Promoting Academic Integrity in Online Distance Learning Courses

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Abstract

In committing to provide a quality education using online Distance Learning (DL) as the delivery mechanism, a university must face new challenges to ensuring academic integrity in the behavior of its students. In addition to the predictable challenges associated with the online format of DL courses there are additional challenges stimulated by the attitudes of the current student population and the increasing permissiveness of our society. This paper introduces issues relevant to promoting academic integrity with an example of a university's published Standards of Conduct, exemplifies the nature of the problem with recent cases of academic dishonesty, reviews the current literature highlighting the extent of the problem, and assesses a technology-based approach to its solution.

Keywords: Cheating, ethics, proctoring systems, remote proctor

Introduction

As those who teach in the online Distance Learning (DL) environment refine their instruction materials, procedures and policies, an alarming number of students are arming themselves with a plethora of weapons, employing both new and old strategies and technologies, to obtain an unfair advantage over the rest of their classmates. In this work the authors highlight the current state of these affairs and review one university's approach to regaining control of academic integrity in its DL offerings. The paper introduces the relevant issues with an example of Troy University's published statement of its Standards of Conduct, illustrates disturbing trends in dishonesty among the current student population with a recent case study, presents a brief survey of the literature to explore the extent of "the problem", highlights Troy University's approach to resolving many of the issues, identifies several pressing questions arising from this research, and concludes with a plan for continued research in this increasingly important area.

Standards of Conduct

A university communicates its attitudes and policies regarding the standards of behavior expected from its student population through a section of its catalog or student handbook typically entitled "Standards of Conduct." This section usually includes definitions of misconduct, identifies corresponding administrative responsibilities, outlines procedures for disciplinary actions, lists potential penalties for misconduct, and defines the rights of accused students. Excerpts from Troy University's Undergraduate Catalog (Troy University, 2006) are presented below as these sections apply to proper student behavior and as they relate to this case study.

. . . "A student is subject to disciplinary action if:
. . . In connection with the taking of, or in contemplation of the taking of any examination by any person:

265

a. A student knowingly discovers or attempts to discover the contents of an examination before the contents are revealed by the instructor;

b. A student obtains, uses, attempts to obtain or use, or supplies or attempts to supply to any person, any unauthorized material or device;

c. A student uses, attempts to use, or supplies or attempts to supply to any person unapproved materials or devices dishonestly.

. . . Penalties for Misconduct:

. . . Any student who has committed an act of misconduct……may be subject to one or more of the following penalties:

a. A student's grade in the course or on the examination affected by the misconduct may be reduced to any extent, including a reduction to failure.

b. A student may be suspended from the University for a specific or an indefinite period, the suspension to begin at any time."

(Tr*oy University Undergraduate Catalog*, 2005-2006)

Such standards appear to be clear, reasonable and "common sense" statements of the type of behavior all institutions of higher learning expect from their students and the potential penalties for improper behavior. Additionally Troy University relies on a student Honor Code system to instill academic honor, trust, and integrity that it views as fundamental to its academic policy. This case study illustrates the new and often-blatant assaults upon their ability to preserve academic integrity institutions of higher learning must now confront, particularly in the DL environment.   Perhaps the most disturbing of these assaults are shifts in society's attitudes toward academic integrity and corresponding views of what is acceptable and ethical behavior. The ongoing struggle between new implementation and security technologies embedded in the DL delivery systems and the counter-technologies that defeat them complicates the enforcement of academic standards. Additionally, our litigious society may add even more impediments to maintaining a university's academic integrity.

Case Study – Two Distance Learning Courses

This case summarizes experiences from recent offerings of two quantitative courses in Troy University's core, business program sequence; QM3341 Business Statistics II and MGT3373 Operations Management.   The emphasis in MGT3373 was a balanced presentation of general principles and several quantitative techniques most often encountered in the business world. For each of these courses students were required to take seven online quizzes consisting of 20 multiple-choice questions randomly drawn from a large test bank. They were also required to take an online final examination consisting of 50 multiple-choice questions randomly drawn from the test bank. Finally, both courses included a proctored examination (PE) for which the students were subject to specific rules for personal identification, control of the exam environment, and security. The PE consisted of two parts; part one consisted of 25 multiple-choice questions, part two consisted of five quantitative problems (QM3341) or five essay questions (MGT3373).   Officials from the University's DL office pre-approved students' choices of proctors and defined rules for establishing a secure environment before examinations were distributed to them.

Examinations, instructor materials and author test banks are not intended for general consumption, particularly by students. Troy University, its instructors and textbook publishers cooperatively implement multiple strategies to mitigate cheating and/or unethical behavior. These strategies typically include:

a) The Blackboard[TM] delivery system provides controls that force students to complete assessments once they are entered

b) Blackboard[TM] provides instructor controls that are designed to prevent students from printing copies of all exams

c) Instructors provide instructions with each examination that typically include:

- Students must take assessments separately to prevent copying or collusion
- Students may not make copies of exams
- Proctors must return all test question sheets in addition to all answer sheets

    d) Publishers screen applicants for instructor materials and author test banks to prevent students from obtaining copies

The authors were first alerted to potential violations of the University's Standards of Conduct by the unusual and unreasonable quiz timings of six QM3341 students for the first three quizzes. Each online quiz had a 1-hour time limit and these six students were completing them in 2-3 minutes with near perfect scores. Historically students averaged 30-40 minutes on these quizzes. All six students were registered at the same university site. The authors sent each of these students an e-mail inquiring about the unusual timings; few responded. One student claimed all his timings were reasonable. No student admitted to possessing unapproved sources of information. The authors began collecting utilization and performance data on these students and changed test bank utilization procedures. While preparing the assessment test banks, a "code" had been inserted into all test bank questions, which would facilitate correlation of the (randomly selected) quiz questions to the test banks. For quiz four the authors shuffled those codes. As shown in Table 1 the timings on quiz four for all six students immediately jumped to historical levels. For all remaining quizzes the codes were completely removed and student timings remained roughly at historical averages.

To minimize student anxiety over memorizing formulas and to facilitate the use mathematical tables in many of the examination problems, the Proctored Exam (PE) for this course was given open-book. To allow students to leverage the efforts expended in their homework assignments, the exam was also given open-notes. Because of the irregularities noted above the authors ensured that all the questions for both the parts of the exam differed from all exams given in all previous years. Table 2 summarizes the peculiarities experienced on the PE for these same six students compared to the rest of the class and to the historical performance of students in all past online offerings of the same course.

Table 1. Summary of Quiz Timing Irregularities

QM3341 Business Statistics II – Term 2/05									
Timings (Minutes:Seconds) and Scores (*Administratively changed to 0)									
QM3341	Quiz 1	Quiz 2	Quiz 3	Quiz 4	Quiz 5	Quiz 6	PE	Quiz 8	Final
Student 1	2:19 100	2:03 100	3:53 100	33:24 95	36:11 75	8:46 95	56/0*	17:07 100	35:36 96
Student 2	1:57 100	3:30 90	3:02 100	26:14 95	24:49 95	12:59 90	56/0*	21:10 95	37:37 92
Student 3	2:57 100	2:25 95	1:47 100	25:50 20	22:55 65	23:25 85	56/0*	11:15 95	30:39 94
Student 4	2:01 100	3:25 100	5:37 100	39:23 90	42:57 85	32:02 90	56/0*	38:48 40	46:48 94
Student 5	1:47 100	2:05 100	1:53 100	53:53 90	56:05 85	35:56 90	41/0*	9:05 95	73:38 60
Student 6	1:38 100	1:51 100	1:47 100	48:04 15	71:11 95	31:32 90	41/0*	3:56 100	46:39 94

Table 2.   Proctored Exam Irregularities – QM3341

QM 3341 Business Statistics II – Term 2/05 Proctored Exam Answer Sheet Analyses				
QM3341 **Answer Sheets**	**Group A** **(Students 1,2,3,4)**	**Group B** **(Students 5,6)**	**Rest of Class**	**Historically:** **"similar test" -(same format, authors' test bank)**
Part 1 25 Multiple Choice (MC)	- Same 2 Errors - Same 2 erroneous choices	- Same 2 Errors (Same as Group A)	- No student missed both questions as A,B - No other pair had identical MC sheets	No pair had identical sheets
Part 2 5 Quantitative Problems	Virtually identical: - Answers - Layout - Detail - Errors - Omissions - Inclusions - Decimal place rounding - Wording (90%)	Virtually identical: - Answers - Layout - Detail - Errors - Omissions - Inclusions - Decimal place rounding - Wording (90%)	- None matched A,B - No other pair had matching answer sheets - No other student presented an answer to ANY of the problems which matched these students' responses in style or format	No pair had matching answer sheets

When confronted with the PE irregularities observed in QM3341, only three of the students responded. Two students, identified here as Students 1 and 2, vehemently denied "illegal" or wrongful activity and two immediately threatened lawsuits.   Those two students were also taking MGT3373 Operations Management in the DL format in Term 2/05 and their behavior in that course (Table 3) was similar to their behavior in QM3341.   Both submitted identical answer sheets for the multiple-choice portion of the proctored exam. Both submitted virtually identical answer sheets for the five essay questions.   When confronted with these additional irregularities, they voiced the same denials and threats of lawsuits as they did for QM3341.

Table 3. Proctored Exam Irregularities - MGT3373

MGT3373 Operations Management - Term T2/05 Proctored Exam Answer Sheet Analyses			
MGT3373 **Answer Sheets**	**Students 1,2**	**Rest of Class**	**Historically:** **"similar test" – (same format, authors' test bank)**
Part 1 25 Multiple Choice	- Same 2 Errors - Same 2 Erroneous Choices	- No student sheet matched A,B - No other pair had identical MC sheets	No pair had identical sheets
Part 2 5 Short Essay Questions	Virtually identical - Answers - Detail - Omissions - Inclusions - Examples - Wording – 90%	- None matched A,B - No other pair had matching answer sheets	No pair had matching answer sheets

Records from QM2241 Business Statistics I from Term 1/05 revealed that the same two students exhibited the same irregularities in quiz and examination performance in that course as well. They completed 1-hour quizzes in 2-3 minutes, completed the 2-hour final exam in five minutes and submitted identical answer sheets for both parts of their proctored exams. That term those irregularities escaped detection.

For QM3341 Students 1 and 2 had arranged to take their proctored examinations under the supervision of a specific university professor in the Business department at the Troy campus. They asked that proctor to allow them to take the examination together since they had developed "common notes" they wished to share. When that professor denied their request and offered instead to allow them to duplicate the notes so that each would have a copy, the students never returned to take the examination and went to another university official to serve as their proctor.

All six offending students were initially assigned failing grades for the courses in question. However, because the early attention over these violations of academic integrity focused upon the unreasonable assessment timings and possession of unapproved sources, there was concern that the open-notes policy for the exam might provide a legal loophole in a court of law. Consequently the grades were changed to ones determined strictly from "items submitted." However upon further review and investigation none of the students could explain the degree of similarity among their PE answer sheets, particularly on the quantitative and essay portions of the exam(s). These similarities could not be explained by simply having common notes, irrespective of their sources. Therefore, their final grades were administratively reassigned as failing and the six students were apprised of their rights to appeal their grades.

During the early stages of their appeals two of the students admitted to possessing unapproved materials. One claimed they all had copies of all the examination questions the authors had given in the past. Another admitted they had the textbook test bank that they found on an open website. Because the exam was given open-notes they claimed that they included these materials in their notes and therefore had done nothing wrong or illegal.

From an academic perspective common sense would dictate that examinations are meant to provide assessments of the student's understanding of the material being examined, not the extent or accuracy of their data bases, irrespective of the manner in which they were obtained. Additionally the assessments are meant to reflect the individual student's knowledge and original work without help from or collusive activities with others. Furthermore Troy University's statement of its Standards of Conduct clearly identifies these activities as specific violations. As a matter of policy the authors included in all of the course syllabi appropriate excerpts from these published Standards as well as recommendations for students to read the full set of Standards. Astonishingly, despite the fact that the behavior of the students cited was in clear violation of these published standards, they did not view their actions as infractions of academic integrity.

This case raises other troublesome concerns over the preservation of academic integrity particularly for courses offered in the DL environment. Students such as those observed in this case do not believe having an author test bank is "cheating." Disappointingly, despite clear copyright restrictions from the publisher, the textbook test bank for QM3341 was posted in its entirety on another university's website by an instructor in a manner accessible by the entire Web public. The offending students were brazenly defiant about their actions and use of materials available on the public Internet. They were willing to take their cases to the highest levels within the University, including the Chancellor of the University. In the end all the failing grades were upheld by the University and all appeals were denied.

Extent of the Problem – Examination of the Literature

For several decades the popular and academic press has published startling reports on the scope and extent of the cheating problem. Many reports suggest that the propensity to gain an unfair advantage in the academic environment begins at the elementary school level and grows increasingly more prevalent as students progress through secondary and higher levels of education (Slobogin, 2002; McCabe, 2005; ETS Research Center, 2006; Overholser, 1999; Vos Savant, 2006). The problem is pervasive and has

increased dramatically over the past 30 years (Harding, et. al., 2001; McCabe, et. al., 2001). Some of the shocking findings (Fellgurth, 2003; Smith, 2006) indicate:

a) In 1996 the American Psychological Association survey showed that 50% of undergraduates admitted to having cheated more than once.

b) In 1999 survey by Donald McCabe of Rutgers University indicated that on most campuses over 75% of students admit to some form of cheating.

c) A 2002 survey by McCabe fond that 74% of high school students admitted to cheating on a test or paper at least once.

d) A 2003 national survey found 41% of students sampled said plagiarism happened "often" or "very often"

e) Other national surveys show that cheating at colleges is on the rise and is occurring at both the undergraduate and graduate levels.

f) Other research reported an incidence rate of cheating of 40% among graduate students

As data storage, access, distribution and communication technologies have advanced so too have the sophistication of the methods by which offending students practice their deceptions (Conradson & Hernandez-Ramos 2004, Argetsinger, 2003).

Many investigators have found interesting correlations between the propensity to cheat and a multiplicity of factors that may constitute predictive variables in certain cases. The observed trends include; underclassmen cheat more than upperclassmen, students with lower grade point averages (GPAs) cheat more than those with higher GPAs, cheating is more prominent among fraternity and sorority members and athletes, students who perceive that peers cheat without getting caught are more likely to cheat themselves, younger students tend to cheat more than older students, and substantially less cheating occurs at institutions employing strong academic honor codes (Butterfield, et. al., 1999; McCabe & Klebe Treviono, 1997). Levels of mastery and extrinsic factors strongly influence cheating as do perceived social norms regarding cheating, knowledge of institution policy regarding cheating, and student attitudes toward cheating (Jordan, 2001). The research on gender as a discriminator for cheating has yielded mixed results and may necessitate secondary gender-related factors (McCabe, et. al., 2006; Ruegger & King, 1992).

Whatever the influencing variables, most research indicates that cheaters are generally less mature, less reactive to observed cheating, less deterred by social stigma and guilt, less personally invested in their education; and more likely to be receiving scholarships but performing more poorly (Diekhoff, 1996). Not surprisingly cheaters tend to shun accountability for their actions and blame their parents and teachers for widespread cheating, citing increased pressure on them to perform well (Greene & Saxe, 1992). Worse yet, society as a whole has become increasingly more tolerant and even accepting of the practice of cheating, often citing the need to survive in today's competitive environment as justification for that shift in attitude (Slobogin, 2002; Vos Savant, 2006; Callahan, 2004).

The new technology tools and distorted societal attitudes towards cheating make the job of maintaining academic integrity within the educational environment much more challenging. While interesting technological solutions, such as Troy University's Securexam Remote Proctor[TM] described below, are now being implemented, additional non-technology based strategies may be required to make the Distance Learning environment less vulnerable to today's sophisticated cheaters. For instance, some research has found that Universities that have implemented a Student Honor Code have experienced decreased levels of cheating among their student bodies (McCabe, 1995; McCabe, et. al. 2001; McCabe, et. al., 1993; Gray, 1998). The research suggests that the long-term solution to curtailing academic cheating must include well-defined standards, a strong sense of accountability and properly focused "community" attitudes, above and beyond complex high-technology attempts to establish a secure testing environment (McCabe & Klebe Trevino, 1993; Gray, 1998; Henderschott, et. al., 1999; McCabe & Pavela 2000). In order to minimize the unethical students' inclination and ability to cheat, faculty, administration and the responsible student population must work together. Establishing a proper

climate to achieve this goal must include unwavering support by the administration of the faculty efforts to maintain ethical standards for academic integrity (Heberling, 2002).
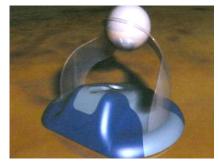
One Approach – Troy University

Troy University has historically pursued a multi-faceted approach to curbing academic dishonesty among its student body.   The approach included traditional methods for controlling the examination environment, "policing" the work and behavior of its students for both in-class and take-home assignments, and instilling a sense of honesty and ethics through a well-published Academic Code and Student Honor Code. These practices were also incorporated into its Distance Learning course offerings and modified as the delivery medium required. The issues that these techniques commonly addressed include:

a)   Verifying proper student is taking the exam
b)   Copying others work
c)   Receiving assistance from others
d)   Using unapproved crib notes, electronic devices, storage media
e)   Using unapproved materials such as copies of instructors past examinations
f)   Helping others commit illicit acts
g)   Collusion

Quite often this broad-based approach included the use of proctored examinations with the requirement for the physical presence of a pre-approved human proctor.   Many of Troy University's DL courses currently require at least one proctored examination be used for student assessment.   Each of these proctored examinations imposes predictable logistical, scheduling and security restrictions, particularly in the DL environment where students may be distributed in remote locations and vastly differing time zones all over the world.

Securexam Remote Proctor^{TM}

With the incorporation of new technologies into its strategies to prevent dishonest behavior, Troy University has adopted a blended approach to DL courses within its eCampus.   In addition to its efforts to establish a University-wide culture of honesty and ethics and in collaboration with the Cambridge, Massachusetts based company, Software Secure, the University has developed a set of hardware and software tools to replace the need for human proctors and the associated logistical and implementation issues.   This approach includes a hardware/software solution called the "Securexam Remote Proctor^{TM} (Johnson, 2006)."   The system will allow Troy faculty members to monitor online test takers and provide students the flexibility to take exams anywhere and at any time.

The hardware module connects to a computer's USB port and does not contain the student's personal information, thereby allowing sharing of the hardware. The target cost for the remote proctor system is in the order of $100. A fingerprint sensor is built into the base of the unit, and instructors may specify the time and frequency at which students must identify themselves before and during the examination. The system incorporates a small video camera with a 360-degree field-of-view and an omni-directional microphone to detect unusual or unapproved activity. When such detections occur, alerts are generated and suitable prompts may be sent to the instructor and appropriate data recorded. For these detections real time audio and video will be remotely recorded for viewing and processing at any time. Securexam Remote Proctor ^{TM} will include software tools that control student activity so that students taking exams cannot access any unauthorized material online or use any other software while taking the exam. This state-of-the-art system is completing its final test phases and is being implemented in several of Troy's eCampus courses in the fall of 2007.

By creating computer-based accountability, Troy University is taking a proactive approach to ensuring online academic quality while making their online programs and courses available to students, worldwide,

meeting associated government mandates and creating the proper framework for maintaining the highest standards of academic integrity and fairness.

While many academics are excited about potential for these technologies to suppress the cheating problem, others are concerned over possible ethical issues, like unwarranted intrusion into the lives of individuals. There is currently little published work on the effectiveness of such automated proctoring systems and the overall impact of the additional requirements they impose upon DL students and instructors. Troy University is one of the first to adopt and integrate this technology-rich environment into its distance learning offerings.

Although interesting technological solutions, such as Troy University's Securexam Remote Proctor ^{TM}, are now being implemented, they will likely require non-technology based, companion strategies to make the Distance Learning environment less vulnerable to today's sophisticated cheaters. In addition to this state-of-the-art set of hardware and software tools for controlling the testing environment, Troy University has launched an eCampus-wide project to redesign all of its eCampus courses in a phased sequence over the next two years. Course Redesign teams, consisting of subject-matter and instructional-design experts, have been formed to conduct the course redesign efforts. The ultimate goal is to have all eCampus courses designed to common delivery and student learning objective (SLO) standards. Each Redesign team will determine a common textbook to be used for all sections of each eCampus course as well as common "course templates." The structure and detail of each course template will be determined by the corresponding course Redesign team, depending upon the nature of the course material. Part of the redesign effort will include restructuring and redesign of course quizzes, examinations, projects and assignments to fully exploit the Securexam Remote Proctor ^{TM}, eliminating all human proctors and conducting all assessments online.

Summary and Conclusions

These experiences have led to the following observations and comments. Surprisingly, even without the open-notes policy formerly used in the proctored examinations for the DL courses of the case study, there are real concerns that the Standards of Conduct may not be defendable in court of law. It is clear that:

1) Students who wish to obtain an unfair advantage over other students are now armed with new and interesting opportunities, tools and resources with which to obtain that unethical edge.

2) These new technologies and tools make the collective job of the University, instructors, course delivery system designers and publishers much more difficult.

3) In today's society students are more apt to wield a weapon they believe is omnipotent – the threat of lawyers and lawsuits. They have been conditioned to believe that with such threats the university will ultimately back down.

4) In the face of these difficulties much more thought, time and energy must be spent in designing DL courses to maintain academic integrity.

While the challenge to protect Academic Integrity is common to course offerings in both the online and traditional (in-class) environments, courses presented in a purely DL environment present special concerns for implementation of protective measures. Anecdotally this case raises several pressing questions over the preservation of academic integrity particularly for courses offered in the DL environment:

1) If a student has resources that give him/her an unfair advantage over other students, does this constitute unethical behavior, violations of the University's Standards of Conduct, or cheating? Is a student obligated to reveal the possession of such sources when queried by the instructor? How do these facts relate to the student's Honor Code?

2) If a student obtains instructor materials, such as the authors' test banks for the course textbook, which give him/her prior knowledge of examination questions and therefore an unfair advantage over other students, does this constitute unethical behavior or cheating? If this material can be

obtained from an open website does this change the fact that their possession is a clear violation of the University's Standards of Conduct?

3) What degree of collusive activity in examinations, if any, is acceptable? To what level of certainty must an instructor prove that such collusion did in fact occur? Upon whom does the "burden of proof" fall? Are the standards for burden of proof the same in academic cases as those in a civil court of law?

4) What is the appropriate statement of the University's Standards of Conduct? How can such dishonest activity be controlled in the DL format? Will purely technology-based solutions be sufficient?

5) In today's ever expanding hi-tech environment is it possible to write a statement of the Standards of Conduct which is comprehensive and which will withstand the scrutiny of attorneys in a court of law? What are the bounds of "academic freedom?"

6) How must these standards be communicated in a course syllabus? Obviously it is not possible or practical to include in a reasonable course syllabus an exhaustive list of possible means and mechanisms an unethical student may employ to circumvent the Academic Code. Do these omissions from a course syllabus constitute a legal loophole that allows students to behave in an unchecked manner?

7) What are the legal implications? To what extent does enforcement of these standards put the University at risk for lawsuits? To what extent are instructors personally liable if his/her actions to enforce the Academic Code are taken are without malice, prejudice or bias and not conducted in an arbitrary or capricious manner?

8) Have student and society attitudes toward academic integrity changed? If so, at what point in a student's development and education does this change occur? What factors influence these changes in attitude?

9) Are there differing views of academic integrity among the student, academia and working professional populations?

10) What are the special implications of these issues on courses taught in the DL format? Are DL students more likely to commit actions in violation of the Academic Code? If so, what factors influence that disturbing trend, if any?

Troy University's multi-faceted approach to controlling the Distance Learning testing environment using Securexam Remote Proctor ™ to replace the human proctor at the testing site combined with its well-published Academic Code and strong Student Honor Code and implementation of its redesigned course structures and templates is a fully integrated attempt to enhance the academic integrity of its online programs. The overall effectiveness of this approach is yet to be determined and will be closely scrutinized as students with high-tech tools make new assaults upon eCampus academic integrity. More research is required to determine if this approach will be successful, particularly for quantitatively intense material. In the example cited in this paper the evidence used to conclusively prosecute the offending students was, in large part, based upon the detailed analysis of hand-written answer sheets, comparing the detailed quantitative and qualitative content. The analysis included factors such as the extent and nature of the quantitative detail presented, specific material included or omitted in each student's responses, the nature and precision of the numbers displayed, and the totality of the content compared to other students' answer sheets. Designing online examinations which provide this level of detail and diagnostic capability will be yet another challenge for this delivery medium.

Future Research

In order to answer the many pressing questions cited above, the authors propose the following plan for future research:

1) The authors will conduct a review of Troy University's history with respect to violations of its Standards of Conduct, sorted by appropriate demographic factors. These experiences will be

compared to those of other universities by searching the appropriate literature and surveying institutions that wish to contribute. These efforts will attempt to identify significant trends in academia's views of ethical behavior, if any.

2) The authors will expand the literature review and conduct appropriate surveys to more fully understand the extent of the problem in both online and traditional environments and how widespread the propensity of students to launch or threaten lawsuits is throughout academia. It would be desirable to determine how likely universities are, in the face of such actions and threats, to "back down" and allow this dishonest behavior to go unchallenged.

3) Through multi-university collaborations with other researchers in the field, the authors will compare various approaches to establishing effective (technology-based and non-technology based) solutions. .

4) As the Remote Proctor system is fully implemented for all its eCampus offerings, statistical data will be gathered to determine the impact, if any, of the introduction of the technology into the DL environment.

5) A set of surveys will be used to determine differences in views of academic integrity between the current student and instructor populations. The survey will include students and instructors in both the traditional (in-class) and Distance Learning environments. The survey will identify those acts that both populations consider to be unethical, violations of the Academic Code, or cheating.

6) Statistical analyses will be used to identify meaningful correlations and trends in student and instructor views sorted by appropriate demographic factors (e.g. age, sex, university major, membership in fraternities or sororities, participation in athletics, employment).

7) Local businesses will be surveyed to determine employer attitudes towards academic integrity. The survey will include sufficient demographic information to determine which factors influence employer attitudes towards ethical behavior, cheating and academic integrity. These results will be contrasted with those obtained from surveys of academia.

8) Statistical analyses will be used to identify significant trends and changes in an individual's attitudes as he/she transitions from pupil to university student and ultimately to working professional.

9) Based upon this research, potential revisions to university policies toward Standards of Conduct, Academic Codes and Student Honor Codes will be formulated, as well as corresponding adjustments to course syllabi and student handbooks, particularly for DL courses.

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