wanted to cheat on assignments or papers, it would be easy.**

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Not sure
- ◯ Agree
- ◯ Strongly agree

***27. If I wanted to cheat on exams, it would be easy.**

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Not sure
- ◯ Agree
- ◯ Strongly agree

***28. At this university, it would be fairly easy for me to cheat.**

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Not sure
- ◯ Agree
- ◯ Strongly agree

***29. It is easy to cheat and NOT get caught.**

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Not sure
- ◯ Agree
- ◯ Strongly agree

***30. How likely are you to consider turning in another's work done as your own?**

- ◯ Very unlikely
- ◯ Unlikely
- ◯ Not sure
- ◯ Likely
- ◯ Very likely

***31. How likely are you to consider copying from someone else during a test?**

- ◯ Very unlikely
- ◯ Unlikely
- ◯ Not sure
- ◯ Likely
- ◯ Very likely

***32. How likely are you to consider using unapproved materials (“crib notes”) during a test?**

- ◯ Very unlikely
- ◯ Unlikely
- ◯ Not sure
- ◯ Likely
- ◯ Very likely

***33. How likely are you to consider plagiarizing to complete an assignment or paper?**

- ◯ Very unlikely
- ◯ Unlikely
- ◯ Not sure
- ◯ Likely
- ◯ Very likely

*34. Please indicate your response to the following statements:

	Yes	No
I have received information on my university's academic dishonesty policy	◯	◯
I have read information about academic dishonesty at my university	◯	◯
I understand the academic dishonesty policy at my university	◯	◯
At my university there are no sanctions regarding academic dishonesty	◯	◯
Lecturers turn a blind eye towards academic misconduct	◯	◯

***35. Please enter your current year of study:**

- ◯ 1st
- ◯ 2nd
- ◯ 3rd
- ◯ 4th
- ◯ 5th
- ◯ 6th

***36. Please indicate your present Grade Point Average across all of your courses for 2011:**

***37. Please indicate your gender:**

- ◯ Male
- ◯ Female

***38. Please enter your age:**

***39. Please indicate where you currently reside:**

- ◯ University residence
- ◯ Home
- ◯ Digs
- ◯ Other

***40. Field of study**

41. Name of University

42. Name of Faculty