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Teaching, Learning and Academic Integrity During the Pandemic

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Abstract:
The COVID 19 pandemic is responsible for instructional delivery changes in the higher education environment. The forced closing of many traditional classrooms, and teaching virtually, is taking the transfer of knowledge to students into a different realm. Adjustments must be made by students and professors alike to ensure that students continue to learn. However, as institutions transition away from the face to face classroom setting to the virtual platform, opportunities for cheating increases and changes to teaching and assessment should be implemented. Included among the innovations and adjustments must be testing and assessment methods that will hopefully guarantee learning but minimize the opportunity to cheat and ensure academic integrity among students.

Twenty-twenty (20/20) is the number associated with normal vision. Of course, there are other meanings analogous to the number 2020. The number can also be linked to spirituality, love, and luck, both good and bad. Each of these associations are certainly valid and serve the purpose for which it is associated. However, 2020 has also now been linked indelibly to the year that the pandemic COVID-19 brought havoc, tragedy, fear and economic ruin to all parts of the world. The veins of this ravaging, invisible monster permeated all facets of life leaving behind destruction, instability and effects that will endure for many years.

No sector is immune from its reach. Although some businesses profited from the pandemic, most organizations, individuals and employers were negatively impacted. An example of an area that suffered greatly was higher education. The model of the operations of higher education was changed in an instant. Schools were closed, classes went online, activities ceased, employees were terminated, and enrollments were left in flux. But in most cases, despite it all, classes were expected to continue, and many administrators decided that those classes would be conducted virtually. With that mandate, the delivery of the educational model changed. Face to face instruction was minimal or non-existent. But the quality and effectiveness of teaching and the learning goals were expected not to change.

Although before the pandemic there were many online programs at various institutions, the problems at some universities with this new instantaneous required model were many. Among them were faculty and students who were not prepared for this type of delivery, or who had chosen not to participate in an online program but was now forced to do so. Some students did not have access to computers or lived in areas where there was poor technology infrastructure. In addition, a great many students did not like the online classes because they performed better in a face to face setting. Overnight, the basic educational tenets of reading, writing, arithmetic were joined by a new member called connectivity.

Furthermore, with the proliferation of online classes many institutions are faced with security threats and cyberattacks. There have been a number of instances where classes on Zoom have been hacked and there is a danger of data breaches which threaten student privacy. A study by Microsoft Security Intelligence shows that in a 30-day period the education industry accounted for 61 percent of the 7.7 million malware encounters. An example of how educational institutions can be affected was shown when one university had its online exams disrupted. The advice that cybersecurity experts share is that universities need to review their cybersecurity programs and adopt measures to ensure their online learning is secure (Kaspersky, 2020).

An additional hurdle was thrown into the mix when it was discovered that there was a security concern with examinations being compromised by the availability of information being provided by various websites such as Chegg,Wofram Alpha and Slader. Students were accused of using the sites to access questions that were posted on exams and other assignments. For example, Gidman (2020) states. “Faculty at Texas A&M say they became suspicious after noting the finance students answered questions on their own online exams faster than they could have possibly read them” (p.1). She further stated that Texas A&M University saw a 20% increase in academic dishonesty during the semester.

But cheating was not limited to one or a few universities. According to McGee (2020), the University of North Texas saw a 20% increase in cheating, Texas State University had a 33% increase and the University of Houston's cases doubled. At Georgia Tech an unknown number of students allegedly used the digital website Chegg to complete their physics final exam. Even the honor code at West Point was violated when 73 students were caught cheating on a remotely administered calculus exam (Shepherd 2020). And, at Boston University, students in general chemistry classes used the site to obtain answers to quiz questions.

To further illustrate the problem Newton (Forbes, 2020) warned, "That the migration of thousands of classes to a virtual format would test academia's ability to keep students honest. Pandora's box is open. The chat rooms and Reddit threads are already overloaded with students sharing their cheating plans and hacks" (p.1). Examples of cheating included a group of 20-40 students running a 20-foot cable to a shared computer where a tutor could answer the questions, using the phone to Google answers or to talk to someone in the room, hiding someone under a blanket under their desk, hidden microphones, and having access to multiple phones. Other cheating methods included the use of dual monitors, and taping class notes on a wall. Behaviors such as these examples are creating a major challenge for the academic administrations and has led to an increase of a business opportunity for the online test integrity market.

In an interview with Scott McFarland, the CEO of ProcturU, the largest company of the online testing integrity companies, it was discovered that they supervised more than 2 million exams in a one-year period; and, their annual income had reached into eight figures because of the demand. The company uses live proctors, testing monitors, and the student's computer camera to see if a student is using notes or talking to someone. In addition, the they can restrict computer features and the ability to open browser tabs.

However, it's clear that the real solution lies not with solely monitoring the students, rather it lies with the system which provides the opportunity and necessity to cheat. Everything has changed except the delivery methods of many exams and assessments. Traditionally, in many classes, professors provide lectures of the classes online, post multiple choice exams and the students have a certain amount of time to complete them. Unless the professor arranges for the students to keep their cameras on during the exam, there is no monitoring of the student. Even then, there is no guarantee that the person taking the exam is the student and other problems exist which have been mentioned above. Thus, the avenue to "seek" assistance or cheat has been provided by the system.

To solve the problem, and remove the temptation to cheat, professors should change the methods and delivery of assessments. It is to be noted that presently there are multiple choice testing programs which provide a large pool of questions where the questions are randomly presented to students. The tests are timed, no exam will be the same, and it very difficult for students to cheat. But even then, the opportunity to cheat still exists. Camila Roberts, the director of Honor and Integrity System at Kansas State University proposed that faculty should change their tests and quizzes, give them more frequently, and ask more essay questions instead of multiple choice to deter cheating (Rajkovic, 2020)

Those suggestions should go even further. But first, it must be reiterated what the goals of education, especially in light of the pandemic should be. At the forefront, the leading goal should be the transfer of knowledge to ensure students are learning. Of course, there are other goals, such as creating problem solvers, and teaching ethics, but transferring knowledge is the foundation that other goals must attach. To accomplish the transfer of knowledge, efforts must be made to relate and communicate to students differently. This may require more time and effort from the faculty, but the effort will be worth it if it helps to ensure that the students obtain the knowledge that professors are trying to convey. This paper discusses the changes in methods and assessments made in several classes in an effort to try something different during the online frenzy caused by the Covid-19 virus.

After the pandemic struck, the professors in the Legal and Regulatory Environment classes took the challenges head on and implemented several changes that would transfer the knowledge and would reduce the atmosphere and opportunity to cheat. Traditionally, the class is taught face to face, examinations are mainly multiple choice, and some essay questions are given for various assignments. Basically, the class was taught in a traditional manner.

Unfortunately, there had been an earlier experience with class disruptions. Before the pandemic, numerous classes were cancelled during the previous semester because of the weather. This occurred during finals week. As a result, some students took their finals online while others took the exams in class after the weather improved. There was a total of 120 exams administered with approximately one half of the students taking exams online. After analyzing the exam scores, it was clear that the students who took the exams online scored significantly higher. Thus, when the pandemic occurred, and all students would be tested and graded online, it was obvious that some changes had to be developed in teaching and the assessment of the student's performances.

Several issues had to be addressed. First, there had to be an acknowledgement that students who take exams online have access to notes, books and in some cases assistance from peers. Next, there had to be an acknowledgement that academic dishonesty, or cheating, possibly occurs not only on online exams, but also during face to face exams. Cheating in higher education is not new. Parnther (2020) listed several studies over different decades which showed that the number of students that admitted to cheating ranged from 66-82%. Similarly, with regards to contract cheating, Gorenko (2020), reported that approximately 31 million students admitted to buying a previously completed university assessment which represents 15% of university students who potentially cheated in one area or another.

With the onset of the Covid-19 pandemic mandating that the masses of students be taught virtually, the opportunity for academic dishonesty has grown. Therefore, to combat this opportunity there must be changes made by the faculty on how the classes are taught and grades assigned. What must be done during this unprecedented time of the pandemic is to remove the necessity and incentive to cheat or encourage academic dishonesty.

The process to develop the change should be based on the goals to transfer knowledge, monitor learning, while ensuring an effective assessment of the students. This endeavor may result in higher grades and be a catalyst for the dreaded infallible concept of grade inflation. But if it

does so be it, it should not be a concern. The concern should be ensuring that the students learn. And, it should also be mentioned that several universities took grades into consideration at the beginning of the pandemic when they allowed students to choose if they wanted to be graded in a P or NP system or with the traditional letter grades.

The first challenge was to find an alternative to multiple choice exams, so the concept of project-based learning was examined. We were drawn to the website of Worcester Polytechnic Institute where the following is posted: "What's the most effective method of delivering a meaningful education to students? How can colleges and universities ensure that their students are ready for life after graduation, to tackle new challenges, passions, and problems"? Research suggests that active learning in higher education, as well as repeated exposure to high-impact practices such as project-based learning is the answer (WPI, 2020). PBL involves changing the traditional academic roles that students and faculty may be used to; and, students take responsibility for their own learning by tackling real, tangible problems through open ended projects (PBL 2020). It is a different method and some researchers encourage teachers in higher education to adopt project-based learning because it allows students to test, and achieve their ideas in the way they want, which promotes their innovative competence. PBL is seen as a tool to eliminate the gap between what students learn, and what they need in the workplace. Summarily, project- based learning would give students the opportunity to participate in real problem solving and knowledge construction in authentic, professional contexts (Guo, et al. 2020). Accordingly, PBL became an alternative to the traditional method of teaching the classes which are the subject of this research.

The researchers were also faced with the concern about reducing the temptation to cheat with the goal of creating the spectrum where students could best learn. Therefore, in addition to PBL other types of assessments were also viewed as an alternative. There are no perfect assessment methods, but the pandemic brought attention to the potential weaknesses of many multiple-choice exams. However, alternative assessment does not mean that multiple choice tests should be eliminated. Rather, other measurements, which can assist in the expanding the learning curve should be encouraged to reach the educational goal and the requirements of the students. Alternative assessment is one such method. This kind of assessment is a collaborative approach which allows the interaction of students and teachers in the learning process. (Barootchi & Keshvarz, 2002. In a sense there should be a goal to move beyond rote learning and memorization and involve students in problem solving which can mimic real world situations (Nasab, 2015) (172).

An example of an alternative assessment model was examined from information presented at the Center for Teaching and Learning at Brigham and Young University where their assessments are used to determine what students can and cannot do, in contrast to what they do or do not know. Their program offers three types of assessments, diagnostic, formative and summative. The goals of each range from determining student's strengths and weaknesses, frequent assessments and feedback, to measuring student achievement of the course content. At the BYU Center they demonstrate how to grade with a rubric, create assignments, and how to provide online feedback to students. They also list the advantages of alternative assessments which includes the means to

assess valued skills that cannot be directly assessed with traditional tests, an alignment with established learning outcomes and a focus on student performance and quality of work performed by students (BYU Center, 2020).

Thus, based on the above models and other research it was decided to merge project based learning and alternative assessments with our teaching methods instead of the multiple choice exams, which in the online setting, are providing the opportunity for students to cheat on exams. At the same time, the alternative assessments would hopefully provide a greater opportunity to transfer the knowledge to the student which, after all, was the desired outcome.

The classes that were the subject of this study were taught online via BlueJeans. The first class was taught during a summer session with a small number of students (8). The changes were easy to implement. However, during the fall semester there were four classes with 125 students and a similar number in the spring semester. The classes were conducted with some traditional methods such as lecturing, video presentations and written assignments. The outside assignments were designed in a manner that were also based on project learning. In order to facilitate communications students were given a phone number which could be used to call the professors or make contact via Facetime, or text messaging.

To complete the assignments, the students had to read, research and write. It was not easy. The timeframe to complete the assignments ranged from three days for the first, two days for the second, one day for the third, and one hour for the final assignment. Furthermore, a group project was assigned that required each member of the group to read various sub-subjects on a topic that was provided by an online legal site. That site awards a completion digital badge certificate if the work is completed and the exam is passed. To pass the exam required each member of the group to participate. Some passed on their first attempt, while others did not, but eventually all were successful.

Many of the students, but not all, formed study groups and chat rooms and each could contact the professors for guidance at any time. To ensure that all work was not group work, some of the questions were individualized and each student had different cases to summarize and apply the legal and business principles. After the assignments were completed assessments were made and grades were assigned to each student. The result was knowledge of the subjects was transferred, students learned and the necessity to cheat or partake in academic dishonesty was significantly lessened.

After grading all assignments, it was determined that most students did extremely well in the classes. In addition, after the completion of the exams, students were randomly chosen to give explanations of their answers. If they could not explain or could not respond correctly, deductions were taken from their test scores. This method ensured that at a minimum they had to read and be prepared. Of course, there were those who did not do as well as their fellow students. After examining the grades of those students who did not perform as well, it was discovered that they did not submit assignments, failed to attend classes and obviously did not prepare for the class.

Mixing project based learning and alternative assessments with traditional teaching methods presented a challenge. However, with challenges comes opportunities. The overall success of the

changes in delivery and assessment required more preparation and was extremely time consuming. For instance, when grading multiple choice exams, with using a scantron, tests can be graded, and scores recorded, in minutes. Similarly, online multiple-choice exams which are given on Blackboard are graded and recorded instantly. Conversely, the classes that were the subject of this paper required the reading of a large number of exams, assignments and projects which was extremely time consuming and took several days to complete. It is to be noted that the professors did not have teaching assistants which could have reduced the extremely large workload. Regardless of the challenges and the implementations and assessment method changes, the crucial issues that had to be addressed were: (1) did the students learn, (2) was the necessity to cheat reduced, and (3) what were the thoughts of the students about the methods that were used.

With regards to the success of the students, the final grades showed the overall student performance increased as compared to similar grades from previous semesters where traditional teaching methods and assessments were used. Comments from students were overwhelmingly positive, even though the class assignments, particularly the exams, required extensive reading and preparation. The class projects were met with enthusiasm and seemingly brought a degree of togetherness to a group of students who were otherwise physically separated, and some had never met. It is our belief that the change in instruction, and projects led to a more concentrated effort by the students. Being allowed to use the available resources, group work, and open communications removed the necessity to cheat for the most part. With appropriate resources the methods and assessment that were used could be tailored for any class, whether it be math, science or the humanities. Sometimes change can be good, other times it can be bad. However, with the mass onslaught of online classes, to not change or adapt is ignoring a problem that we all know exists.

Conclusion

The concern about, and the proliferation of, cheating by some students in the higher education environment cannot be understated. Proactive steps to curtail the growing assault on academic integrity have now required administrations to develop counter measures. However, just as much effort should be made to ensure that the transfer of knowledge to students is being accomplished. Cheating is not a new phenomenon but with the proliferation of online classes caused by the Covid-19 pandemic, opportunities for students to cheat have dramatically increased. Even with the numerous safeguards that have been designed to prevent cheating, the practice still exists. Thus, the response should be to remove the necessity and desire to cheat. Cheating is a detriment to academic integrity and should be discouraged. But the issue at hand is two-prong. On one hand cheating must be addressed, on the other, learning must be ensured. Procedures must be implemented that ensure that students are learning and that can be accomplished by implementing different methods teaching and corresponding assessments. No testing or assessment is perfect and alternative assessments can significantly increase the time and effort of the professor, but the costs are worth it if the outcome of student success in the goal.

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