# Factors Influencing Academic Fraud Prevention among Accounting Students

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**Abstract:** This study examines the factors influencing academic fraud prevention among the accounting students. Specifically, this study examines whether five factors namely, identification verification, monitoring, restroom visits procedures, punishment and embarrassment can prevent academic fraud. Using questionnaire survey on accounting students, this study shows that out of the five selected factors, monitoring and punishment significantly and positively influence academic fraud prevention. On the other hand, the other three factors namely, verification identification, restroom visits procedures and embarrassment do not significantly influence academic fraud prevention among the accounting students. The findings in this study shed some lights on the factors influencing academic fraud prevention among the accounting students. This study contributes to the university as well as other related parties in strategizing better controls to prevent academic fraud. This in turn will improve the quality of their graduates and eventually the image of universities.

**Keywords:** Academic fraud, academic fraud prevention, accounting students, examination, university.

## 1. INTRODUCTION

Fraud has been in existence for a long time and it is not restricted to any sectors. The education sector is also open to fraud. In 2013, the Transparency International published a report stating that bribes in academic fraud in Vietnam had more than double the country's GDP per capita (Transparency International, 2013). Such scenario raised a concern since academic fraud is on the rise, as can be seen from news articles all over the world. The Hindustan Times reported that a total of 150 students were caught cheating during an online examination at the Savitribai Phule Pune Universityin India (Bengrut, 2021). Even the military academy, where discipline is paramount, has seen the occurrence of academic fraud in recent years, when more than 70 students were accused of cheating during a mathematics test (BBC News, 2020). BBC News (2020) further added that the cheating caught at West Point is the worst cheating scandal in the last four decades. In South East Asia, similar events could be seen. For example, the National University of Singapore (NUS) had identified the alleged cheaters in one of their module examinations (New Straits Times, 2022).

Academic fraud has becomes more concerning during the Covid-19 pandemic era (Erguvan, 2021). During the Covid-19 epidemic, when universities around the world were forced to switch to online learning, there are strong indicators that academic dishonesty has become more prevalent. This trend has increased the number of options for students to finish assignments with internet assistance; as a result, emerged as a significant threat to academic integrity (King, Guyette, & Piotrowski, 2009). Students claimed that cheating on online exams was easier than on in-person exams; hence, they are more likely to cheat during online exams. For example: In one of the college universities in Malaysia, a student was caught cheating by bringing a mobile phone into the examination hall for one of the final examinations. When the Covid-19 virus was traced in Malaysia in early 2020, the government had to introduce a Movement Control Order (MCO), which limited the movement of the people, and most organisations cannot operate fully. During this time, the college university had allowed the students to take their exams at home without close invigilation. As a result, the lecturers had found a considerable increase in instances of plagiarism among the students.

According to studies, one of the keys to preventing academic fraud is internal control (Curran, Middleton, & Doherty, 2011; Gasparyan et al., 2016). Controls in the teaching and learning procedures, including the examination process and sanctions, that are mandated by the laws and regulations of educational institutions are essential for preventing widespread academic fraud (Transparency International, 2013). The Malaysian Universities and University Colleges Act of 1971 is an example of such legislation and regulations.

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When academic fraud happens, the question of whether internal control exists and, if it does, whether it is appropriate emerges. Academic fraud might be perpetrated and an unfair advantage gained if internal controls were inadequate (Muhsin, Kardoyo, & Nurkhin, 2018). Since its commencement in 1971, the Universities and Universities Colleges Act in Malaysia has been revised six times, with the most recent revision occurring in 2012. However, despite the existence of the law, why do academic fraud still exist? What are the factors that can influence prevention of academic fraud.

This study aims to examine this issue. Specifically, this study aims to examine the factors influencing academic fraud prevention among accounting students in one of the college universities in Malaysia. Five factors are selected namely, identification verification, monitoring, restroom visits procedures, punishment and embarrassment can prevent academic fraud. The findings in this study provides additional information to universities that can help them to strengthen their internal controls and improve the quality of their graduates and eventually, their image. The remainder of this paper is organised as follows. Section 2 presents a review of the literature relevant to this study. This is followed by Section 3 that explains the research design. Section 4 presents the results and Section 5 concludes this paper.

## 2. LITERATURE REVIEW

Academic fraud can be defined in various meanings, as shown in different studies (Martinez & Ramírez, 2018; Sierra & Hyman, 2008). Academic fraud is any action that creates an opportunity for underserved and unearned students to gain an advantage over others (Martinez & Ramírez, 2018). According to Sierra and Hyman (2008) misconducts perpetrated by students are considered to be academic fraud. Illegal actions during tests or examinations, plagiarism during coursework assignments, or using context from academic materials without citation by students are defined as academic fraud (Hughes & McCabe, 2006). Genereux and McLeod (1995) stated that attaining academic results using unauthorised conduct, be it an intention or execution of actions, is defined as academic fraud.

A body of the education literature has identified different approaches and strategies to prevent academic fraud. Among the strategies considered to be most effective are actions taken by the administration to impose strict controls and heavy punishments (Malgwi & Rakovski, 2009). During the COVID-19 epidemic, when institutions shifted to online learning, the percentage of students who cheated rose to record levels. The absence of face-to-face interaction and proctoring on college campuses as an opportunity and employed aggressive marketing strategies to attract students (Erguvan, 2021). In the light of recent events of the Covid-19 and Movement Restriction Order that forces many universities to conduct examinations online, the controls and punishments need to be revisited to ensure that they remain relevant and effective to prevent academic fraud occurring on a large scale. However, what are the controls or factors that can influence academic fraud prevention?

Studies have suggested that identity verification is one of the factors suggested that can prevent academic fraud whereby it is used by the administration against impersonation during examination (Gathuri, Luvanda, Matende, & Kamundi, 2014; Saheed, Hambali, Adeniji, & Kadri, 2017; Shahwan et al. 2022; Sinha, 2022). Impersonation is a significant risk of academic fraud (Erguvan, 2021). Identity verification is an effective control against impersonation to ensure that students attending the exam are the actual students and not imposters (Gathuri et al., 2014; Saheed et al., 2017). However, some students may claim to have lost their student identity card to get a letter from the Students Records and Registration Office stating that they are registered students in the university. This letter allows impersonation since it does not have any photo that could help identify the correct student (Taderera, Nyikahadzoi, Matamande, & Mandimika, 2014).

According to Taderera et al. (2014) with this letter, other people may impersonate the students since the letter does not have any photo that could help identify the impersonated students. However, arguably, the invigilators checking the student's identity card prior to entering the examination hall may not know the impersonated student. Furthermore, it is inefficient to verify and identify students by identification cards since it is possible to forge the cards. The identification card would have genuine information about the student but has the photograph of the imposter. When entering the examination hall, a long queue is observed for identity verification, and the invigilators may not be able to spend much time checking the details for impersonation (Rufai, Adigun, & Yekini, 2012). The risk of impersonation would be significantly higher when the assessment is performed online without direct supervision by the invigilators (Gathuri et al., 2014).

Another group of studies suggested using biometric recognition for examinations. Biometric recognition has a higher level of security to prevent forgery. It is more reliable, reduces queueing time, and enhances the student screening process (Rufai et al., 2012; Saheed et al., 2017). Biometric recognition would also be applicable for online assessments and examinations as the invigilators would have difficulties performing the traditional method of matching the student's photograph identification document with his details (Gathuri et al., 2014). However, there is also a risk that students who attempt to cheat attending the beginning of the exam for verification of identity purposes only and then asking someone else to impersonate them and sit for the examination session (Gathuri et al., 2014). Hence, Gathuri et al. (2014) suggested that identity verification preferably be performed continuously throughout the examination session, either using biometric recognition or traditional invigilator methods of matching students' details with the photograph identification documents. Since the study was performed in 2014, it would be interesting to identify if the same control measure would be sufficient to prevent fraud in the widely adopted online examination during the pandemic Covid-19 virus outbreak. Therefore, the following hypothesis is developed:

H1: Identity verification significant influence academic fraud prevention among accounting students.

Another factor that may influence academic fraud prevention is monitoring. Monitoring is a key control to ensure students attempting the examination follow the rules and guidelines set by the university. Unsupervised students during theexamination might attempt to get access to unauthorised materials, communicate with other individuals, take a longer time than allowed, and do many other actions to give them an unfair advantage. Minimal supervision is seen as an opportunity for students to commit fraud. Students tend to engage in cheating to a greater extent in minor assessments than final examinations. Minor assessments, such as quizzes and assignments, carry less weightin the final grading, and students would be subjected to less severe punishments if caught cheating by the management. Typically, minor assessments are conducted without special seating arrangements and with less monitoring. This situation allows a greater chance of cheating among students (Yussof & Ismail, 2018). Bernardi, Banzhoff, Martino, and Savasta (2012) studied business students and observed that students who have cheated either in a major or minor examination might attempt to cheat in the future. Therefore, precautionary measures, such as close monitoring and proper students' seating arrangements during examinations, arenecessary to reduce the cheating rate. LaSalle (2009) supported this notion as the perception of a low detection environment would more likely encourage students to cheat.

Academic fraud is more prevalent during online assessments and examinations, especially when the students are not monitored (Hylton, Levy, & Dringus, 2016). Hylton et al. (2016) found that students who sat for online examinations unmonitored scored higher than students who were monitored using webcams duringthe online examinations. The former also took longer to complete the examination. However, the study also mentioned that there is a possibility that the students took longer time due to them feeling more relaxed when taking the examination unsupervised. Contrastingly, Stack (2015) found that there is no significant difference in marks scored by students who performed a test being monitored at the university and marks scored by students who performed the test using unmonitored browsers. It would be interesting to determine if monitoring online examinations is still effective today to prevent. Thus, the following hypothesis is developed:

H2: Monitoring significantly influence academic fraud prevention among the accounting students.

Another body of the education literature has examined the link between break time during on-going examination and academic fraud. These studies show then the students tend to conduct academic fraud. For example: (Muhammad, Ghani, & Rossli, 2021) stated in their study that among the opportunities for students to commit academic fraud during examinations is when the students take a break to go to the restrooms. They could utilise this break time to get access to unauthorised materials. Restrooms are where students can hide their materials, especially when there is no thorough checking of the restrooms before and during the examination. Madara and Namango (2016) reported that the majority of students thought that the chance of getting caught is minimal since the examinations are set in a big hall. These conditions contribute to cheating behaviour among students. Thirteen percent of their respondents suggested establishing separate examination venues (different from the lecture rooms) that are secure and have attached restrooms. During an examination, the students might request to go to the restrooms several times, giving them the freedom to read for some time in the restroom. These students were usually seen coming back very enthusiastically from the trip to the 'restroom library' (Madara & Namango, 2016).

In order to combat academic fraud, students must strictly be supervised throughout the entire examination period, including during their visit to the restrooms. Students attempting to commit academic fraud may place lecture notes and other relevant exam materials in the restrooms before the examination. During the examination, the students would ask to go to the restrooms, some even doing it several times. Going to the restrooms would give them the freedom to read for some time in the restroom. These students are seen coming back from the restroom enthusiastically (Madara & Namango, 2016). Visiting the restrooms provides an opportunity for cheating. Therefore, it is one of the key factors for academic fraud (Malgwi & Rakovski, 2009; Muhammad et al., 2021; Sripan & Wisaeng, 2022; Ali et al.2022). Thus, a strict procedure over visits to the restrooms, such as limitation of the number of visits, the time allowed, or even outright prohibition of visits, may eliminate the opportunity of academic fraud. Hence, this study formed the following hypothesis.

H3: Restroom visits procedures during an examination significantly influence academic fraud prevention among the accounting students.

Another factor is punishment. Sometimes, students who cheated do not realise the magnitude and consequences when they decided to cheat. Molnar and Kletke (2012) suggested that enforcement of punishments and rules helps in combating fraud. Students must be made aware of the rules and the punishments imposed when the rules are broken. Abdaoui (2018) study of students in Algeria showed that the easiness of cheating in college andno harsh punishments being observed are the causes of academic dishonesty. According to Yussof and Ismail (2018) students who are not involved in fraud are aware of therules of the universities and the consequences of breaking the rules. Madara and Namango (2016) respondents unanimously supported that developing an academic honour code and reminding students about it in class and writing would reduce academic dishonesty.

Madara and Namango (2016) also observed that the students' morale would beaffected by cheating. Cheating discourages and kills morale as students who do not cheat feel frustrated at seeing those who cheat go unpunished. 21.4% of their respondents suggested no cheating penalties as a factor influencing cheating. 33% ofthe students believed that the most effective penalty is suspension, and 26% voted expulsion. Other cheating penalties suggested by the students in the study included automatic fail, warning or cautionary statement, expel from examination, face StudentDisciplinary Committee, ban from high-

er education permanently, suspended for a number of years, and awarded a zero mark in the related module. The staff surveyedby Taderera et al. (2014) ranked nullification of results, expulsion, suspension, and inclusion of the offence in transcripts as effective. They considered counselling and giving another opportunity to graduate with a lower class as not effective at all. Disobedient and unruly candidates should not be left unpunished to serve as prevention to others.

Malgwi and Rakovski (2009) supported this idea and suggested that if the punishment and the actions are publicised, it may have a deterrent effect and act as apreventive measure. This measure is discussed further in the next section. The greater the punishment, the lower the probability of breaching the law and performing fraud (Achen & Snidal, 1989; Maahs, Weidner, & Smith, 2016; Chowdhury, 2022). On top of that, unpunished academic fraud may affect other students' morale; cheating discourages and kills morale. It also frustrates students who do not cheat when the cheating goes unpunished. Some students may be discouraged from working hard and may also resort to cheating because of the lack of punishment. Disobedient and unruly candidates should not be left unpunished to serve as prevention to others (Madara & Namango, 2016). Thus, these studies led to the following hypothesis:

H4: Punishment significantly influence academic fraud prevention among accounting students.

The last factor examined in this study is embarrassment. Embarrassment is when the punishment imposed on an individual is made apparent to others, causing shame to the individual (Cochran, Chamlin, Wood, & Sellers, 1999). Students are afraid of the punishment that comes along with academicfraud. The heaviest punishment could be dismissal from the university or feeling ashamed if friends and family receive news of the cheating. The conscience of the students (the guilty feeling) and embarrassment may discourage the students from cheating. Undefined learning purpose is one of the factors that lead to cheating. After years of hard work in high school, many college students relaxed their requirements for acquiring knowledge after admission into the college in the face of a free learning environment. When some of them realised that they might not get through the exam, they resort to cheating. To make students realise that cheating is a shameful act, universities should cultivate a sense of integrity and foster a culture where integrity is worthy of being praised while cheating is shameful (Zhang, 2019). Integrity should be considered the most basic code of conduct as an examination is not only an examination of cultural knowledge but also the test of moral character. Furthermore, integrity is related to one's conscience (Zhang, 2019).

In Madara and Namango (2016) study, they found that 47% of respondents proposed exposing cheaters as the punishment for cheating to decrease the rate of cheating in examinations. An example of the exposure is putting their photos permanently in the Schools' notice board, indicating their names, year of study, department, and the respective punishment. Without this exposure, some students might think that no one really gets punished, even if caught cheating (Madara & Namango, 2016). The above finding is in contrast to Cochran et al. (1999) where there is no evidence that embarrassment can have an impact on preventing academic fraud. It isimportant to note that the study was done in 1999, and it would be interesting to identify if the result would still be the same given the widespread use of social media and importance of one's image today.

There are studies that showed that some students proposed the exposureof cheaters as a punishment for cheating (such as Grasmick and Bursik Jr. (1990); Madara and Namango (2016)). For example, the university should put their photos permanently on a notice board with their names, year of study, department, offense committed, and punishment given. Grasmick and Bursik Jr. (1990) suggestedthat individuals might feel embarrassed towards a person of importance due to the lossof that person's respect. Therefore, publicising the cheaters would deter not only thefraudsters but also other students from doing academic fraud in the future. Madara and Namango (2016) suggested that some students might think that no one really gets punished for cheating if the punishment is not publicised. Therefore, publicising the cheater would give clear information that the fraudster has been caught and action has been taken. These studies led to the development of the following hypothesis:

H5: Embarrassment significantly influence academic fraud prevention among the accounting students.

This study's framework consisted of one dependent variable and five independent variables. Fig. (**1**) illustrates both the dependent and independent variables. The dependent variable is academic fraud, whereas the independent variables are identity verification, monitoring, visit to restroom, punishment and self-conscience. The underlying theory for this study is the Rational Choice Theory, where fraudsters would consider the likelihood of being caught and the risks and rewards of fraud, including the severity of punishment, before committing the fraud.

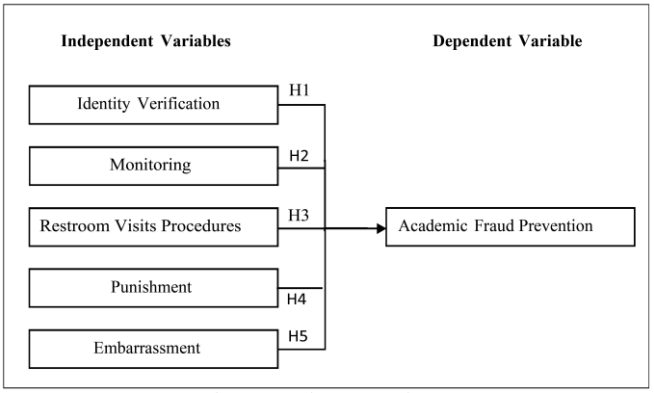


**Fig. (1).** Study Framework.

## 3. RESEARCH METHOD

### 3.1. Sample Selection

The accounting students in one the college universities in Malaysia is selected as the sample of this study. The ac-

counting students are students who were currently pursuing professional accounting courses. They were selected because they are still studying and may be facing the pressure to perform academic fraud. There were 360 accounting students enrolled in the professional accounting courses.

This study used the simple random sampling as the population is accessible of which the list of the students can be drawn using a lottery method or a computer-generated random list (Elfil & Negida, 2017). As the total population of accounting students is 360, the sample size is 186 students (Krejcie & Morgan, 1970).

### 3.2. Research Instrument

This study used the questionnaire survey as the research instrument. The questionnaire was developed based on reviewing the literature. The questionnaire is divided into three main sections. Section A request the respondents to provide their information related to demographic profile such as age, education, semester in the college university, and the main source of income for the students to maintain their cost of living. Section B requests the respondents to provide their opinion on academic fraud. The respondents were requested to provide opinion on whether *'communicating with other students during examination is considered an academic fraud', giving hints or signals to other students is considered an academic fraud'* and whether *'letting another person sits for the examination is considered an academic fraud'* among others.

Section C requests the respondents to complete a series of questions relating to identify verification. The respondents were requested to provide their opinion on identify verification such as '*identify verification performed manually', 'requirement to present photographic identification document'* and *'identity verification performed multiple times throughout the examination session'*. Section D requests the respondents to complete a series on questions relating to monitoring such as '*monitoring students live through webcams', 'number of invigilators assigned to monitor the students'* and *'recording students taking the examination'*. Section E requests the respondents to complete a series of questions relating to restroom visits such as 'supervision of students during restroom visits', 'limitation of the length of time students can go to the restroom during examination' and 'prohibition of restroom visits during examination'.

**Table1: Variable Measurements.**

| Variable | Measurement Items | References |
|---|---|---|
| **Dependent Variable** | | |
| Academic Fraud Prevention | Communicating with other students during examination is considered an academic fraud<br>Communicating with other individuals during examination is consideredan academic fraud<br>Access to unauthorised materials during examination is consideredan academic fraud<br>Giving answers to other students is consideredan academic fraud<br>Giving hints or signals to otherstudents is consideredan academic fraud<br>Letting others read your answer is consideredan academic fraud<br>Letting another person sits for the examination is consideredan academic fraud | Martinez and Ramírez (2018) |
| Independent Variables | | |
| Identity Verification | Requirement to present photographicidentification document (ID)<br>Identity verification performed bysomeone who knows the students<br>Identity verification performedmanually<br>Identity verification using application software (e.g., biometricapplication)<br>Identity verification performedmultiple times throughout the examination session | Taderera et al. (2014);<br>(Gathuri et al., 2014) |
| Monitoring | Monitoring students live through webcams<br>Monitoring the room used to take theexamination live through webcams<br>Number of invigilators assigned tomonitor the students<br>Number of webcams to monitor theexamination from different angles<br>Recording students taking theexamination<br>Monitoring performed by trained invigilators | Hylton et al. (2016)<br>Taderera et al. (2014) |
| Restroom Visits Procedures | Supervision of students during restroom visits | Taderera et al. (2014) |

| | | |
|---|---|---|
| | Limitation of the frequency of students going to the restroom during anexamination<br>Limitation of the length of time students can go to the restroom duringan examination<br>Prohibition of restroom visits during examination | |
| Punishment | Amount of penalty for fraudsters<br>Awareness of punishment thatstudents should receive for committing academic fraud<br>Fail or downgrade the paper of thefraudster<br>Revoke the qualifications given tofraudster<br>Report to sponsors of the fraudster | Molnar and Kletke (2012)<br>Madara and Namango (2016)<br>Taderera et al. (2014) |
| Embarrassment | Publish the fraudster's name on the university's information board.<br>Publish photograph of the fraudster onthe university's information board<br>Publish the fraudster's name on the university's website or social media<br>Publish the photograph of the fraudster on the university's websiteor social media<br>Report to the immediate contact ofthe fraudster | Cochran et al. (1999)<br>Madara and Namango (2016) |

Section F requests the respondents to complete a series of questions relating to punishment such as 'amount of penalty for fraudsters', 'fail or downgrade the paper of the fraudster' and 'awareness of punishment that students should receive for committing academics fraud'. The last section, Section G requests the respondents to complete a series of questions relating to embarrassment such as 'publish photograph of the fraudster on the university's information board and 'report to the immediate contact of the fraudster'

The respondents were asked to complete this section using a 5-point scale from 1 as highly disagree to 5 as highly agree for Sections C to G. Table **1** provides the measurement of the research instrument.

### 3.3. Data Collection

The data collection procedure used digital questionnaires on the Google Formplatform. The questionnaire provided anonymity to the respondents, making the data collected more reliable (Phellas, Bloch, & Seale, 2011). Furthermore, the elements inthe questionnaire dealt with sensitive issues. Thus, anonymity would encourage more respondents to complete the questionnaire. Since majority of the respondent owns smart phones and personalcomputers, they would have no difficulty in completing the digital questionnaire as itcould be accessed easily through a digital device. In the event where the respondents have difficulty accessing the platform through their own devices, the suggestedalternative was to utilise the college university's computer lab. As all respondentsare free to use the computer lab, there would be no issue accessing the questionnaire, and the costs of the data collection procedures would be kept minimal. Based on thesereasons, a Web Survey was deemed most suitable for this study (Phellas et al., 2011).

The questionnaires were distributed to the respondents over a period of three months. The respondents were approached during the semester while they are still studying and may be facing the pressure to perform academic fraud. The suggested sample size for this study was 186 students. However, it is expected that, in a questionnaire survey, some sample units might not complete the questionnaire (Phellas et al., 2011). Thus, this researcher made a provision of 20% for non-reply by the respondents. Therefore, links to the questionnaire were distributed to233 students with the aim of acquiring 186 responses, representing 80% response rate.

## 4. RESULTS AND DISCUSSION

Table **2** presents the demographic profile of the respondents in this study. Table **1** shows that 78.5% of the respondents are female, with the remaining 22.5% male. With regards to age, the results show that the respondents mainly come from the 20 – 21 years old age group (54.3%) and the 22 – 24 years old group (36%). The balance of the respondents comes from the 19 years or below group (3.8%) and 25 years or above group (5.9%).This distribution is due to the students mainly pursuing higher education right after they finished high school at 17. Courses undertaken by the respondents are predominantly ACCA (76.3%), whereas the remaining 23.7% of the respondents are CAT/FIA students. This result isin line with the IPS' CAT/FIA ratio to ACCA students, where 27% of the total accounting students are CAT/FIA students and the remaining 73% are ACCA students.

For the semester, the results show that a significantly higher number of respondents are from the semester 3-4 group and semester 5 or more group at 36.0%and 38.2%, respectively. For the semester 1-2 group, the frequency is slightly lower at25.8% of total respondents. These results are consistent with the significant drop in intake for new students due to Covid-19 and online classes that had persisted since March 2020. The respondents' main source of income comes from student loans or scholarships, standing at 72%. The remaining 20.5% of the respondents rely on their families, whereas 7.5% of the respondents work to support their cost of living.

**Table 2. Demographic Profile of Respondents.**

| Gender | N | Percent |
|---|---|---|
| Male | 40 | 21.5 |
| Female | 146 | 78.5 |
| **Age** | | |
| Below 20 years old | 7 | 3.8 |
| 20 to 21 years old | 101 | 54.3 |
| 22 to 24 years old | 67 | 36.0 |
| 25 years and above | 11 | 5.9 |
| **Education Level** | | |
| Secondary | 7 | 3.8 |
| Diploma | 42 | 22.6 |
| Bachelor's Degree | 39 | 21.0 |
| Professional Certificate | 98 | 52.7 |
| **Course** | | |
| CAT/FIA | 44 | 23.7 |
| ACCA | 142 | 76.3 |
| **Semester** | | |
| 1 to 2 | 48 | 25.8 |
| 3 to 4 | 67 | 36.0 |
| 5 and above | 71 | 38.2 |
| **Source of Income** | | |
| Family | 38 | 20.5 |
| Scholarship/ Loan | 134 | 72.0 |
| Own | 14 | 7.5 |

Table **3** presents the descriptive statistics on the academic fraud occurred among the students in the college university. A review of the mean scores presented in Table **3** shows that all items received a score of more than 4. Only item 7 relating to the longer time taken than allowed during an examination received a mean of 3.35. Nevertheless, the mean score of more than 4 for seven of the eight items show that the respondents are well informed aboutthe rules and guidelines of the examination and understand well what is considered as academic fraud. Specifically, the respondents provided the highest mean score for statement '*Letting another person to sit for your examination is considered an academic fraud'* with a mean score of 4.78, followed by statement '*Giving answers to other students is considered an academic fraud*' with a mean score of 4.68 and statement *'Letting others read your answer is considered an academic fraud*' with a mean score of 4.61. These results are in line with the demographic profile of the respondents where the majority of them are in Semester 3 onwards. Thus, they would have been informed direct or indirectly about the rulings in examinations. On the other hand, the respondents provided the lowest mean score for statement '*Taking longer time than allowed for an examination is considered an academic fraud'* with 3.35, an indication that the respondents do not consider giving extra time for examination is an academic fraud.

**Table 3. Descriptive Statistics of Academic Fraud Prevention.**

| Statement | Mean | SD |
|---|---|---|
| Communication with other students during an examination session is consideredan academic fraud | 4.44 | 0.791 |
| Communication with other individuals during an examination session is considered an academic fraud | 4.17 | 0.986 |
| Accessing unauthorised materials duringan examination session is considered an academic fraud | 4.44 | 0.952 |
| Giving answers to other students isconsidered an academic fraud. | 4.68 | 0.635 |
| Giving hints or signals to other studentsis considered an academic fraud | 4.51 | 0.780 |
| Letting others read your answer isconsidered an academic fraud. | 4.61 | |
| Taking longer time than allowed for anexamination is considered an academic fraud | 3.35 | 1.209 |
| Letting another person to sit for your examination is considered an academic fraud | 4.78 | 0.624 |

Table **4** presents the descriptive statistics for identity verification. The mean scores of all items are more than 4.3, which indicates that the majority of the respondents agree that identity verification is a strong control in the prevention of academic fraud. The respondents provided the highest mean score for statement *'Students are less likely to ask someone to sit for the exam on their behalf if there is a requirement to present photographic identity documentation'* with 4.48. This is followed by statement '*Students are less likely to ask someone to sit for the exam on their behalf if the invigilator who performs the identity verification is someone who knows the students (e.g., the teaching lecturer)'* with a mean score of 4.38 and statement '*Students are less likely to ask someone to sit for the exam on their behalf if the invigilators perform the identity verification using software, such as biometric application'* with a mean score of 4.37.

**Table 4. Descriptive Statistics of Identity Verification.**

| Identify Verification | Mean | SD |
|---|---|---|
| Students are less likely to ask someone to sit for the exam on their behalf if there isa requirement to present photographic identity documentation | 4.48 | 0.890 |
| Students are less likely to ask someoneto sit for the exam on their behalf if the invigilator who performs the identity verification is | 4.38 | 1.013 |

| | | |
|---|---|---|
| someone who knows the students (e.g., the teaching lecturer) | | |
| Students are less likely to ask someoneto sit for the exam on their behalf if the invigilators perform manual identity verification. | 4.35 | 0.993 |
| Students are less likely to ask someone to sit for the exam on their behalf if the invigilators perform the identity verificationusing software, such as biometric application | 4.37 | 0.990 |
| Students are less likely to ask someoneto sit for the exam on their behalf if the invigilators perform identity verification multiple times throughout the examination session. | 4.31 | 0.975 |

Table **5** presents the descriptive statistics for monitoring. The mean scores of all items are more than 4.1, indicating that the majority of the respondents agree that monitoring of the examination is a strong control in the prevention of academic fraud. Specifically, the statement '*The higher number of webcams in place to monitor the students from different angles during an examination, the less likely are the students to commit academic fraud'* received the highest mean score with 4.55. This is followed by statement *'Students are less likely to commit academic fraud if they are being recorded during the examination'* with a mean score of 4.49 and statement *'The higher number of invigilators assigned to monitor the students during anexamination, the less likely are the studentsto cheat in the examination'* with a mean score of 4.40.

**Table 5. Descriptive Statistics of Monitoring.**

| Statement | Mean | SD |
|---|---|---|
| Students are less likely to commit academic fraud if they are being monitored by webcam | 4.12 | 1.035 |
| Students are less likely to commit academic fraud if the examination room isbeing monitored by webcams | 4.38 | 0.899 |
| The higher number of invigilators assigned to monitor the students during anexamination, the less likely are the studentsto cheat in the examination. | 4.40 | 0.794 |
| The higher number of webcams in placeto monitor the students from different angles during an examination, the less likelyare the students to commit academic fraud. | 4.55 | 0.705 |
| Students are less likely to commit academic fraud if they are being recordedduring the examination. | 4.49 | 0.707 |
| Students are less likely to cheat in the examination if they are being monitored bytrained invigilators | 4.38 | 0.798 |

Table **6** presents the descriptive statistics for restroom visits procedures. The mean scores of all itemsare more than 3.82, which show that the majority of the respondents basically agree that the restroom visits procedures are an important control in preventing academic fraud. The results show that the respondents provided the highest mean score for statement *'Students are less likely to cheat during the restroom visit if there is supervision during a restroom visit'* with a mean score of 4.26, followed by statement *'Students are less likely to cheat in the exam if there is a limit on the length of timefor a restroom visit during the examination'* with a mean score of 4.03 and statement *'Students are less likely to cheat in theexam if there is a limit on how frequently students can go to the restroom during the examination'* with a mean score of 3.99.

**Table 6. Descriptive Statistics of Restroom Visits Procedure.**

| Statement | Mean | SD |
|---|---|---|
| Students are less likely to cheat during the restroom visit if there is supervision during a restroom visit. | 4.26 | 0.889 |
| Students are less likely to cheat in theexam if there is a limit on how frequentlystudents can go to the restroom during the examination. | 3.99 | 1.008 |
| Students are less likely to cheat in theexam if there is a limit on the length of timefor a restroom visit during the examination. | 4.03 | 1.013 |
| Students are less likely to cheat in theexam if there is a prohibition of restroom visits during the examination | 3.82 | 1.256 |

Table **7** presents the descriptive statistics for punishment. The mean scores of all items are more than 4.44,indicating that the majority of the respondents tend to strongly agree that punishment is a strong control for the prevention of academic fraud. Specifically, the respondents provided the highest mean score for statement 'Students are less likely to cheat in the exam if the university would report to their sponsors if caught cheating' with 4.67. This is followed by the second highest mean score of 4.63 for statement 'Students are less likely to cheat in the exam if their qualifications would be revoked if caught cheating' and statement 'The higher the amount of penalty for students who cheat in the exam, the lesslikely are the students to attempt to cheatin the exam' with a mean score of 4.51.

**Table 7. Descriptive Statistics of Punishment.**

| Statement | Mean | SD |
|---|---|---|
| Students are less likely to cheat in theexam if they know the details of the penalty and punishment that can be imposed on them by the university if thestudents are caught cheating. | 4.44 | 0.749 |
| The higher the amount of penalty for students who cheat in the exam, the lesslikely are the students to attempt to cheatin the exam. | 4.51 | 0.699 |
| Students are less likely to cheat in theexam if the university would fail their paper if caught cheating | 4.50 | 0.773 |
| Students are less likely to cheat in theexam if their qualifications would be revoked if caught cheating. | 4.63 | 0.647 |
| Students are less likely to cheat in the exam if the university would report to theirsponsors if caught cheating | 4.67 | 0.621 |

Table **8** presents the descriptive statistics for embarrassment. The mean scores of all items are more than 4.2, showing that

the majority of the respondents agree that embarrassment is an important control in preventing academic fraud. The respondents provided the highest mean score for *statement 'Students are less likely to cheat in the exam if the university would revoke all academic achievements awarded to the students'* with 4.52, followed by statement *'Students are less likely to cheat in theexam if the university would report theiractions to their immediate contact'* with a mean score of 4.44 and statement *'Students are less likely to cheat in the exam if their photos would be published onthe university's information board if caughtcheating'* with a mean score of 4.37.

**Table 8: Descriptive Statistics of Punishment.**

| Statement | Mean | SD |
|---|---|---|
| Students are less likely to cheat in the exam if their names would be published onthe university's information board if caughtcheating | 4.32 | 0.993 |
| Students are less likely to cheat in the exam if their photos would be published onthe university's information board if caughtcheating. | 4.37 | 1.043 |
| Students are less likely to cheat in the exam if their names would be published onthe internet (e.g., university's website or social media) if caught cheating. | 4.32 | 1.052 |
| Students are less likely to cheat in the exam if their photos would be published onthe internet (e.g., university's website or social media) if caught cheating. | 4.24 | 1.167 |
| Students are less likely to cheat in theexam if the university would report theiractions to their immediate contact. | 4.44 | 0.824 |
| Students are less likely to cheat in theexam if the university would revoke all academic achievements awarded to the students. | 4.52 | 0.787 |

In this study, preliminary analysis was performed to ensure the reliability and normality of the data. The Cronbach's alpha coefficient was used to analyse the internal consistency of this study's questionnaire.The analysis was to make sure that all items in the scale 'hang together' and measure the same thing. The Cronbach's alpha coefficients range from 0 to 1, with a higher scoretowards 1 indicating a higher level of consistency. According to Pallant (2016) an ideal Cronbach's alpha coefficient is 0.7 or more, indicating that the scale is internally consistent. Any score below 0.7 is considered unacceptable. Table **9** shows Cronbach's alpha for all variables are above 0.8, indicating a good level of internal consistency of the items.

**Table 9: Reliability Analysis.**

| Variable | Cronbach's Alpha | Standardised Items | N of Items |
|---|---|---|---|
| Academic Fraud Prevention | 0.813 | 0.835 | 8 |
| Identity Verification | 0.865 | 0.864 | 5 |
| Monitoring | 0.802 | 0.811 | 6 |
| Restroom Visits Procedures | 0.802 | 0.813 | 4 |
| Punishment | 0.840 | 0.843 | 5 |
| Embarrassment | 0.898 | 0.894 | 6 |

This study then proceeded to perform normality test. Since this study collected 186 responses, the Kolmogorov-Smirnov test was performed. The results of the test are shown in Table **10**. The significant values of the Kolmogorov-Smirnov test for all variables shown in Table **4**.15 above are at 0.00, which is lesser than the benchmark set at 0.05. According to Allen et al. (2014), this 0.00 *p*-value means that the null hypothesis that the data is normally distributed is rejected. However, as the sample size used is large,the results can be significant even when the data distribution is only slightly differentfrom the normal distribution.

**Table 10. Normality Analysis.**

| Variable | Kolmogorov-Smirnov Statistics | Sig. |
|---|---|---|
| Academic Fraud Prevention | 0.197 | 0.000 |
| Identity Verification | 0.214 | 0.000 |
| Monitoring | 0.149 | 0.000 |
| Restroom Visits Procedures | 0.121 | 0.000 |
| Punishment | 0.216 | 0.000 |
| Embarrassment | 0.230 | 0.000 |

Table **11** presents the results of correlation analysis. In relation to identify verification and academic fraud prevention, the result shows that Based on the Pearson correlation value of0.325, there is a medium positive relationship between identity verification and the prevention of academic fraud. Table 11 also shows a value of 0.572 for monitoring indicating that there is a large positive relationship between monitoring and the prevention of academic fraud. In terms of restroom visits, the results show that the correlation value of 0.342, there is a medium positive relationship between monitoring and the prevention of academic fraud.

For punishment, the Pearson correlation value of 0.489 shown inthe table, there is a large positive relationship between punishment and the prevention of academic fraud whilst for embarrassment, correlation value of 0.306 shownin the table, there is a medium positive relationship between embarrassment and the prevention of academic fraud.

Table **12** provides the results of the multiple regression analysis. In Table **12**, it is observed that the $R^2$ value is 0.355, which indicates that 35.5% of the prevention of academic fraud can be explained by the independent variables (identity verification, monitoring, restroom visits proce-

**Table 11. Correlation Analysis.**

| | | Academic Fraud Prevention | Identity Verification | Monitoring | Restroom Visits Procedures | Punishment | Embarrassment |
|---|---|---|---|---|---|---|---|
| Academic Fraud Prevention | Pearson Correlation | 1 | 0.325** | 0.572** | 0.342** | 0.489** | 0.306** |
| | Sign (2-tailed) | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

**. Correlation is significant at the 0.01 level (2-tailed)

dures, punishment, and embarrassment). The p-value of monitoring is the lowest at 0.000. Embarrassment has the highest p-value at 0.853. As monitoring is the only independent variable with a p-value lower than 0.05, it is considered a significant factor for the prevention of academic fraud.

**Table 12. Multiple Regression Analysis.**

| Model | R | R Square | Adjusted R-Square | Std. Error of Estimate |
|---|---|---|---|---|
| 1 | 0.596 | 0.355 | 0.337 | 2.89564 |

Predictors: (Constant), Embarrassment, Identity Verification, Restroom Visit, Punishment, Monitoring.
Dependent Variable: Academic Fraud.

On the other hand, even though the p-value ofpunishment (0.063) is more than 0.05, it is still lower than 0.10. Therefore, this factoris considered marginally significant. Hence, both hypotheses H2 and H4 are supported by the analysis.

These results indicate that monitoring and punishment have a significant positive influence on the prevention of academic fraud as shown in Table 13. The p-values for identity verification (0.169), restroom visits procedures (0.569), and embarrassment (0.853) are all more than 0.05. Therefore, the respective hypotheses H1, H3, and H5 are not supported by the analysis. These results indicate that identityverification, restroom visit procedures, and embarrassment have an insignificant positive impact on the prevention of academic fraud.

**Table 13. Multiple Regression Coofficients.**

| | | Unstandardised Coefficients | | Standardised Coefficients | | |
|---|---|---|---|---|---|---|
| Model | | β | Std Error | β | t | Sig. |
| 1 | Constant | 8.701 | 1.936 | | 4.495 | 0.000 |
| | Identity Verification | 0.084 | 0.061 | 0.093 | 1.382 | 0.169 |
| | Monitoring | 0.399 | 0.090 | 0.396 | 4.442 | 0.000 |
| | Restroom Visits Procedure | 0.044 | 0.077 | 0.041 | 0.570 | 0.569 |
| | Punishment | 0.212 | 0.113 | 0.163 | 1.871 | 0.063 |
| | Embarrassment | 0.010 | 0.054 | 0.014 | 0.186 | 0.853 |

## 5. CONCLUSION

This study examined the factors influencing academic fraud prevention among accounting students in a college university. Five factors are chosen in this study. The first factor is identity verification. This study shows that identity verification has no significant influence on academic fraud prevention. Such finding is consistent with Farisi (2013). Other plausible reasons could be attributed to the identity verifications performed online are unreliable even when done using specific software. This study also shows that monitoring influence academic fraud prevention. As the majority of the time spent by students in anexamination is on the examination itself, monitoring in the exam hall limits the students' opportunity to perform academic fraud. Such finding is consistent with Hylton et al. (2016) and LaSalle (2009) which stated that students tend to score higher in an unmonitored environment that provides them the opportunity to cheat in the exam.

In addition, this study shows that punishment influence academic fraud prevention. Such finding indicates that due to punishments, such as automatic fail, would prevent students from achieving their objective of committing academic fraud in the first place, which is to pass with high marks. This finding is consistent with the findings of Taderera et al. (2014) who stated that certain types of punishment such as suspension and automatic fail, are considered highly effective punishments. However, this study shows no significant influence of restroom visit procedures to academic fraud prevention. Despite the objective of restroom visits procedures being to prevent studentsfrom performing academic fraud, such as accessing unauthorised materials in the restroom, the impracticalities of the procedures are seen as a barrier to their effectiveness in preventing academic fraud. For example, it would not be practical to prevent students from going to the restroom at all, especially for examinations that last a long time.

On topof that, requiring students to bring a webcam to the restroom during their restroom visits may be seen as too excessive and invading personal privacy. Such finding is consistent with Vegendla and Sindre (2019) which stated that strict restroom visits procedures, especially foronline examinations, are not very effective. Procedures such as total prohibition or requiring students to bring a webcam and film themselves in the restroom are not practical. Similarly, this study shows that embarrassment do not significantly influence academic fraud prevention, a finding which is similar to Cochran et al. (1999) who stated that embarrassment has a more significant impact on adolescents rather than

adults. Since the adolescents in this study's population and respondents is small at 3.8%, and the remaining respondents are 20 years old and older, the finding that embarrassment insignificantly impacts adults is proven.

This study is without limitations First, this study covers only on accounting students who embarked in the professional programs. Hence, the findings in this study can only be generalized to the students within the same field. Secondly, the number of students participated in the questionnaire survey is 168. Increasing the number of respondents in future study may increase the robustness of the findings.

In sum, as online examinations would be widely used more and more in the current pandemic and probably after, this study could contribute to other researchers who would like to perform further research around the same topic. This study could be used as part of their literature review. In addition, this study may contribute to higher learning institutions' administration in setting appropriate controls to impact the prevention of academic fraud positively. As the study was performed during the Covid-19 pandemic and online examination is widely used around the world, the results are highly relevant to the current environment. Universities should adapt faster and keep tabs on the significantchanges in the education industry.

Academic fraud would cause bigger harm in the future if left unchecked. Undeserved students who graduated would enter the workforce and may perform basic mistakes that can be avoided if the students were assessed properly during examinations. Mistakes from accounting graduates may disrupt a country's economy, mistakes from medical science graduates may be fatal to their patients, and mistakesfrom law graduates may cause a guilty criminal to be acquitted, and the innocent be punished. Hence, this study could reduce the risk of such catastrophes by reducing the probability of students graduating who are not well equipped and prepared to enter theworkforce.

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Received: Jan 10, 2023 Revised: Jan 20, 2023 Accepted: Mar 29, 2023