THE SUCCESS OF PROCTORING IN AN ONLINE CLASS

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ABSTRACT

In this paper, we will examine the success of proctoring in an online class. The IS Success/Impact Model will be used as the theoretical foundation for this study. We have chosen this model for our study because within this framework we can measure our four distinct but related issues such as a) Perceived cheating behavior improvement of students, b) Instructors’ confidence enhancement, c) Students’ acceptance of proctoring, and d) Faculty acceptance of proctoring. The data will be collected via the survey method. This study will have some significant contribution in that it will take a holistic approach to ensure the success of proctoring in an online environment.

INTRODUCTION

Since 2010 online course enrollment has increased by 29 percent. Currently, 6.7 million students or roughly one third of all college students are enrolled in online courses (Redford, 2011). Online course is different from traditional face-to-face courses in case of their format (Ernst, 2008). Traditional courses provide students and teachers the scope of face-to-face interaction opportunities. For example, students can engage in social activities and get a real-time environment for more active learning. The format itself makes the online courses more challenging to students as well as instructors (Danesh et al, 2015). Students not only require technical proficiency but also some non-academic skills that make the online courses all the more challenging. Students must be able to manage time, stay organized, and be more conservative for managing the integrity of online courses.

For the last several years, significant research has been conducted on the effectiveness of online vs. face-to-face class. Most of the research concludes that the effectiveness of both online and face-to-face courses is same (Wagner et al., 2011). However, research identified a higher probability of cheating in online courses (Wagner et al., 2011). As the online courses are growing rapidly, the means of cheating are also growing. Researchers investigated different ways of cheating in online courses (MacNabb and Olmstead, 2009). Currently, students cheat in online courses by their mobile phones, stealing questions from the actual exams, by collaboration, using unauthorized sources in actual exam and in assignments, using YouTube and social networking sites.
Most faculty want an integrity mechanism that can stop students from cheating and fulfill the purpose of learning in online courses (Joshepson and Mertz, 2004). Faculty are not taking this matter lightly, as cheating spoils the credibility of the providers and disproves the effort to establish that online course can be as effective as a face-to-face class. As technology is making cheating easier in online courses, faculty are trying to respond to the issue more seriously than ever before. It is true that dishonest students will always try to find a way to cheat in spite of the consequences, but relentless strategies from educators to discourage students from cheating are ongoing (Scanlan, 2006).

Experts provide a lot of suggestions on how to stop cheating (Bedford et al., 2011). Some of them have been implemented on different colleges and universities, and the results are encouraging. To mitigate cheating, many universities have focused on creating a culture for online courses that can be useful in the long run. The Honor Code system, an indirect way, is to have students vow to avoid cheating in online courses (Zwagerman, 2008). This strategy assumes that students will be honest about their academic achievement, and all students are required to sign an honor code. As online classes teach in virtual environments, right technology implementation is important to keep the integrity. Right now, technologies that are available to stop cheating in online courses are plagiarism checking software, fingerprinting checking software (used in GMAT, GRE and LSAT exam), Keystroke Verification Software, Respondus Lockdown Browser Application, Algorithmic Test Bank, computerized proctoring, and human proctoring (Michael & Williams, 2012).

To stop cheating in online courses, human proctoring is one of the better solutions to enforce integrity (Michael & Williams, 2012). Human proctoring is done step by step, where a human proctor can check the authenticity of a student and block ways to share the exam questions to other students (Cluskey, 2008). For example, before starting the exam, the human proctor asks for 360 degree span to observe who is in the exam room. This step insures that no two students sit together and if two students sit together, one student cannot help the other student. Secondly, it is not possible to keep any crib notes or books during the exam, as human proctor asks to observe the table before the exam. Thirdly, the human proctor does not allow keeping any copy of questions and answers and the exams are proctored in blackboards or other course management systems. This again prevents the uncertainty that one student can share the exam documents through screen shot or copying. Fourthly, the human proctor only allows valid identifications, which insures that no one is taking the exam for another person. Lastly, the whole exam session is observed and recorded, and if anything suspicious is found, necessary steps are taken by the human proctor.

Currently, there are several types of online proctoring services in the market: Software Secure Remote Proctor, Remote Proctor Now, Kryterion, Kyterion OLP, Proctor Cam and Proctor U (Michael and Williams, 2012). Software Secure Remote Proctor requires students to participate in biometric verification and visual verification to log on to the testing site. Captured videos are uploaded, and instructor may view the videos to determine if anything happened (Bedford et al., 2011). However, are those proctoring services really curbing the cheating problem? As proctoring services are relatively new in the market, there has not been enough research conducted on their effectiveness to stop cheating. Proctoring service provides some innovative solutions in a package that have the justification to influence the behavior of students toward cheating. If proctoring services improve the confidence among the instructors that proctoring
actually maintains the integrity of the online course, the cheating problem will be less of a concern. The purpose of our study is manifold: 1) to identify the effects of proctoring in an online class on cheating behavior of students; 2) to measure the enhancement of confidence of instructors regarding the role that proctoring plays in maintaining academic honesty; 3) the student acceptance of the different features of the proctoring system; and 4) the faculty acceptance of the use of the proctoring system.

THEORETICAL FOUNDATION

The IS Success/Impact Model will be used as the theoretical foundation for this study. The individual and organizational impact of technology-based services have gained much attention in the IS research journals during the past several years. Several variations of the IS Success/Impact model have been used to explain and predict IS Impact. As per this model, the success/impact of an Information System is measured in terms of 1. Individual impact – influence on the individual capabilities and effectiveness, 2. Organizational impact – influence on the organizational results and capabilities, 3. Information quality – the quality of the outputs of the system, and 4. System quality – the performance of the system from the technical and design perspective. Other two aspects are Use and User Satisfaction. We have chosen this model for our study on the success of online proctoring systems because within this framework we can measure our four distinct but related issues such as a) perceived cheating behavior improvement of students, b) Instructors’ confidence enhancement, c) Students’ acceptance of proctoring, and d) Faculty acceptance of proctoring.

THE RESEARCH MODEL

The research model to examine the success of proctoring in online courses is presented in Figure 1.
The IS/Impact Success Measurement model is explained next. In the effectiveness and influence level, an information System has six distinct categories or aspects: System Quality, Information Quality, Use, User Satisfaction, Individual Impact, and Organizational Impact (Deleon & Mclean, 1992). In our paper, we are using the proctoring tools and mechanism as an Information System where output can be captured through analyzing the effectiveness and influence of proctoring on students and course instructors.

**Perceived cheating behavior improvement of students**

In a hypothetical situation, Mr. X is a student of an online E-commerce course in which it is mandatory to attend the weekly discussion, quizzes, assignments, and final exams. Mr. X logs in to the course site only once a week to attend the discussion and to work on assignments. For the exam, he depends on his friends who have already taken the exam. Before the exam, he studies the materials provided by his friends and during the exam he copies from his question banks and notes. He rarely opens the book and maintains the honor code. After the final exam, Mr. X gets
an A in that online course. At the same time, Mr. X is engaged in a face to face course where he does not get any help from friends, does not get any scope to copy during examination and has to work diligently during the semester. Although Mr. X can claim that he works hard for the face to face course, getting an A would be difficult for him.

This hypothetical situation is without proctoring in the online course. We cannot blame only the criminal mindset of students who have engaged in cheating in online courses. There are flaws in the communication mediums of online courses. Without proctoring in an online class, it would be easy for Mr. X to copy during exam and to have the copy of assignment from friends.

Use of proctoring in an online class could stop Mr. X from cheating during exam and take unfair advantage to achieve good grade in online course. We will examine Information Quality and Individual Impact aspects of proctoring on showing how proctoring has improved the perceived cheating behavior of students. We will measure the Individual Impact and Information Quality through multiple attributes such as positive/negative experience, attitude toward exam, learning, diligence, and individual productivity.

Mr. X may have positive experience while taking exam without proctoring but proctoring can change the experience to negative if Mr. X keeps the same mindset during the exam. Attitude towards exam can be influenced by using proctoring during the exam. Proctoring can create extra vigilance for student as there is little scope for cheating. Thus proctoring forces students to learn, to be diligent during the exam and improves the individual productivity. Individuals have to go through academic books and study as in a face-to-face class to make better grades in the exam.

**Instructor confidence enhancement**

Survey conducted by Dennis Berkey and Jay Halfond (2015) on “Cheating, Student Authentication and Proctoring in Online Programs” suggests that eighty four percent instructor concurred that student dishonesty is a significant issue in an online course. Instructors feel less motivated when they observe that academic integrity of an online course is compromised by students who take unfair advantage in exams and assignments (Rozycki, 2006). Honesty of students is a prerequisite for the credibility of the online program (Berkey and Halfond, 2015). To keep students honest in the online courses, instructor needs to track the suspicious activities and monitor the exam environment. Also, instructor needs to insure that students are not using the unauthorized materials during the exams. But to an instructor, it is too difficult to track everyone in an online environment. So meaningful technology such as proctoring in an online course affects the course instructor to successfully deliver the learning environment and keep the academic integrity. The success of proctoring much depends upon whether course instructor can accurately track the suspicious activities of students, get the live report, and monitor the test environment.

**Student acceptance of proctoring**

The proctoring market is developing rapidly with new entrants, acquisitions and rapid development of cutting-edge ID verification technology (Alderson, 2015). With the development of technology, students are getting flexible exam schedule, immediate technological help from proctoring vendors and real time exam environment. We will examine the System Quality,
Information Quality and User Satisfaction features from the IS/Success measurement model in the light of student acceptance of proctoring. Proctoring is not a mandatory academic requirement for all online courses. As students are the main customers of the proctoring service, without students’ satisfaction of this service, proctoring will not be in the market in future. Most of the online proctoring vendors in the market now provide a lot of services that matter to students such as interaction with test taker through live chat, canned messages, live instruction, session review, program customization, specific aids, real time data forensics, compatibility with the students’ operating systems, alerts, working both with external and internal camera and so on. The success of proctoring depends on how students are getting most of the benefits of the technology without fearing the lack of technological knowledge. The measurement of students’ acceptance of proctoring will be established through analyzing the multi-variables such as flexibility, authentication, and availability of recorded materials, accessibility, and technical support.

Faculty acceptance of proctoring

According to IS/Impact measurement model, organization impact is an important aspect for measuring the success of information system. In our study, we have considered proctoring to have a boarder impact on faculty, who are ultimately adopting proctoring services to maintain the integrity of online courses. Faculty not only consider proctoring as a tool to deter students from cheating but also consider costs, proctor motivation and training, collusion risk and related research. Also timely report regarding cheating is important for faculty to provide immediate response. Instructors are aware that even though the adoption of proctoring is actually creating extra expense for students in online courses, it is also providing the students with the convenience of test taking from home (Bandyopadhyay, Barnes and Bandyopadhyay, 2015). So, through the use of proctoring, instructors are providing values to students by allowing them to focus more on studying and learning. The measurement of faculty acceptance of proctoring will be established through analyzing the multi-variables such as flexibility, reliability, authentication, and availability of recorded materials, accessibility, and technical support.

THE RESEARCH DESIGN

The data will be collected via the survey method. We will seek students’ responses to know whether proctoring is a real defense against cheating behavior, and if it has improved students’ perception of cheating in online courses. We will also gather information on student acceptance of different features of the proctoring system. Faculty members will also be surveyed to find out whether proctoring has any impact on their concern regarding maintaining academic honesty in online courses.

CONCLUSION

This study will have some significant contribution in that it will take a holistic approach to ensure the success of proctoring in an online environment. The overall impact of proctoring
services on student cheating behavior, on faculty concern about maintaining academic integrity, and on student acceptance of the features of the proctoring system will be considered. Additionally, the importance of stringent university policies to prosecute violators to bring integrity in online courses will be emphasized. This is crucial because it will remind students how serious their crime is and will discourage them from cheating.

REFERENCES


