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The Impact Of Technology On Online Course Integrity: A Pilot Study

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ABSTRACT

The March 2020 COVID-19 pandemic caused many universities to move face-to-face and hybrid courses to completely online formats, resulting in increased challenges to academic integrity. Although academic misconduct and academic dishonesty among students is nothing new, the literature is inconclusive as to whether there is more cheating in online classes than in face-to-face classes. However, online education has made it much more difficult for instructors to detect instances of cheating. The purpose of this study is to identify faculty perceptions and attitudes regarding student violations of academic integrity, particularly in online courses. An Internet survey link was sent to all faculty at a southwestern university. Responses revealed that although faculty are aware of the threat of technology to academic integrity, many do not use the available technology safeguards.

Keywords: online, academic integrity, safeguards, technology, pedagogy

INTRODUCTION

Online education has grown at a rapid pace in the last few years as more and more universities develop programs to reach the online community and to offset declines in on-campus attendance. In some cases, this has allowed universities to reach entirely new market segments. The movement to an online environment has also brought with it an increase in the possibility of a decrease in academic integrity of courses as many online websites offer "help" with homework, term papers and even taking courses for students. This research addresses these issues through a survey of faculty at a regional university in the southwest.

LITERATURE REVIEW

Academic integrity has received a great deal of interest in the educational literature, both for universities and K-12 schools, (e.g., Silver & Stafford, 2017). Incidents such as the Atlanta school cheating scandal (Blinder, 2015) raise awareness in the general public, but teachers, administrators, and students are aware that cheating is an everyday problem. According to McCabe, Butterfield, & Trevino (2012) over the 13-year period from 2002 to 2015, in a survey of 71,300 students, 68% of undergraduates admitted to cheating in some form as did 43% of graduate students. In the same survey, 95% of high school students reported they had either cheated on a test, plagiarized, or copied homework (McCabe, et al., 2012).

While there are numerous definitions of academic integrity (e.g., East & Donnelly, 2012; Turner & Beemsterboer, 2003), the International Center for Academic Integrity [ICAI] defines academic integrity as the ethical principles that guide academic practice. ICAI breaks down "academic integrity" into *academic misconduct*, and *academic dishonesty*. Academic misconduct is a violation of ethical conduct (e.g., intentional cheating or plagiarism) while academic dishonesty refers to behaviors that lead to the misrepresentation of scholarly work (ICAI, 2015). It is this definition of academic integrity, along with the concepts of misconduct and dishonesty we use in this paper.

Academic dishonesty includes a number of behaviors including unauthorized collaboration on homework, cheating during exams, plagiarism, and purchasing term papers. Collaboration on homework is a form of collusion where students work together or share information about an assignment and then present it as an individual effort. Plagiarism includes, at the low end, improperly citing another person's work and, at the high end, completely incorporating someone else's work into an assignment and presenting it as one's own work. Purchasing term papers is a form of "contract cheating," particular to online classes and is discussed below (Atkinson, Nau & Symons, 2016).

When asked why they cheat, students often say, in one form or another, "It depends." Richards (2012) in his work on K-12 cheating made the following observation:

> *Perhaps the most alarming news is that students say their cheating is contextual: based on the teacher, the assignment, or their overall workload. Decisions appear to be based on the extent to which the student can rationalize cheating in a given circumstance. Essentially, the academic integrity scale is a sliding one given the situation at hand, rather than a matter of a person's sense of right or wrong (p. 97).*

Two other factors may contribute to cheating: culture and English language proficiency. Many foreign students, when entering U. S. universities, experience culture shock and need to learn Western academic mores. Some time may need to be set aside for intercultural learning on the part of the student and the instructor.

Many universities in the U.S., Canada, Australia, and the U.K. require English language proficiency. Yet, students arrive at English speaking universities with a variety of English language skills. This lack of language skill may cause inadvertent plagiarism through misunderstanding or, if the language skills are sufficiently deficient, as the only way to pass the assignment. The solution is not

to punish the students but for the institution to have sufficient language support services (Atkinson, et al., 2016).

The literature is inconsistent as to whether there is more cheating in online classes than in face-to-face classes (Lanier, 2006). While there may be no difference in cheating incidents in different delivery methods, online education has made it much more difficult for instructors to detect academic dishonesty (Malesky, Baley, & Crow, 2016). As of 2016, 6.3 million university students in the United States were taking an online course (Freidman, 2018).

Several methods of detecting online cheating include remote proctoring of exams, requiring students to prove their identity, and submitting students' written work through such links as Turnitin or SafeAssign to detect plagiarism. Yet, these methods have their limitations. A new way to get around these limitations is to engage a company online to take the course for the student. This is known as "contract cheating" (Atkinson, Nau, & Symons, 2016). One particular problem with contract cheating is that the companies that offer these services submit assignments of high-quality original content and are not detected ty Turnitin and SafeAssign (Malesky, et al., 2016).

In a recent study, Malesky, et al. (2016) established an online introduction to psychology course. Both the instructors, who were experienced online teachers, and the students knew the course was not for credit. The students were blind to the instructors just as in any online course. Students were instructed to cheat and there was a reward of $200 if the instructors did not catch them.

One student contacted an online company that, for $917, would take the course for him and guarantee him an "A." This included tests, papers, and discussion boards. One glitch was that the student was required to make a live presentation on Go-To-Meeting with PowerPoint slides. The company sent the slides to the student along with a script he was to read verbatim. The student received an "A" on the presentation.

Other methods of detecting cheating were used by the instructors. For the mid-term and final, the student took 46 minutes and 37 minutes to take an hour-long 50-question test, which was not considered unreasonably fast. His written work was run through Turnitin and instructors also did Google searches of his work. In the end, neither instructor had any reason to believe he had cheated (Malesky, et al., 2016).

Cheating doesn't begin in college. As noted above, in one study 95% of high school students admitted to some form of cheating. An emphasis on grades and high stakes testing for college admissions have contributed to this trend (Price-Mitchell, 2015). The solution to the problem of cheating is not an easy one and views differ on how to address it. There is even a difference in attitudes about whether academic integrity can be taught (Lofstrom, et al. 2015).

In a survey of university professors in New Zealand and Finland, Lofstrom, et al. (2015) found that while professors agreed that academic integrity was more than following rules, they disagreed on whose role it was to teach academic integrity or even whether the underlying values of academic integrity could be taught at all.

Potential employers are also concerned about the integrity of online courses. A study done in 2018 found that 41.6% of CPAs would let an online degree impact their decision to hire an employee (Richards, Stevens, Silver, Metts, 2018). As part of this study the authors conducted interviews with CPAs and found that many CPA firms are now giving entrance exams to evaluate new hires. This concern has come from CPA firms' experience with hiring students with accounting degrees who have very limited knowledge of accounting. Also, in this study, the authors learned from CPAs that they viewed the CPA exam as a leveling tool for accounting degrees. The CPA exam is a nationwide exam given in a secure testing environment. With a CPA license, employers were not concerned with online learning due to the uniformity of the exam and the security and identification controls in place for testing.

METHODOLOGY

In this study, an Internet survey link was sent to all faculty at a southwestern university. The list included 123 full time faculty and 91 adjuncts. The survey had been approved by the Institutional Review Board (IRB) and the Vice President of Academic Affairs prior to sending it out. Respondents were informed of the nature of the survey and given a definition of academic integrity to assure cognizance of the survey intent. Seventy faculty responded, yielding a 32.7% response rate. The survey instrument used in this study was adapted from a questionnaire developed at the University of Central Florida. (http://www.facultysenate.ucf.edu/committees/Steering/2005-2006/Minutes/1-19-2006/Academic%20Integrity%20Survey.pdf)

Respondent characteristics were as follows: (1) had an average of 15.3 years of teaching experience with and an average of 11.1 years here at This University; (2) having taught an average of 2.96 online courses in their career and at This University before the spring, 2020, semester – None – 15 respondents; 1-3 courses – 19 respondents; 4-6 courses – 4 respondents and 7 or more courses – 31 respondents; (3) 61 % were in the School of Arts and Sciences, 20% were from the School of Business, and 19% were from the School of Education. Respondents included 35% full professors, 9% associate professors, 15% assistant professors, 16% instructors, and 25% were adjuncts.

For purposes of this study, academic integrity was defined as follows: Academic integrity is the moral code or ethical policy of academia. This includes values such as avoidance of cheating or plagiarism; maintenance of academic standards; honesty and rigor in research and academic publishing. (https://oaa.osu.edu/academic-integrity-and-misconduct) SPSS software was used to analyze the resulting data. The analysis produced means, medians, and percentages where appropriate with the results show in the tables below.

FINDINGS

In the middle of March 2020, the COVID-19 pandemic resulted in most campuses across the US to close for face-to-face and hybrid/blended courses. This is reflected in Exhibit 1, as it shows that 19% of the respondents in this survey had never taught an online course before the current semester. This means that these instructors had no experience in online education and the challenges to academic integrity that ensue with such courses. Some of the University's programs were already 100% online and therefore, unaffected by the changes involved in an online format.

Exhibit 1: Number of Online Course Taught Before the Current Semester

None	13	19%
1-3	14	20%
4-6	6	9%
7 or more	37	53%

However, they were all aware of the need for academic integrity and had specific actions that they would take if they were convinced that a student had cheated on a major test or assignment in their course. These results are shown in Exhibit 2.

Exhibit 2: Actions Taken in the Case of Student Cheating

	Very Unlikely	**Unlikely**	**Neutral**	**Likely**	**Very Likely**
Reprimand or warn the student	3 4%	2 3%	1 1%	10 14%	53 77%
Lower the student's grade	7 10%	3 4%	5 7%	2 17%	42 61%
Fail the student on the test or assignment	5 7%	4 6%	9 13%	14 20%	38 54%
Give the student a failing grade	15 21%	16 23%	21 30%	9 13%	9 13%
Report the student to the dean, judicial officer or disciplinary committee	8 12%	10 14%	16 23%	18 26%	17 25%
Do nothing/Ignore the incident	59 86%	6 9%	3 4%	0 0%	1 1%

Nonetheless, 44% also believed that some faculty ignored cheating because they did not want to go through the process of reporting the incidents. When asked about how faculty members handle instances of student cheating, 48% felt cheating was not handled in a uniform or consistent manner although the majority (52%) felt the judicial process for handling cheating was fair and impartial. Also, 35% felt that cheating was a serious problem at the University. These results are shown in Exhibit 3.

Exhibit 3: Reactions to Cheating and Uniform Handling

	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Faculty members at this University handle instances of student cheating in a uniform manner	11 16%	22 32%	22 32%	12 18%	1 1%
Faculty members at this University try hard to detect cheaters	3 4%	8 12%	24 35%	30 43%	4 6%
Cheating is a serious problem at this University	4 6%	16 23%	25 36%	16 23%	8 12%
The judicial process at this University is fair and impartial	1 1%	3 4%	29 42%	25 36%	11 16%
Faculty at this University should be held responsible for monitoring the academic integrity of their students	2 3%	3 4%	15 22%	30 44%	18 26%

When respondents were asked what incidents with student cheating, they had experienced in the last three years, the most frequently occurring issue was related to plagiarism. These results are shown in Exhibit 4.

Exhibit 4: Most Frequently Occurring Issues Experienced in the Last 3 Years

	Never	Once	More than Once
Copying from another student during a test or exam without his or her knowledge.	40 59%	10 15%	18 26%
Copying from another student during a test with his or her knowledge	52 76%	9 13%	7 10%
Using unpermitted crib notes (or cheat sheet) during a test	46 69%	13 19%	8 12%
Getting questions or answer from someone who has already taken the test	43 62%	12 17%	14 20%
Helping someone else cheat on a test	50 74%	7 10%	11 16%
Altering a graded test or exam and submitting it for additional credit	64 96%	2 3%	1 1%
Copying material, almost word for word, from any source and turning it in as one's own work	11 16%	12 17%	46 67%
Fabricating or falsifying a bibliography	50 74%	9 13%	9 13%
Turning in as one's own, work done by someone else	26 38%	12 18%	30 44%
Receiving substantial, unpermitted help on an assignment	40 60%	10 15%	17 25%
Working on an assignment with other students when the instructor asked for individual work	40 60%	7 10%	20 30%
Copying a few sentences of material without footnoting them in the paper	18 26%	10 15%	40 59%
Writing or providing a paper for another student	54 79%	7 10%	7 10%
Turning in a paper either purchased or plagiarized, in large part, from a term paper mill or website	40 60%	10 15%	17 25%
Using false or forged excuse to obtain an extension on a due date	35 51%	7 10%	26 38%
Plagiarizing a paper in any way using the Internet as a source	18 26%	10 15%	40 59%
In a course requiring computer work, copying a friend's program rather than doing one's own	50 76%	3 5%	13 20%
Falsifying lab or research data	62 94%	2 3%	2 3%

Respondents were then asked if they felt like the increased availability of technology threatened academic integrity and 84% responded yes. They were also asked about what types of safeguards they used in their courses to prevent cheating. Their responses are shown in Exhibit 5 below. As noted in the findings, the most frequently used safeguard is information placed in the syllabus about cheating and plagiarism. They majority (56%) also felt that an honor code would be an effective tool in maintaining academic integrity.

Exhibit 5: Safeguards Used to Maintain Academic Integrity of Courses

None. I do not use any special safeguards in my courses.	3%
Use Internet tools like Safe-Assign and Turnitin to confirm plagiarism	61%
Provide information in syllabus about cheating/plagiarism	96%
Change exams regularly	55%
Use different versions of each exam	59%
Discuss your views on the importance of honest and academic integrity with your students	68%
Remind students periodically about their obligations under your school's academic integrity policy	65%
Tell students about methods you will use to detect and deter cheating in your course	58%
Utilize Lockdown Browser Software or other monitoring programs during online tests/exams	26%
Set times for online tests/exams	64%
Other (please specify)	23%

DISCUSSION AND CONCLUSIONS

One interesting observation on the findings of this research is that while most respondents indicated that they felt that the increased availability of technology threatened academic integrity of courses, the most common safeguard to thwart cheating was a statement in the syllabus about cheating. In other words, the increased availability of technology was seen as a threat to course integrity and yet available technology used to identify cheating was not the most frequently mentioned tool used to maintain academic integrity.

This would lead to a conclusion that the respondents were not aware/trained in the use of technology to enhance course integrity-an issue of the availability of training or, given the availably of training, respondents were unwilling to use the available technology, which would indicate a resistance to change. Since the University maintained a department charged with training and support in technology to help maintain course integrity, the latter, resistance to change, would be the most likely reason for not taking advantage of training and technology.

However, another possibility for the inconsistency, is the belief on the part of some faculty that the technological tools are ineffective or require too much effort to use. This could also explain why more of the available tools are not more frequently used. As referred to in the literature review, the experiment by Malesky, Baley, and Crow, resulted in the instructors being unable to detect the company that took the course for the student and the student received an A on the presentation required for the course.

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