Academic Dishonesty and the Impact of Technology: Perspectives from Accounting Faculty

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Abstract

New technology has had a significant impact on higher education, including the area of academic dishonesty. Technology provides new opportunities for students to engage in dishonest behaviour while simultaneously providing faculty members with new ways to control such behaviour. The purpose of this study is to investigate academic dishonesty in accounting programs from the perspective of accounting faculty members with a focus on the impacts of technology. Over 375 survey responses were received from faculty members across Canada and the United States. The results reveal that accounting faculty perceive academic dishonesty to be a significant issue that is compromising the integrity of the classroom. Incidences of academic dishonesty are reported to have increased over the past five to ten years, and the proliferation of technology has resulted in increased incidences of academic dishonesty. The impact of technology is reported to have had a more significant impact on academic dishonesty related to plagiarism as opposed to exams. The three types of academic dishonesty impacted the most by technology are: i) using information without proper referencing; ii) using unauthorized materials during a test; and iii) using another students assignments from a previous semester. We also found that although faculty members view cheating and plagiarism differently, there seems to be a broader agreement that one of the most effective control is to create and use new exams, cases and assignments every year. For greater effectiveness, assessment should be designed in such a manner that responses are unique to each student. This type of assessment requires significant time and effort and faculty members' contributions in this regard should be encouraged, facilitated and recognised by the academic institutions.

Keywords: Academic dishonesty; technology; controlling academic dishonesty

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1 Introduction

Accounting scandals are not a recent phenomenon. Several high profile accounting scandals have taken place over the past century; however, it appears that the magnitude of the scandals has increased over the years. In light of the increasing implications of these accounting scandals, serious questions are being raised regarding the ethical conduct of accountants, which is some time linked to the failure of academic institutions to instil professional honesty, as evidenced by the widespread incidences of academic dishonesty among students (McCabe, 1993). Much has been written on the ethical conduct of professional accountants and accounting students. Most of the prior literature attempts to gauge overall level of accounting student ethics by exploring how students behave in different situations (e.g., Chapman and Lupton 2004; Christensen et al., 2010). The overarching theme of the prior literature is that academic dishonesty is not only a serious concern but is also believed to be on the rise (Greene and Saxe, 1992; McCabe et al, 2001; Brown and Choong, 2005; Chapman and Lupton, 2004).

The rapid proliferation of new technologies has had a profound impact on higher education (Bowen, 2012). With respect to academic dishonesty, technological developments provide new avenues for students to engage in dishonest behaviours. For example, portable and wearable smart devices have enabled students to discreetly communicate during exams or store and access unauthorized material. On the flip side, faculty members can also make use of new technologies to better prevent and detect incidences of academic dishonesty. For example, faculty members can make use of new software that can detect plagiarism in student assignments.

Currently, it is unclear how new technologies are affecting the perpetration and controls of academic dishonesty. Accordingly, this paper provides new insight by exploring the impacts of technology on academic dishonesty in accounting programs. In addition, this paper explores various other facets of academic dishonesty from the perspective of accounting faculty members. This secondary purpose is motivated by the fact that most prior academic dishonesty studies are focused on student responses

(Rakovski and Levy, 2007; Chapman and Lupton 2004) and studies based on faculty perspectives are few and dated (e.g., McCabe, 1993).

Faculty members in colleges and universities across Canada and the United States were surveyed with the approval of Lakehead University Research Ethics Board. The survey was administered electronically with invitations sent via email. All email addresses were obtained from publicly available sources. A total of 389 responses were received and analyzed.

Overall, the results reveal that accounting faculty perceive academic dishonesty to be a significant issue that is compromising the integrity of the classroom. Incidences of academic dishonesty are reported to have increased over the past five to ten years, and the proliferation of technology has resulted in increased incidences of academic dishonesty. The impact of technology is perceived to have had a more significant impact on plagiarism as opposed to exam cheating. Over 90% of faculty members say that they would report academically dishonest behaviour among students or impose sanctions. Most faculty members would not ignore academic dishonesty and would pursue administrative measures to penalize dishonest students. While 42% of respondents report exam cheating, only 31% report plagiarism, suggesting that faculty members consider exam cheating as a more serious form of academic dishonesty.

The three types of academic dishonesty impacted the most by technology are: i) using information without proper referencing; ii) using unauthorized materials during a test; and iii) having another person complete an assignment or using another students assignments from a previous semester. All three of these incidences are correlated with faculty members' perceptions about the overall integrity of the classroom being compromised. Faculty members with more than 15 years of experience feel more strongly that improper referencing and falsifying research results is a significant issue ($\alpha = 5\%$ level).

The perceptions of faculty members presented in this study regarding the motivations for academic dishonesty are somewhat consistent with the perceptions of students as presented in the prior literature (Brimble and Stevenson-Clarke, 2005). Faculty members believe that pressure to get good grades is the

strongest motivator for accounting students to engage in academic dishonesty, and is perceived to be a motivator across all course levels from introductory to advance. Accounting faculty members also reported that students engage in academic dishonesty because they are unlikely to be caught. This finding suggests that appropriate controls may not be in place or are unavailable to deal with academic dishonesty. This notion is supported by the fact that students also perceive an unlikeliness to get caught as the second highest rated reason for engaging in academic dishonesty (Brimble and Stevenson-Clarke, 2005).

In controlling academic dishonesty, the most commonly used practices are: i) referring to university policies; ii) changing assignment and exams each year; and iii) using multiple examination versions. The top three most effective controls are: i) changing assignment and exams each year; ii) using multiple examination versions; and iii) creating assessment such that the question responses are unique to a student and cannot be copied. The results reveal that changing assignments and exams annually and using multiple exam versions are commonly used by faculty members and are believed to be effective. These results are intuitive as faculty members are more likely to adopt a control if they believe that it will be effective.

There is little consensus on whether university policies have adapted to meet the challenges posed by technology. Approximately 45% of the respondents believe that the policies have not adapted while 28% believe otherwise.

The remainder of this paper is organized as follows. Section 2 presents a brief review of the literature. Section 3 presents the research questions. Section 4 discusses the methodology and survey development. Section 5 presents the results and key findings. Section 6 offers a brief conclusion.

2 Understanding Academic Dishonesty

2.1 Defining Academic Dishonesty

There seems to be little agreement on the definition of academic dishonesty (Apostolou, 2013). Most definitions are based on examples of what constitutes academic dishonesty as opposed to defining academic

dishonesty as a construct. Students often claim that they did not know that their act was wrong when caught committing academic dishonesty or have varying understandings of academic dishonesty (O'Neill, 2012). The changing academic environment is making it even more difficult to pin-down an exact definition of academic dishonesty. New technologies (Christensen et al., 2010) and social norms (Bernardi, 2011) are challenging conventional perceptions of academic dishonesty. There are many examples of behaviour which is the direct result of new developments and hard to define as academic dishonesty. Research has shown that students largely agree on what constitutes acceptable and unacceptable practices, however, their views can differ from faculty member's views (Ashworth et al., 1997; Pincus and Schmelkin, 2003) and university policies (Sherad et al, 2002; Brimble and Stevenson-Clarke, 2005; Braun and Stallworth, 2009). Faculty members tend to include greater number of activities as academic dishonesty than students and tend to view academic dishonesty more seriously (Roberts and Toombs, 1993; Graham, et al, 1994; Koljatic and Silva, 2002).

Academic dishonesty can be classified as passive or active. Passive academic dishonesty includes actions such as sharing or using sorority/fraternity resources or not reporting incidents of academic dishonesty. Active academic dishonesty includes, but is not limited to, cheating in exam, letting someone to take exam on your behalf or appearing in exam for some other student (Anista and Elmore, 2009) .

The past literature also offers insights into many of the antecedents of academic dishonesty. The established antecedents include academic integration, academic performance, age, awareness, cultural influences, gender, moral capability, pressure and technology (Guo, 2011).

2.2 Incidences of Academic Dishonesty

Academic dishonesty appears to be a global problem (Chapman and Lupton 2004) and there appears to be little difference in dishonest academic behaviour between educational institutions whether they are publicly owned or private, or guided by secular or religious values (Brown and Choong, 2005).

Measuring the overall prevalence of academic dishonesty has proven to be a difficult undertaking and tends to depend on how it is defined. For example, the percentage of students engaged in some type of dishonest activity has been reported to range from a low of 10% (Sheared et al. 2002) to a high of 75% (McCabe and Trevino 1996).

The incidences of academic dishonesty appear to be increasing over the last few decades (Greene and Saxe, 1992; Brown and Choong, 2005; Chapman and Lupton, 2004). Reasons offered for the increase in academic dishonesty include the fact that more students are engaged in online learning, there is greater emphasis on team work, and new technology is constantly emerging which can assist students or facilitate academic dishonesty (Christensen et al., 2010).

In addition, student cynicism seems to be on the rise as academic institutions become less personal and more competitive (McCabe and Trevino, 1996). It also appears as though academic dishonesty is becoming more socially acceptable. Although the majority of students (92%) agree that cheating is unethical, approximately half (45%) believe it to be socially acceptable (Bernardi, 2011).

It has also been argued that part of the reason for increase in academic dishonesty is the attitude of the professors, who are less inclined to confront students, report academic dishonesty or impose sanctions. A survey found that 44% of faculty members did not report incidents of known academic dishonesty to the university (McCabe and Trevino, 1996). Professor cite lack of administrative support and bureaucratic process as the main reason for this attitude (Jendrek, 1989).

2.3 Academic Dishonesty in Business Schools

Cheating appears to be more prevalent among pre-med, engineering, and business majors. The highest level of academic dishonesty was found among undergraduate business majors. About 26% of business majors committed severe acts of cheating, compared to 20% for other disciplines. Business students tend to perceive a greater need for unethical behaviour (Lane and Schaupp, 1989), score lower on measures of

moral development (Bernardi et al., 2004) and are more likely to engage in unethical behaviour as compared to students from other disciplines (Iyer and Eastman, 2006; Smyth and Davis, 2004).

It can be argued that students have greater tendency to cheat in more difficult disciplines. Considering that accounting is considered more challenging, accounting student may report a higher inclination for academic dishonesty. However, prior research findings are inconclusive. For example, Moffat (1990) found that accounting majors, in fact, exhibited the least tendency to cheat, among business students; however, Nowell and Laufer (1997) were unable to reproduce these results. More recently, Brimble and Stevenson-Clarke (2005) did not find significant differences in academic dishonesty among accounting students when compared to other business disciplines. McCabe, et al (2006) claim that academic dishonesty among accounting students, specifically cheating, has increased exponentially in recent decades.

2.4 Consequences of Academic Dishonesty

Academic dishonesty weakens the effectiveness of educational system institutions and prevents them from achieving their goals and objectives. Instructors cannot properly evaluate students and address gaps in student's understanding (Rozzet el al, 2011). By rewarding students who engage in unethical behaviour academic dishonesty, if not controlled, encourages similar behaviour.

In accounting, academic dishonesty creates an additional challenge for faculty members who value ethical education and moral development for future members of an accounting profession that is built on professional conduct and public trust (Saat, 2012). In other disciplines, such as medicine, academic dishonesty may allow students to join a profession for which they otherwise do not qualify and potentially jeopardize lives.

Numerous studies have shown that academic dishonesty in college is correlated with unethical behaviour on the job (Sims, 1993; Brown and Choong, 2005). For example, students involved in academic dishonesty in medical schools have been shown to be more likely to falsify patient records in a clinical setting (Sierles

et al , 1980). In addition, student caught cheating are shown to be more likely to lie and shoplift (Beck and Ajzen, 1991), abuse alcohol (Kerkvliet, 1994), and cheat on their taxes (Fass, 1990). We would like to caution that correlation in these cases may not necessarily mean causation.

2.5 Controlling Academic Dishonesty

Academic dishonesty needs to be controlled because it reflects a more serious problem in a student's perception of ethical values (Carpenter et al., 2006; Chapman et al., 2004). Educational institutions are expected to hold students accountable and shape their values by communicating, explaining and enforcing ethical behaviour before students are released into the workforce (Rozzet et al., 2011) .

Despite their importance, controls have not been researched as much as other aspects of academic dishonesty. Institutional honor codes (McCabe, 2005), students perceptions of his/her behaviour (Teodorescu and Andrei, 2009), deterrents (Smith et al, 2002; Smith and Rosenberg, 2009) and student perceptions of faculty understanding of policies are cited as possible contextual control factors. Faculty members sanctioning students for academic dishonesty prefer reporting the matter to appropriate authorities, grant a lower grade and/or warn students (Nuss, 1984). Effectiveness of these specific measures remains to be determined.

3 Motivation and Research Questions

As discussed, this paper has two motivations. First, this paper is motivated by understanding how the new technology has impacted the academic integrity of academic accounting programs in North America. Second, this paper is motivated by the lack of recent research that focuses on academic dishonesty from the faculty member's perspective. Most prior studies are focused on student responses (e.g., Chapman and Lupton 2004) and any prior studies based on faculty perspectives are becoming dated (e.g., McCabe, 1993). Updating our understanding of faculty perspectives on academic dishonesty will allow for a comparison against the more recent studies from the student perspectives. The following is a brief discussion of the research questions, which are exploratory in nature and therefore, not posed as formal hypothesis.

One of first steps in dealing with academic dishonesty is to better understand why students engage in this behaviour in the first place. Recent literature has investigated the motivations for engaging in academically dishonesty behaviour from the student's perspective (e.g., Brimble and Stevenson-Clarke, 2005), but, not from the faculty member's perspective (e.g., McCabe, 1993). This leads to the first two research questions as posed from the perspective of accounting faculty members:

> *RQ1 – What factors motivate students to engage in academic dishonesty?*
>
> *RQ2 – Are faculty member perceptions consistent with student perceptions regarding the motivations for engaging in academic dishonesty?*

Academic dishonesty is an age old issue; however, the rapid adoption of new technologies, such as smartphones and wearable smart devices, combined with the proliferation of social media and online information, have changed the academic dishonesty landscape. These new technologies, which are constantly emerging, can unfairly advantage a student by facilitating academic dishonesty (Christensen et al., 2010).

Mobile and wearable devices can aid students in cheating in exam settings. For example, these technologies can allow students to easily take and store pictures of solutions and course materials which can be viewed in the exam room or during a washroom break. Mobile and wearable devices can also be used by student to share information during an examination. Trends in mobile and wearable devices suggest that these technologies will become more powerful, smaller in size and more discreet.

The advent of social media, Wikipedia and collaborative websites allow students to easily access a wealth of information in a matter of seconds. This has led to issues with plagiarism and referencing, summarized as follows:

> *"In the age of blogs, mashups, smashups and Wikipedia, traditional notions about academic and educational integrity and appropriate acknowledgment of sources seem*

> *altogether out of synch with everyday, creative or artistic research and writing practices. Rarely do students' everyday experience of the Internet include an awareness or consideration of ownership or authorship, much less of plagiarism" (Pfannenstiel, A. N., 2010, pg. 41)*

Social media and collaborative websites also allow students to access, store and share class materials (e.g., previous year's exams/assignments, assignment materials, etc.). New websites are also emerging that allow students to purchase solution manuals for textbooks and/or purchase ready to submit assignments papers.

However, faculty members can also use technology to mitigate the impacts of academic dishonesty. For example, technologies can be used to monitor a student's digital footprints during online exams, lockdown technologies can be used to control student's internet activity during online exams, and computer software can be used to search for plagiarism.

The impact of technology on academic dishonesty leads the third and fourth research questions as posed from the perspective of accounting faculty members:

> *RQ3 – Has the recent and rapid development of new technologies resulted in increased incidents of academic dishonesty?*

> *RQ4 – Which incidences of academic dishonesty have been impacted the most by the advent of new technologies?*

With the advent of new technologies, faculty members must be more vigilant in order to ensure that academic integrity is maintained. Controls for academic dishonesty can be viewed as preventative or detective. Preventive controls are policies and practices employed in order to discourage academic dishonesty from occurring, while detective controls are designed to identify academic dishonesty once it has occurred.

Considering the importance of controls in today's technology enable classrooms, these measures have not been researched as much as other aspects of academic dishonesty. Prior literature provides little insights into the specific measures used by faculty members to prevent academic dishonesty from occurring. This leads to the fifth and sixth research question:

RQ5 - What controls do the accounting faculty members use to prevent and detect academic dishonesty?

RQ6 - What controls do the accounting faculty members find effective to preven and detec academic dishonesty?

Prior literature has argued that part of the reason for the increase in academic dishonesty is the attitude of the professors, once academic dishonesty has been discovered. In the past, college and university professors have not confronted students, reported academic dishonesty or imposed sanctions citing lack of administrative support and bureaucratic process (Jendrek, 1989; McCabe and Trevino, 1996). This leads to the seventh research question:

RQ7 – How do accounting faculty react to incidences of academic dishonesty?

4 Research Design

This study employs a survey methodology. Email addresses of accounting faculty were collected from the websites of different universities in North America. The email addresses were compiled from publicly available sources, such as institution webpages and online faculty directories.

The survey was developed by the authors and is primarily based on previous studies related to academic dishonesty. The survey was pre-tested on a small group of accounting faculty members in different universities across Canada. The feedback from the pre-test was incorporated into the survey instrument. The pre-testing identified small ambiguities and issues with the survey language prior to being used to collect the data.

The survey was designed based on the extant body of literature, and divided into five sections. The first section focuses on the demographics of the respondents. The second section outlines different examples of academic dishonesty and asks respondents about the frequency, significance and the role of technology relating to different incidences of academic dishonesty. The third section relates to the reasons that academic dishonesty occurs. The fourth section focuses on the frequency and perceived effectiveness of various controls used by faculty members to mitigate the impacts of academic dishonesty. The fifth section focuses on overall perception of accounting faculty members when it comes to academic dishonesty.

The incidents and controls of academic dishonesty are measured with a 5-point Likert scale anchored at 1 = Low and 5 = High. A 5-point Likert scale is easy for respondents to visualize and extract meanings as a measure. The 5-point and 7-point Likert scales also result in the highest possible mean scores relative to the highest attainable score (Dawes, 2008; Preston and Coleman, 2000). Note that the literature does not reveal any statistical significant differences between the variation around the mean, skewness or kurtosis of the distributions across the 5, 7, 9 or 10 point scales.

The survey was initially emailed during the first week of October 2014 to 5,420 faculty members in the United States and 544 faculty members in Canada. A reminder email was sent one week after the initial survey request. In response to these emails, 331 usable responses were received from United States and 57 from Canada with a response rate around 6% and 10%, respectively. One reason for the higher response rate from Canadian faculty members relative to faculty members from the United States may be that the principal investigators are from Canada.

It is unclear how high the response rate should be (Baruch, 1999). While studies have been done on the variables that affect the level of response rate (Heberlein and Baumgarther, 1978) there is no agreed norm as to what is or what may be considered an acceptable and reasonable response rate. Henderson (1990) has argued that a response rate of 20-30% is fairly typical for mail out surveys. Schaefer and Dillman (1998) found that all else being equal, paper based surveys seemed to enjoy higher response rates than e-mail

surveys. Fenton and-O'Creevy (1996) examined reason for non-response. These included too busy (28%), not considered relevant (14%), address unavailable (12%) and cases where it was company policy to not complete surveys (22%). In terms of academic dishonesty research, most of the previous research has focused on student with class administered surveys (Ashworth et al., 1997; Davis et al, 1992; Martin, 2005) which results in very high response rate. Braun and Stallworth's (2009) study reported a 13% response rate of accounting faculty members when participation was sought through email.

It is important to note that the results may be impacted by non-responder bias and only those faculty members who are interested in academic dishonesty chose to respond to this voluntary survey.

5 Results and Findings

5.1 Demographic Profile of Respondents

Table 1 presents the demographic profile of the respondents.

Insert Table 1 Here

Our responses reflect the larger number of faculty members teaching accounting in the United States (85%) relative to Canada (15%). The breakdown of respondents by gender, and reveals a fairly even split among male and female. Approximately 55% of the respondents were males. This gender mix was similar in both United States and Canada and is consistent with the prior literature (Kwak and Radler, 2002; Smith and Leigh, 1997; Saxon et al, 2004; Underwood et al., 2000).

The majority (67%) of respondent had more than 15 years' experience teaching accounting. More females (26%) reported less than 10 years' experience than males (15%). Dividing experience into respondents with more than 15 years' experience and less than 15 years' experience yielded 54% females as opposed to 46% males with less than 15 years' experience. The numbers indicate a growing trend toward more females in academic accounting (Almer and Single, 2007).

Table 1 confirms earlier findings that approximately 80% of accounting faculty has a terminal degree (Kamath et al. 2011). Approximately 37% of faculty with terminal degree also holds a professional designation and approximately 60% of the accounting faculty members do not possess a professional degree. Disaggregating the data on the basis of experience into more and less than 15 year experience indicates some significant differences between qualifications. A larger number of faculty members with more than 15 years' experience have both terminal degree and professional qualifications (33%) compared to faculty with less than 15 years' experience (21%). The percentage of faculty holding a terminal degree was found to be almost equally divided. It seems to indicate that number of faculty members hired on the basis of terminal degree acquire a professional qualification afterwards and having a terminal degree is more important for an extended career in academic accounting.

Most respondents answered based on their primary teaching responsibility related to advance accounting courses. The respondents with only a Masters or Professional accounting designation answered the question with reference to introductory level accounting (22%) which went down to less than 1% for intermediate and advanced level courses combined. Similarly, more faculty members with less than 15 years' experience (34%) used introductory level as reference compared to more experienced faculty (17%). Interestingly more female respondent chose to relate their answers to Introductory level teaching (28%) as compared to males (19%).

Only 5.7% of the respondents chose online courses as the frame of reference to respond to the survey. This however may not reflect the percentage of accounting courses being offered online. Since online teaching is comparatively new and some faculty member tend to teach both in-class and online courses, respondents may have chosen in-class courses because of greater familiarity with in-class environment.

Approximately 47% of accounting faculty selected Financial Accounting as their primary teaching area. The number of instructors with professional designations was slightly higher in case of Taxation (14% vs 9%) and lower in case of Auditing (12% vs 14%). Teaching areas were fairly evenly distributed across

experience levels. Twice as many males reported Taxation as their primary teaching area as females. On the other hand, comparatively more females named Accounting Information System as their primary area (12%) of teaching than males (7%).

5.2 Research Questions 1 and 2 - Faculty's Perceptions on why accounting students engage in academic dishonesty

The first research question explores why students engage in academic dishonesty. Table 2 presents faculty perceptions regarding student motivations to engage in academic dishonesty.

Insert Table 2 Here

Table 2 reveals that accounting faculty strongly believe that number one motivation for accounting students to engage in academic dishonesty is a result of the pressure to get good grades. Not only did pressure to get good grades receive the highest mean score, but, also the lowest standard deviation which suggests that faculty members also have a high level of consensus about this motivation. ANOVA (results not tabulated) reveals that there was no difference in faculty member's perceptions about the pressure to get good grades across course levels. That is, faculty members perceived pressure to get good grades as a strong motivator for introductory, intermediate and advanced level courses.

Our findings are consistent with the prior literature that suggests that pressure to get good grades was most important determinant of academic dishonesty (Drake, 1941; Keller, 1976) and that students more often cheat to enhance their grades rather than pass a subject (Davis 1993).

Our results can be compared to studies that rely on student-based responses to assess motivations for engaging in academic dishonesty. Prior literature suggests that helping a friend was the primary reason students engage in academic dishonesty and pressure to get good grades is the fourth highest ranked reason (Brimble and Stevenson-Clarke, 2005). These results suggest that there is a gap between student and faculty

perceptions regarding the motivation for engaging in academic dishonesty. That is, pressure to get good grades may not be as strong a motivator for engaging in academic dishonesty as faculty tend to perceive.

The unlikelihood of being caught is perceived by faculty members as a strong motivating factor for engaging in academic dishonesty. This finding is consistent with student perceptions (Brimble and Stevenson-Clarke, 2005). The persistence of this factor indicates that either proper controls are lacking or not working as intended. There may be a possibility that students are becoming more sophisticated at avoiding being caught while engaged in academic dishonesty.

A comparison of ranking between our study and Brimble and Stevenson-Clarkes (2005) reveals another interesting point. Student ranked assessment as being too difficult and the professor's deficient teaching as a stronger motivator as compared to faculty members. While the difference may indicate an expectation gap, it may be due to the fact that, within business studies, accounting is considered a more challenging discipline and such results are not entirely unexpected.

5.3 Research Question 3 - Faculty's Overall Perceptions of Academic Dishonesty

The third research question explores whether the recent and rapid development of new technologies resulted in increased incidents of academic dishonesty. Table 3 presents the results.

Insert Table 3 Here

Table 3 reveals that most accounting faculty members (approximately 75% of respondent) view academic integrity as a serious issue and agree that academic dishonesty is compromising the integrity of the classroom. Only 14% of respondents believe that academic dishonesty has not compromised the integrity of the classroom. Most faculty members agree (approximately 74% of respondents) that the proliferation of technology has resulted in increased incidences of academic dishonesty. Only 10% of respondents believed that technology has not resulted in increased incidences of academic dishonesty.

Analysis of Variance ("ANOVA") reveals that the faculty members who primarily teach at the introductory level feel more strongly that academic dishonesty is compromising the classroom (4.10 mean response versus 3.86, respectively, p-value of 0.061). These finding support the prior literature that suggests that student learn about academic dishonesty in earlier courses which results in future behaviour modification (Nuss, 1984).

There is less consensus on whether academic dishonesty has increased over time. Approximately 60% seem to agree (somewhat or strongly) that academic dishonesty has increased over time. ANOVA with the demographic variables reveals that the increase in the incidences of academic dishonesty varies only by faculty members' years of experience. That is, faculty members with over fifteen years of experience perceived the incidences of academic dishonesty to have increased more so than faculty with less than fifteen years of experience (3.76 mean response versus 3.53, respectively, p-value of 0.059). Perceptions of the more senior faculty members may be more valid because of greater experience.

5.4 Research Question 4 - Faculty Perceptions on how Technology has impacted various types of Academic Dishonesty

The fourth research question explores which incidences of academic dishonesty have been impacted the most by the advent of new technologies. Faculty members were asked to rate various incidents of academic dishonesty in terms of frequency, significance and technological impact based on Likert scale questions anchored with "1" representing "Low" and "5" representing "High". Table 4 presents the results.

Insert Table 4 Here

Table 4 reveals that the three types of academic dishonesty impacted by technology are: i) using information without proper referencing; ii) using unauthorized materials during a test; and iii) having another person complete an assignment or using another students assignments from a previous semester. The mode was "strongly agree" that technology has impacted all three of these types of academic dishonesties.

Table 4 reveals that faculty responses were fairly consistently spread across all the incidences and dimensions measured in this paper. However, prior literature suggests that faculty view academic dishonesty relating to exam and papers differently (Pincus and Schmelkin, 2003). Accordingly, we combined incident which are clearly related to exams versus assignments in order to identify any possible differences in terms of mean scores related to technological impact. Specifically, we grouped incidences number 1 to 8 from Table 4 as being exam related academic dishonesty and incidences 9 to 11 as being assignment related academic dishonesty. Table 5 presents the results of the test for mean difference across the two groups.

Insert Table 5 Here

Table 5 reveals that faculty seems to believe that technology has impacted academic dishonesty related to assignment/papers much more than exams. One reason may be easier access and the widespread, proliferation of information available through the internet.

An analysis of the qualitative, open-ended questions reveals that many respondents perceive online information sharing and collusion as a growing issue among students. Most respondents referred to examples of collusion among students where students submit the same or similar assignment with different names. This type of collusion is difficult to detect in larger classes or where different graduate assistants mark assignment.

5.5 Additional Insights - Faculty Perceptions on the frequency and significance of incidences of Academic Dishonesty

Our survey also explores the frequency and significance of each incidence of academic dishonesty. In terms of frequency, Table 4 reveals that none of the academic dishonesty incidents averaged more than a mean of 2.84. This result suggests that accounting faculty do not perceive any one type of academic honesty to be exceedingly frequent. The three most frequent types of academic dishonesty are: i) having another

person complete an assignment or using another student's assignment from a previous semester; ii) using information without proper referencing; and iii) continuing to write after the test time has expired. Getting someone else to pretend they are a student on an exam and preventing other student's access to resources required to complete an assignment are among the least common types of academic dishonesty.

The prior literature has investigated similar incidences of academic dishonesty from the student perspective. The faculty perceptions regarding the frequencies presented in Table 4 are consistent with student perceptions (Sims, 1984; Brimble and Stevenson-Clarke, 2005).

ANOVA reveals that frequency of academic dishonesty did not differ between three course levels (introductory, intermediate and advanced). However, comparing intermediate and advanced courses against introductory courses revealed significant results in terms of: 1) using unauthorised material during tests; 2) getting someone else to pretend that they are the student; 3) requesting special consideration in exam without seemingly genuine reasons; and 4) using information without proper referencing. All of these types of academic dishonesty are perceived to occur more frequently at the introductory level.

ANOVA also reveals that faculty members with less than 5 years' experience feel more strongly that student can gain unauthorised access to material compared to faculty with more than 15 years' experience (results not tabulated, difference significant at 5% level). In addition, faculty members with more than 15 years of experience feel more strongly that improper referencing and falsifying research results is a significant issue (results not tabulated, difference significant at 5% level). This could be the result of senior faculty members being more involved with research supervision and therefore are more likely to perceive higher significance and frequency with improper referencing and falsifying research results.

In terms of significance, the three most significant types of academic dishonesties are: i) copying from another student; ii) Gaining unauthorised access to test material before writing; and iii) Using unauthorised material during a test (e.g., phone, notes, pre-programmed calculator, etc.). ANOVA revealed that

communicating by signals during tests and using washroom breaks to access unauthorised material are perceived to be of higher significance at introductory level as opposed to intermediate and advanced level.

Spearman correlation analysis is utilized in order to provide insights into the relationship between the significance of the twelve incidences of academic dishonesty (presented in Table 4) and the overall impact of academic dishonesty on the integrity of the classroom (presented in Table 2). The Spearman correlation matrix is presented in Table 6.

Insert Table 6 Here

Table 6 reveals that the accounting faculty who reported that academic dishonesty is compromising integrity of the classroom reported higher significance of the following incidents: i) copying from other students; ii) using unauthorized materials during an exam; iii) continuing to write after the exam time is over; iv) requesting special consideration/deferred exam assuming that the conditions are not genuinely met; v) having another person complete an assignment or using another student's assignment from a previous semester; and vi) using information without proper referencing (from a book, journal or website). Product of significance and frequency of these incidents also yield higher total scores for these incidents. While most incidents relating to exams can be managed through better exam room management, other present more serious issues.

It seems that request for special consideration seems to be more difficult since it is hard to disprove and can provoke social and cultural sensibilities. Goucher (1995) who examined the incidence of requests for special consideration in an Australian University found an increasing trend for special consideration requests. He also found that such requests are proportionally higher for international and female students. It is interesting to note that female faculty members in our dataset reported significantly higher frequency of special consideration requests (difference significant at 5% level) than their male counterparts.

5.6 Research Questions 5 and 6 - How do accounting faculty control against academic dishonesty?

The fifth and sixth research question explore the used and effectiveness of controls employed by accounting faculty to mitigate the impact of academic dishonesty. A summary of the responses related to controls against academic dishonesty are presented in Table 7.

Insert Table 7 Here

Table 7 reveals that most commonly used controls are: i) referring to university policies; ii) changing assignment and exams each year; and iii) using multiple examination versions. Davis (1993) found that regardless of size and type of institution the most effective deterrent was preparation of separate forms of tests. Our results also found that controls that are perceived to be most effective include: i) changing assignment and exams each year; ii) using multiple examination versions; and iii) creating assessment such that the question responses are unique to a student and cannot be copied.

The results reveal that changing assignments and exams annually and using multiple exam versions are not only commonly used by faculty but are believed to be effective. Faculty members have remarked that creating new exams, cases and assignment every year requires considerable time commitment but these efforts mostly go unacknowledged because they do not neatly fit into teaching or research performance as evaluated by Universities. This may be a reason why creating assignments such that the responses are unique and cannot be copied is perceived to be effective but is not widely practiced.

Although referring to university policies in syllabus is frequent it is not perceived to be an effective deterrent. However, leading a discussion in class about academic dishonesty with specific examples is practiced more often and considered effective. The results also corroborate Nuss' (1984) recommendation that besides publishing academic code of conduct, due consideration should be given to discussion between students, faculty and student advisors during orientation and regular classes.

Using online resources to detect plagiarism was also reported as comparatively effective but used less often. Faculty members may not use online detection software for many reasons. Web based search engines and

free online services to check plagiarism have serious limitations and students who are inclined to plagiarise learn overtime to avoid these detections. Paid software like Turnitin are expensive and their effectiveness has been questioned. Students can also legally refuse to submit their assignment through online plagiarism software. These shortcomings led Mount Saint Vincent University in Nova Scotia, Canada to actually ban the use of online plagiarism detection software in 2006. Contrary to expectations that younger faculty would be more tech savvy and consequently prone to use online plagiarism detection tools, we did not find any difference in frequency of online software use between more or less experienced faculty members.

The survey provided respondents with the opportunity to report other techniques that they use to control academic dishonesty. This open-ended question yielded some interesting results. Many faculty members commented that they inform students about academic dishonesty at the beginning of classes. The practice has been adopted by many universities as a matter of policy and Table 7 confirm its widespread use. Some faculty members seem to believe that the approach can be effective if used persistently and creatively. For example, some instructors develop quizzes based on academic dishonesty, discuss news items about accountants who were involved in dishonest practices and provide students with examples of academic dishonesty. A few faculty members commented on the effectiveness of explaining consequences of getting caught while engaged in dishonesty and believe it to be effective.

Most of the comments received about controls focused around examination room management. Comments ranged from diligent invigilation to restricting student access to cell phone and contact with peers.

5.7 Research Question 7 - How do faculty members respond to incidences of academic dishonesty?

The seventh research question explores how accounting faculty members respond to incidences of academic dishonesty. Table 8 presents the result of an overall question related to faculty response. It seems that most faculty members (78%) would not ignore academic dishonesty and remain undeterred by administration of penalizing dishonest students. The results highlights the fact that there is still need for University administration to encourage faculty and facilitate reporting and penalizing of dishonest students.

Insert Table 8 Here

Jendrek (1989) reported that only 20% of the faculty members who observed cheating complied with university policy of reporting the incident. This finding is seemingly supported by McCabe and Trevino (1996). Jendrek concluded that faculty members prefer to handle cheating on a one to one basis. While our question was broader in context, it still points to a possibility that most academic dishonesty cases are handled at the faculty level without involving University administration.

Table 9 tabulates specific faculty reactions to academic dishonesty related to cheating versus plagiarism.

Insert Table 9 Here.

It seems that accounting faculty members react differently to plagiarism as opposed to cheating on an exam. They are prone to give students a zero for the course more readily for exam cheating than incidents of plagiarism. They would rather be selective and penalise students for portion of plagiarised contents. They are also more likely to report incidents of cheating than plagiarism. Ashworth et al. (1997) found that the notion of plagiarism among students is unclear and student sometimes feel that they may be found guilty of plagiarism without the intention to commit plagiarism. The faculty, perhaps, realising this fact have adopted a different attitude toward plagiarism than cheating in an exam.

It is important to note that the survey did not allow respondents to select multiple responses. For example, it is possible for a faculty member to select report academic dishonesty to administrative authority and also assign a zero. Therefore, the results in Table 9 represent the faculty members first and foremost response to academic dishonesty.

6 Conclusions and Implications

The purpose of this paper is explore how technological advancement and access has impacted different facets of academic dishonesty, as it relates to teaching accounting. We found that most accounting faculty members believe that academic dishonesty is compromising integrity of the classroom and proliferation of technology has increased incidences of academic dishonesty. Considering proliferation and pace of new

technologies, these trends are likely to continue. Technology seems to have impacted incidences of academic dishonesty related to exams and assignments; however, the impact of technology on assignments appears to be more pronounced. This study suggests that university administrator should consider updating policies and procedures which deal with the impacts of technology on academic dishonesty.

Second, this study is one of few which explore controls for academic dishonesty. We found that changing assignment and exam each year is considered an effective tool against exam cheating and plagiarism. We found that informing students about policies relating to academic dishonesty through syllabus is widely practiced but not perceived useful. A more proactive approach like class discussions with specific examples of academic dishonesty is perceived to be more effective. These findings can be used by faculty members seeking new ways of mitigating the impacts of academic dishonesty.

Third, this study revisits the question of response of faculty toward academic dishonesty. We found that although most faculty members would not ignore incidents of academic dishonesty, they view exam cheating and plagiarism differently.

Fourth, the results of this survey can be compared to similar research conducted from the perspective of students. Comparing these results to the prior literature reveals several gaps between the perception of students and faculty members. An interesting gap arises from the motivations for engaging in academic dishonesty. Faculty members perceive that pressure to get good grades is the main motivator while students ranked it as the fourth highest motivator. In addition, while students perceive difficult assessment as a motivator to engage in academic dishonesty, faculty members thinks otherwise. Understanding these expectation gaps is important for faculty members in order to help prevent students from engaging in academic dishonesty.

This study is not without limitations. First, the survey instrument did not include a “not applicable” option. Accordingly, respondents may have selected Low (“1”) in situations where they would have selected “not applicable”. Therefore, not having a “not applicable” option may have resulted in a negative bias in some

of the mean responses. Second, respondents voluntarily agreed to participate in the survey. Therefore, the respondents may have chosen to participate due to an interest in academic dishonesty thereby biasing the sample statistics. Third, this paper relies on perception of the faculty members only and does not consider student's perception to ascertain differences in perception and reality. However, studies examining perception of academic dishonesty of students and faculty have found significant correlation between responses (Sims, 1995).

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8 Tables

Table 1 – Demographic Profile of Respondents

Panel A - Respondent profile by country

	Frequency	Percent
Canadian institution	58	14.9
USA institution	331	85.1
Total	389	100.0

Panel B - Respondent profile by gender

	Frequency	Percent
No response	3	.8
Female	173	44.5
Male	213	54.8
Total	389	100.0

Panel C – Respondent profile by years of experience

	Frequency	Percent
No response	4	1.0
1 to 5	19	4.9
11 to 15	48	12.3
15+	260	66.8
6 to 10	58	14.9
Total	389	100.0

Panel D – Respondent profile by educational background

	Frequency	Percent
No response	2	.5
MSc. / MBA / Etc. (Masters level)	35	9.0
MSc. / MBA / Etc. (Masters level), PhD / DBA (Doctoral level)	12	3.1
MSc. / MBA / Etc. (Masters level), PhD / DBA (Doctoral level), Professional Accounting Designation	69	17.7
MSc. / MBA / Etc. (Masters level), Professional Accounting Designation	38	9.8
PhD / DBA (Doctoral level)	180	46.3
PhD / DBA (Doctoral level), Professional Accounting Designation	46	11.8
Professional Accounting Designation	7	1.8
Total	389	100.0

Panel E – Respondent profile by course level used as a reference for survey response

	Frequency	Percent
No response	3	.8
Advanced level courses	164	42.2
Intermediate level courses	134	34.4
Introductory level courses	88	22.6
Total	389	100.0

Panel F – Respondent profile by course type (in-class versus online)

	Frequency	Percent
No response	3	.8
In-class courses	364	93.6
Online courses	22	5.7
Total	389	100.0

Panel G – Respondent profile by primary teaching area

	Frequency	Percent
No response	3	.8
Accounting Information Systems	35	9.0
Auditing	50	12.9
Financial Accounting	183	47.0
Managerial Accounting	76	19.5
Taxation	42	10.8
Total	389	100.0

Table 2 - Faculty Perceptions on why students engage in academic dishonesty

	Mode	Mean	Std. Deviation
Pressure to get good grades	5	4.46	.789
Not likely to get caught	4	3.78	.980
Cheating is victimless	4	3.29	1.245
Wanting to help a friend	3	3.28	1.070
Assessment was too time consuming	4	3.24	1.210
Test date or due date was too close to other test/assignments	4	3.20	1.156
Assessment is too difficult	3	3.18	1.138
Teaching method did not accommodate student's learning style	1	2.08	1.016

Table 3 – Overall Faculty Perceptions related to Academic Dishonesty

What is your level of agreement with the following statements?			
	Overall, academic dishonesty is compromising the integrity of the classroom.	The proliferation of technology has resulted in increased incidents of academic dishonesty.	Incidents of academic dishonesty have increased over the past five to ten years.
Strongly disagree	3.3%	3.6%	4.1%
Somewhat disagree	10.8%	5.1%	10.3%
Neither agree nor disagree	10.8%	16.2%	26.2%
Somewhat agree	41.1%	44.0%	29.8%
Strongly agree	33.7%	30.6%	28.8%
Mean	3.91	3.93	3.69
Mode	4	4	4
Standard Deviation	1.08	1.00	1.12
N	388	387	387

Table 4 - Frequency, significance, and technological facilitation of various types of academic dishonesty

Incidence #	Incidence of Academic Dishonesty	Frequency			Significance			Technology		
		Mean	Mode	St Dev	Mean	Mode	St Dev	Mean	Mode	St Dev
1	Copying from another student on a test	1.79	1	1.02	3.73	5	1.49	2.08	1	1.39
2	Using unauthorised material during a test (e.g., phone, notes, pre-programmed calculator, etc.)	1.75	1	1.05	3.63	5	1.55	3.23	5	1.61
3	Communicating by signals during a test.	1.35	1	0.67	2.90	1	1.67	1.80	1	1.22
4	Continuing to write after the test time has expired.	2.32	1	1.37	1.97	1	1.12	1.26	1	0.78
5	Gaining unauthorised access to test material before writing.	1.56	1	1.02	3.65	5	1.71	2.76	1	1.65
6	Getting someone else to pretend they are the student (impersonation) during a test.	1.17	1	0.58	3.52	5	1.82	1.59	1	1.17
7	Using washroom breaks to access unauthorized materials (e.g., hidden notes, phone access, etc.)	1.79	1	0.99	3.30	5	1.58	2.30	1	1.45
8	Requesting special consideration/deferred exam (eg for illness) assuming that the conditions are not genuinely met.	2.09	1	1.19	2.78	1	1.43	1.56	1	1.02
9	Having another person complete an assignment or using another student's assignment from a previous semester	2.84	3	1.34	3.45	5	1.39	3.21	5	1.51
10	Using information without proper referencing (from a book, journal or website).	2.61	1	1.35	3.18	3	1.45	3.43	5	1.56
11	Falsifying the results of one's research.	1.35	1	0.88	3.07	5	1.84	2.45	1	1.61
12	Preventing other student's access to resources required to complete an assignment.	1.19	1	0.68	2.38	1	1.62	1.77	1	1.29

Table 5 – Technology's impact on plagiarism versus exam related academic dishonesty

Impact of technology on incidences of academic dishonesty related to:		
	Exams	Papers
Mean	2.08	3.03
p-value for difference	0.00***	

*** - Significant at the 1% level

Table 6 – Correlation matrix (Spearman) between the significance of each incidence of academic dishonesty and the overall impact on academic integrity

	Incidence #1	Incidence #2	Incidence #3	Incidence #4	Incidence #5	Incidence #6	Incidence #7	Incidence #8	Incidence #9	Incidence #10	Incidence #11	Incidence #12	Overall Impact
Incidence #1	1.000 .000	.784** .000	.326** .000	.727** .000	.688** .000	.679** .000	.704** .000	.464** .000	.473** .000	.410** .000	.583** .000	.523** .000	.148** .004
Incidence #2	.784** .000	1.000 .000	.363** .000	.711** .000	.638** .000	.645** .000	.717** .000	.470** .000	.483** .000	.458** .000	.601** .000	.500** .000	.164** .001
Incidence #3	.326** .000	.363** .000	1.000 .000	.412** .000	.283** .000	.313** .000	.409** .000	.505** .000	.233** .000	.267** .000	.303** .000	.353** .000	.143** .005
Incidence #4	.727** .000	.711** .000	.412** .000	1.000 .000	.649** .000	.691** .000	.775** .000	.493** .000	.429** .000	.390** .000	.627** .000	.575** .000	0.060 .243
Incidence #5	.688** .000	.638** .000	.283** .000	.649** .000	1.000 .000	.727** .000	.632** .000	.427** .000	.406** .000	.387** .000	.604** .000	.505** .000	0.048 .351
Incidence #6	.679** .000	.645** .000	.313** .000	.691** .000	.727** .000	1.000 .000	.673** .000	.405** .000	.346** .000	.319** .000	.641** .000	.532** .000	0.053 .300
Incidence #7	.704** .000	.717** .000	.409** .000	.775** .000	.632** .000	.673** .000	1.000 .000	.562** .000	.435** .000	.438** .000	.654** .000	.583** .000	0.093 .072
Incidence #8	.464** .000	.470** .000	.505** .000	.493** .000	.427** .000	.405** .000	.562** .000	1.000 .000	.454** .000	.404** .000	.396** .000	.469** .000	.166** .001
Incidence #9	.473** .000	.483** .000	.233** .000	.429** .000	.406** .000	.346** .000	.435** .000	.454** .000	1.000 .000	.536** .000	.473** .000	.424** .000	.212** .000
Incidence #10	.410** .000	.458** .000	.267** .000	.390** .000	.387** .000	.319** .000	.438** .000	.404** .000	.536** .000	1.000 .000	.510** .000	.385** .000	.238** .000
Incidence #11	.583** .000	.601** .000	.303** .000	.627** .000	.604** .000	.641** .000	.654** .000	.396** .000	.473** .000	.510** .000	1.000 .000	.705** .000	0.028 .596
Incidence #12	.523** .000	.500** .000	.353** .000	.575** .000	.505** .000	.532** .000	.583** .000	.469** .000	.424** .000	.385** .000	.705** .000	1.000 .000	0.058 .264
Overall Impact	.148** .004	.164** .001	.143** .005	0.060 .243	0.048 .351	0.053 .300	0.093 .072	.166** .001	.212** .000	.238** .000	0.028 .596	0.058 .264	1.000 .000

** Significant at the 1% level

* Significant at the 5% level

Table 7 - Faculty member controls for academic dishonesty

	Frequency			Effectiveness		
	Mean	Mode	St Dev	Mean	Mode	St Dev
Include or refer to the University's policy on academic dishonesty in the syllabus.	4.36	5	1.17	2.32	1	1.15
Changing assignments and exams each year in order to limit student's access to past materials.	4.03	5	1.22	3.96	5	1.07
Using multiple examination versions (e.g., scrambling the order of questions on multiple-choice exams).	3.75	5	1.52	3.82	4	1.12
Increase the certainty of punishment if detected.	3.39	5	1.51	3.50	3	1.26
Lead a discussion in class about academic dishonesty with specific examples and explanations of the consequences.	2.97	5	1.57	2.72	3	1.17
Have students sign a statement that their work is their own.	2.71	1	1.74	2.29	1	1.16
Using online resources, search engines or other plagiarism software to detect plagiarism.	2.64	1	1.62	3.52	1.12	1.24
Creating assessment such that the question responses are unique to a student and cannot be copied.	2.25	1	1.48	3.63	5	1.37
Requiring students to turn in research materials, with incorporated sections highlighted.	1.52	1	1.07	2.60	3	1.31
Checking the washrooms before an exam for unauthorized materials.	1.32	1	0.89	1.60	1	0.99

Table 8 – Overall Faculty reaction to Academic Dishonesty

	I would rather ignore academic dishonesty than deal with the administration of penalizing dishonest students.
Strongly disagree	54.2%
Somewhat disagree	24.2%
Neither agree nor disagree	10.5%
Somewhat agree	7.5%
Strongly agree	3.1%
Mean	1.88
Mode	1
Standard Deviation	1.09
N	387

Table 9 – Faculty members most likely course of action when dealing with academic dishonesty

	What is your most likely course of action when dealing with a student caught plagiarizing?			**What is your most likely course of action when dealing with a student caught cheating on an exam?**	
	n	%		N	%
Give the student a zero for the course.	43	11.1%		72	18.5%
Give the student a zero on the portion of the test / assignment or on the entire test/assignment.	193	49.6%		136	35.0%
Report student to administrative authority (e.g., Dean, Disciplinary Committee, etc.)	123	31.7%		166	42.7%
Do not confront the student / Do nothing	4	1.0%		4	1.0%
Give the student a verbal warning. No further action	24	6.2%		10	2.6%
No response	2	0.5%		1	0.3%

9 Appendix –Survey Instrument

Demographic Information

What is your gender?

- ☐ Male
- ☐ Female

Please select the number of years you have been teaching accounting:

- ☐ 1 to 5
- ☐ 6 to 10
- ☐ 11 to 15
- ☐ 15+

Please tell us about your educational background (select all that apply):

- ☐ MSc. / MBA / Etc. (Masters level)
- ☐ PhD / DBA (Doctoral level)
- ☐ Professional Accounting Designation

Your answers are based upon your experience teaching:

- ☐ In-class courses
- ☐ Online courses

Please select the course level which you will use as the reference to answer the survey questions (please select only one):

- ☐ Introductory level courses
- ☐ Intermediate level courses
- ☐ Advanced level courses

What is your primary teaching area?

- ☐ Financial Accounting
- ☐ Auditing
- ☐ Taxation
- ☐ Managerial Accounting
- ☐ Accounting Information Systems

Your answers are based upon your experience teaching at a:

- ☐ Canadian institution
- ☐ USA institution
- ☐ Australian institution
- ☐ U.K. institution

Scenarios of Academic Dishonesty

Each of the following presents a scenario of academic dishonesty. Please rank each scenario on a scale of one (low) to five (high) across the following three metrics: Frequency: how often does this type of academic dishonesty occur in your classroom? Significance: how significant would this type of academic dishonesty be to the overall integrity of a student's grade in your course? Technological Facilitation: how important is technology in facilitating this type of academic dishonesty?

1) Copying from another student on a test.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Significance	☐	☐	☐	☐	☐

	Low - 1	2	3	4	High - 5
Technological Facilitation	☐	☐	☐	☐	☐

2) Using unauthorised material during a test (e.g., phone, notes, pre-programmed calculator, etc.)

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Significance	☐	☐	☐	☐	☐
Technological Facilitation	☐	☐	☐	☐	☐

3) Continuing to write after the test time has expired.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Significance	☐	☐	☐	☐	☐
Technological Facilitation	☐	☐	☐	☐	☐

4) Communicating by signals during a test.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Significance	☐	☐	☐	☐	☐
Technological Facilitation	☐	☐	☐	☐	☐

5) Gaining unauthorised access to test material before writing.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Significance	☐	☐	☐	☐	☐
Technological Facilitation	☐	☐	☐	☐	☐

6) Getting someone else to pretend they are the student (impersonation) during a test.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Significance	☐	☐	☐	☐	☐
Technological Facilitation	☐	☐	☐	☐	☐

7) Using washroom breaks to access unauthorized materials (e.g., hidden notes, phone access, etc.)

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Significance	☐	☐	☐	☐	☐
Technological Facilitation	☐	☐	☐	☐	☐

8) Requesting special consideration/deferred exam (eg for illness) assuming that the conditions are not genuinely met.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Significance	☐	☐	☐	☐	☐
Technological Facilitation	☐	☐	☐	☐	☐

9) Having another person complete an assignment or using another student's assignment from a previous semester.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Significance	☐	☐	☐	☐	☐
Technological Facilitation	☐	☐	☐	☐	☐

10) Using information without proper referencing (from a book, journal or website).

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Significance	☐	☐	☐	☐	☐
Technological Facilitation	☐	☐	☐	☐	☐

11) Falsifying the results of one's research.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Significance	☐	☐	☐	☐	☐
Technological Facilitation	☐	☐	☐	☐	☐

12) Preventing other students access to resources required to complete an assignment.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Significance	☐	☐	☐	☐	☐
Technological Facilitation	☐	☐	☐	☐	☐

Which other types of academic dishonesty occur frequently?

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Reasons for, and Reactions to Academic Dishonesty

What is your most likely course of action when dealing with a student caught plagiarizing?

- ☐ Give the student a zero for the course.
- ☐ Give the student a zero on the portion of the test / assignment or on the entire test/assignment.
- ☐ Report student to administrative authority (e.g., Dean, Disciplinary Committee, etc.)
- ☐ Do not confront the student / Do nothing
- ☐ Give the student a verbal warning. No further action

Why do you think students engage in academic dishonesty?

	1 - Not a strong motivator	2	3 - Somewhat of a motivator	4	5 - Strong motivator
1) Wanting to help a friend	☐	☐	☐	☐	☐
2) Not likely to get caught	☐	☐	☐	☐	☐
3) Assessment is too difficult	☐	☐	☐	☐	☐
4) Pressure to get good grades	☐	☐	☐	☐	☐
5) Cheating is victimless	☐	☐	☐	☐	☐
6) Assessment was too time consuming	☐	☐	☐	☐	☐
7) Test date or due date was too close to other test/assignments	☐	☐	☐	☐	☐
8) Teaching method did not accommodate student's learning style	☐	☐	☐	☐	☐

What is your most likely course of action when dealing with a student caught cheating on an exam?

- ☐ Give the student a zero for the course.
- ☐ Give the student a zero on the portion of the test / assignment or on the entire test/assignment.
- ☐ Report student to administrative authority (e.g., Dean, Disciplinary Committee, etc.)
- ☐ Do not confront the student / Do nothing
- ☐ Give the student a verbal warning. No further action

Controls for Mitigating Academic Dishonesty

Each of the following questions presents a potential control to mitigate the impacts of academic dishonesty. Please rank each scenario on a scale of one (low) to five (high) across the following two metrics: Frequency: how often do you use this control in your classroom? Effectiveness: how useful do you believe that this control is at mitigating the impacts of academic dishonesty?

1) Lead a discussion in class about academic dishonesty with specific examples and explanations of the consequences.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Effectiveness	☐	☐	☐	☐	☐

2) Include or refer to the University's policy on academic dishonesty in the syllabus.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Effectiveness	☐	☐	☐	☐	☐

3) Have students sign a statement that their work is their own.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Effectiveness	☐	☐	☐	☐	☐

4) Using multiple examination versions (e.g., scrambling the order of questions on multiple-choice exams).

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Effectiveness	☐	☐	☐	☐	☐

5) Changing assignments and exams each year in order to limit students access to past materials.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Effectiveness	☐	☐	☐	☐	☐

6) Checking the washrooms before an exam for unauthorized materials.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Effectiveness	☐	☐	☐	☐	☐

7) Creating assessment such that the question responses are unique to a student and cannot be copied.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Effectiveness	☐	☐	☐	☐	☐

8) Using online resources, search engines or other plagiarism software to detect plagiarism.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Effectiveness	☐	☐	☐	☐	☐

9) Requiring students to turn in research materials, with incorporated sections highlighted.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Effectiveness	☐	☐	☐	☐	☐

10) Increase the certainty of punishment if detected.

	Low - 1	2	3	4	High - 5
Frequency	☐	☐	☐	☐	☐
Effectiveness	☐	☐	☐	☐	☐

Do you use any other control to mitigate the impacts of academic dishonesty?

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Overall Perceptions

What is your level of agreement with the following statements?

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Overall, academic dishonesty is compromising the integrity of the classroom.	☐	☐	☐	☐	☐
Incidents of academic dishonesty have increased over the past five to ten years	☐	☐	☐	☐	☐
I would rather ignore academic dishonesty than deal with the administration of penalizing dishonest students.	☐	☐	☐	☐	☐
The proliferation of technology has resulted in increased incidents of academic dishonesty.	☐	☐	☐	☐	☐
University policies have adapted to meet the academic dishonesty challenges posed by technology	☐	☐	☐	☐	☐

You have completed the survey. Thank you for your participation.

Please enter your email address here if you wish to receive a copy of this study's results.