Feasibility Report

Topic: The Feasibility of implementing solutions to address online cheating.

Introduction

Based off my recent memo. I highlighted how the pandemic forced universities to switch to remote learning leading to an increase in online cheating. I summarized how other universities like the University of Calgary are also experiencing a "increase in violation of academic integrity" when switching to online remote examinations (Eaton, 2020, pp. 83). To address online cheating the university of Calgary has implemented various technologies and solutions to prevent or identify online cheating. These solutions and technologies are proctoring tools, student authentication and authorship checking systems and traditional cheating prevention methods listed in my previous memo. Donald Ipperciel as our chief information officer at UIT York University you will make the final decision in choosing a solution or a combination for us to implement into our e-platform to prevent students from cheating. In this feasibility report it will be evaluating the factors needed to address online cheating, provide background information on online cheating, compare different solutions and technologies with each other using the factors, and make a conclusion. The conclusion will evaluate the feasibility of implementing these solutions into our e-class platform.

Requirements to consider in addressing online cheating.

A set of factors will be used as criteria to judge the technologies and solutions in preventing or identifying of online cheating methods outlined by Kasen, Eaton and Mellar. We need this criterion to identify their ability to prevent online cheating and the feasibility for UIT to implement them into our e-class. The factors would consider the cost, ability to prevent online cheating methods and if it can be implemented in our platform. The factors to consider before implementing these technologies and solutions are in the following list.

Requirements to consider:

- It can either prevent or identify if students are communicating with each other or with another during the examination.
- It must be able to prevent or identify when students are copying or plagiarizing other's solutions.
- It can validate the student's identity to prevent another from impersonating them to do their tests or exam on their behalf.
- It can prevent or identify when students are accessing the online web or block access to certain web sites during the examination.
- To be able to detect or prevent foreign software, use of secondary monitor and a virtual machine that can be used for academic misconduct.
- It must be able to integrate with Moodle which is the open source learning platform e-class was based on.
- The Price of implementing it should be fair
- Instructor and Student acceptance because they are the primary users.

The reasons some of these factors are chosen is to counteract the ability students have in cheating during online examinations. As well as, considering the cost and price in purchasing then implementing the solution to our Moodle platform. Since in the pandemic it is quite easy for students to cheat due to the move to online remote learning. Instructors, colleges, and universities are negatively affected by this. Because it is their responsibility to prevent or identify when it is happening. We must help prevent online cheating if it is within our limit.

Here are the current technologies and solutions UIT can use:

The technologies or solution must work in e-class and must be plug-ins which are modules or addons tools that must be installed and enabled to be used on our platform. Most plugins available to us are based on Moodle the open based e-platform our e-class is based on. The solutions and technologies are listed in table 1.

Table 1 Solutions:

Types of Solutions	Advantages	Disadvantages
Online Proctoring Plugins (Proctortrack, ProctorU, Procotorio, Respondus LockDown Browser)	• Prevents copying and plagiarism. • Validates identity • Blocks browser access • Identifies use of other software and monitor • Available plugins for Moodle. • Great for preventing cheating on online examinations.	• Price can vary • Implementation depends on students. • Implementation costs are high. • Student Privacy issues • Students requires a webcam
Student authentication and authorship checking systems (Moodle addons like Turnitin or Zoom to monitor and check if it is the student)	• Available plugins for Moodle. • Popular solution for essays and short answers. • Perfect for student authentication and authorship checking. • Validates identity • Prevents plagiarism.	• Students requires a webcam. • Difficult to implement depends heavily on students. • Only prevents online cheating for essay and impersonation. • Price can vary.
Training professor to use Traditional methods or strategies such as reducing time, difficult questions, short answers, essay questions, limiting multiple choice answers etc.	• Easy to implement and understand. • Cheap to implement • Easy for students to adapt too. • Makes it difficult to cheat.	• Hard to enforce depends on instructors. • Does not prevent online cheating.

Summary of table 1

- Online proctoring plugins are a great way to prevent online cheating. However, one of requirements is not met since they are not widely accepted by the user.

- Student authentication and authorship checking systems are good to prevent plagiarism and impersonation. However, they do not meet our requirements in stopping the many forms of online cheating during examination.

- Traditional methods or strategies like training and awareness are easy to implement and for students or instructors to understand making cheating difficult. However, it does not prevent cheating because it relies on trust and it only makes it harder for students to cheat by limiting them.

Table 1 Comparison

To select the best solution, it must satisfy the most factors in addressing online cheating. For online proctoring plugins they can be useful for preventing cheating on online examination. There are many types that can satisfy all factors we listed, but not student acceptance. Students have concerns regarding privacy and equity in regards about online proctoring which will be explained in detail. For student authentication and authorship checking systems we can use zoom and Turnitin for our e-platform. Which are only good for checking student identity and identifies impersonations or plagiarism in forms of copying from others. However, they are not useful system to identify if students are cheating on examinations on our e-platform. For traditional methods we can adjust our e-platform towards helping instructors use old school strategies to prevent cheating. For example, having more assignments then tests, disable the ability to copy paste to the platform, strict time limits per questions, randomizing questions so students cannot coordinate and having more essays or short answer question to check for only authorship. Each solution has its disadvantages and advantages because each have their own special function in preventing online cheating.

Privacy and Equity concerns in proctoring Students:

Proctoring may seem like it solves online cheating, but it can cause other issues as well. According to experts and student organizations many students have privacy and equity concerns in using proctoring plugins (Panico, 2020). The equality issue concerned is that students may have to absorb additional costs they cannot afford. For privacy concerns they are worried about being monitored and information being leaked. These concerns have become a reality since a company who makes the proctortrack an online proctoring company had a security breach. The security breach happened in Europe where an un-verified person accessed one of their servers using an employee's credentials (Lupton, 2020). Students were concerned and demanded that the company tell them what type of data was leaked. The CEO did not provide any details on what data was breached. This reason creates concerns and allows students a reason to refuse to install software on their computer web browser.

Conclusion

After a lot of analysis of research and comparing the available options. The ultimate solution in addressing online cheating is to use the combination of these technologies and solutions on our e-class platform. This is because it will be able to cover all our requirements in preventing all forms of online cheating. The drawback is that it will be extremely costly to implement all of them to cover every online cheating method and specifically proctoring will not be widely accepted by the students. However, if our goal is to reducing costs then implementing a simple solution of using only traditional prevention methods by bringing awareness and training to professors will suffice.

Recommendation

We should implement the most of these technologies and solution. The reason is because many institutions like University Calgary are combining these technologies and solutions to address online cheating (Eaton, 2020). At UIT York University we should follow in the steps of other educational institution or do better than them. Implementing all solutions and technologies is expensive, so we should pick a single method like training and awareness. It would be cost-effective because it minimizes costs which was indicated in my previous memo is on the line during the pandemic.

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