

A MODEL OF UNIVERSITY EXAMINATION MONITORING SYSTEM

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ABSTRACT

This work takes into consideration the system of examination invigilation in Nigeria universities. Over the years, the extent of students' malpractice in examinations and the resultant effects when confronted by invigilators or university security agents have been on the increase and devastating. According to Ejiogu (2001), general moral decadence and the high premium placed on achievement and certificates by Nigerians has in recent times spawned examination fraud. There arose the need for an examination automated monitoring system that will handle this societal menace. This journal therefore x-rays the exact way students take examination and tries to portray each student's grade with his academic capabilities. It is a system of examination conduction that monitors the examination arena (halls) and stores live-fed videoed scenario for future screening and use. The system is designed and developed with webcams at the examination halls to capture the student's face, posture and movement at every moment during examination. The

captured images are stored at the server end and can be viewed later to detect those students that cheated during the examination. There is a direct link of the live-fed of the examination arena to the section of the university website known as "University Examination Panel" in the university portal. When reviewed by this body, those found guilty are appropriately sanctioned. To make this system work well, a dedicated system (Server) manned by an examination administrator is provided. Also made available are 4 webcams; Solar panel, internet access. Questionnaires were served to estimated population to know their opinions about university examinations in general and the ways to curb this cankerworm that has eaten deep into the fabrics of our society. The new system is designed to replace the manual method of examination monitoring were the latter's evidence of examination misconducts are always in confusion and doubt. It is believed that this new system when adopted and deployed will reduce to a drastic extent the

high increase of examination malpractice in our Nigerian Universities.

KEYWORDS: Examination Malpractice; Webcam; Monitoring; Exam Ethics; Exam Malpractice Panel; Solar Panel; Dedicated System

INTRODUCTION

The intent of every society is to produce young ones that are capable of taking the mantle of leadership of that nation. The primary injection is through education and as the society stands today, university education becomes the foundation for this. For this to be achieved, the nation's education system has to be positioned in such a way that the expected breeds of graduates are produced. This is exactly not the order of the day in our Nigerian society. Why: most graduates these days are confused because: (a) Some candidates graduated with good grades (Distinction, Second Class Upper Division) but without job. (b) Some are good practically but had low grades (Third Class, Pass) and thus could not find their feet in the society in terms of white collar jobs.

Most of these graduates cannot even live up to their certificate grades because they got it by foul means. But in Nigeria, every organization, company and the society in

general is looking for graduates with Distinction for employment. This becomes a great problem where a graduate with good grade is employed but cannot offer anything to the society because his result was gotten somehow. The seriousness of examination malpractice and its widespread manifestation have received attention in research. It has generated both public and private discussions (Omotosho, 1990; Adekale, 1993; Olasheinde, 1993; Ijaiya, 1998; Sooze, 2004). The Exam Ethics Project (EEP), led by Ike Onyechere, in time past led a campaign against examination malpractices. Some Nigerian universities have also come up with policies on examination malpractices. The Lagos State Police Community Relations Committee (PCRC) has also organized a public relations workshop to sensitize the public on the evils of examination malpractice. Topics covered included the causes of examination malpractice and other public offences in Nigeria and factors motivating students to go into cheating in examinations among others (Ozor, 2004). Rani (2004) has advocated the use of counseling as a tool for stopping examination malpractices in the universities. In this work, we looked at how university examinations are conducted and the monitoring procedures and consequently

advocated the use of computerized university examination monitoring system.

In most Nigerian universities, examinations are conducted manually. A situation where students are checked into the examination halls; examinations started and invigilators (Both lecturers and university's security agents) are assigned to monitor the progress of the examination. If there is any breach in the exam conduction, those in the examination halls monitoring are expected to arrest the situation: either to apprehend the culprit or seize the malpractice evidence for panel exhibition. It becomes difficult when there is resistance (as there must always be considering the punishment involved depending on the gravity of the malpractice). Some victims of examination malpractice do funny things to exonerate themselves from the ensuing consequences. Sometimes they hid the evidence in their breast, thighs, pants and so on. And sometimes they chew or swallow the evidence. Even when they fail to sign the accompanied malpractice form, they claim, at the examination malpractice panel, that they were unjustly indicted.

How then do we know the exact thing that happened during the examination? Hence this journal proposal....University Examination Monitoring System. In this, videoing starts immediately examination

commences. With the help of the webcams, every motion in the examination hall is captured, recorded and stored for further use. The video is watched again at the panel and identity of the victims made known. This divulges the doubt phenomena. Appropriate sanction is then administered to the culprit.

Examination malpractice is rated as one of the greatest problems that undermine the foundation of university education in Nigeria today. Sooze (2004) defined examination malpractice as all illegal means which students use to pass examinations. The magnitude of the problem and the dangers posed by this phenomenon has been identified by stakeholders as national malady that requires drastic solution. Thus, this work attempted to investigate the demerits of manual examination monitoring procedures and the need for a computerized university examination in order to find lasting solutions to university examination malpractices.

Existing Examination Monitoring Procedures:

At present, in any Nigerian university, students are checked in during examinations. Invigilators are assigned to monitor each examination hall. The problem here comes when a student is found cheating in any

form. Because no student wants to be rusticated from the university because of examination malpractice, they would always find a way of denying their involvement even if they are caught “Red Handed”. Sometimes the insistence of the invigilator to collect the malpractice material or sign the malpractice form brings real commotion in the examination hall. This might even create an avenue for other students in the hall to cheat.

In most Nigerian universities, the examination misconducts are well spelt out in the first page of Answer Scripts. But this has never deterred the evil minded students from cheating because they thought they could always outwit the invigilators and evade the punishment.

Some of the examination misconducts as spelt out that constitute examination offences are:

- ❖ Sitting internal Examination for another student, ie, impersonation
- ❖ Gaining previous knowledge of examination questions
- ❖ Copying from or referring to notes, books or other materials
- ❖ Copying from fellow students with or without their collaboration
- ❖ Bringing in unauthorized aids

- ❖ Chatting, disturbance, communication (Verbal or non-verbal, talking, etc)
- ❖ Destruction of evidence(s)
- ❖ Disobedience to invigilator’s instructions
- ❖ Refusal to fill/sign misconduct form
- ❖ Bringing/use of mobile phone in the exam hall
- ❖ Copying or spying from prepared answers and swapping or examination documents
- ❖ Violent/unruly behaviour to examiners
- ❖ Lateness to examination hall without valid reasons
- ❖ Smuggling out question papers/answer sheets from the hall
- ❖ Collusion with other candidates / examiners / external agents
- ❖ Leaving examination hall without permission.

When any of the above is committed by any student in an examination hall, such student is meant to sign Exam Malpractice Form. This will later be filed and submitted to Exam Malpractice Panel of such university. This aspect of examination is very crucial considering the after-effect of this cankerworm called examination malpractice. From the above, it is sometimes difficult for a student caught to admit that he/she was actually cheating. Evidence may be

destroyed or even swallowed. There are some cases where students refuse to sign the Misconduct Form or even fight the invigilator or security agent. When this happens, the examination hall is made un-conducive for other students. In case of the any of the above, the invigilator or supervisor that caught the student cheating then pencils his comment on the malpractice form for onward submission to examination malpractice panel for investigation.

The Concept of the New System and the Expectations:

The new system we advocate here is the “A Model of University Examination Monitoring System”. This system is going to electronically monitor the university examination arena, capture, record and store whatever transpired from the start of the examination to end of the examination. Thus, videoing starts immediately examination starts and stops when examination ends. For clarity of purpose, every student is properly checked in the examination hall and seat position noted. This is for adequate identification during investigation.

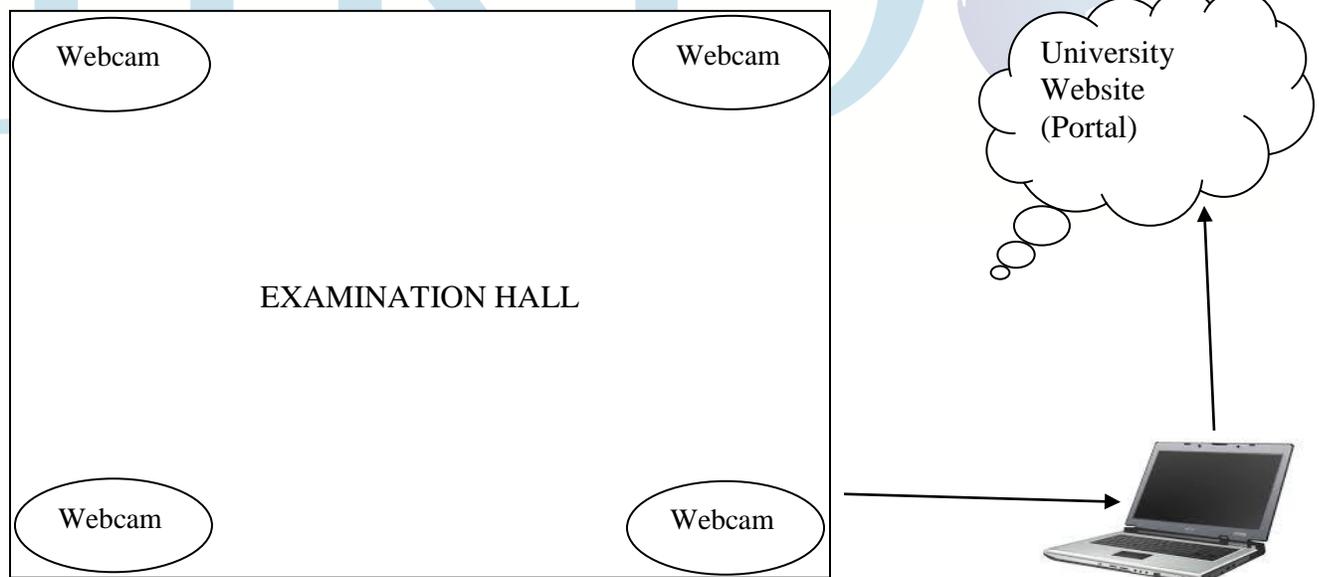


Fig 1: MODEL OF THE UNIVERSITY EXAMINATION MONITORING SYSTEM

A webcam stands for web camera. It is a video camera that feeds its images in real time to or through a computer to another computer networks. It is a digital camera that

is attached to a host computer through a USB and it functions mainly by grabbing every movement of its environment and sending it directly to another location (in this case, to

the university website or portal) for further viewing and investigation. Once this is done, it sends the image over the internet connection. The format of image conversion here is that the webcam turns every image it captures into JPEG that can easily be transported to another location and this is

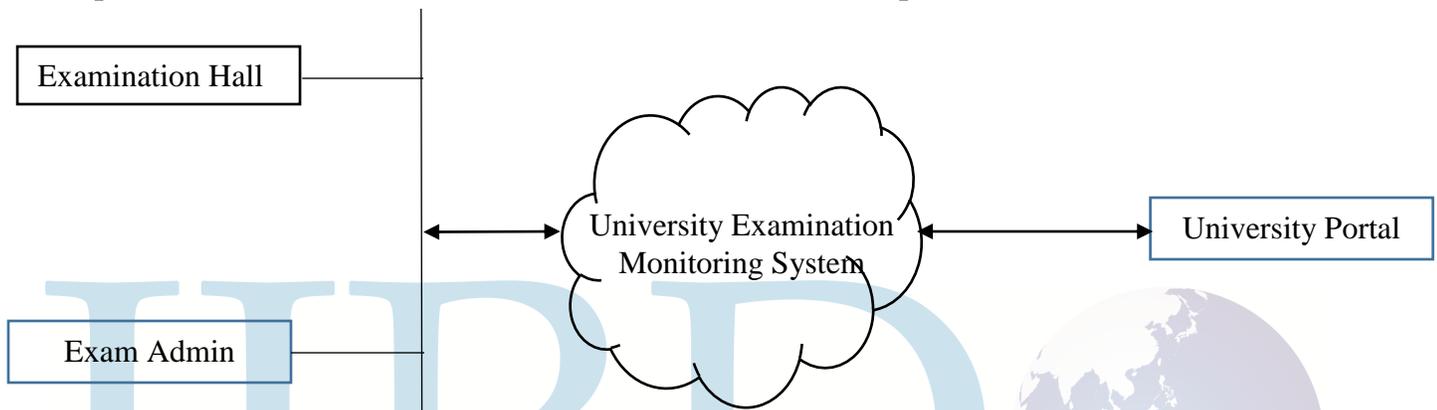


Figure 2: The University Examination Monitoring System

University Examination Monitoring System is a computerized system for monitoring examinations in Nigerian universities and beyond. The system is made up of a webcam which is connected to the computer through the serial port of a computer and placed in roof corners of examination arena. It monitors an examination arena and then detects every motion of students in the examination hall using the break beam techniques. It also captures and stores images of people in its area of surveillance. It keeps track and images of students that have been detected moving during the examination. The system is set in motion at the start of the

uploaded to a webserver using the File Transfer Protocol (FTP)

The environment here is the Examination hall. It is always wide and far from the top where the webcams are placed, a video cable with RCA jacks on it is run from the webcam to the computer.

examination and stopped at the end of the examination. The system is such that it sends live-feed to the section of university website in-charge of examination malpractice. This can be called up, viewed and verdict meted by this body in-charge. It can also be reserved for further use. When this is appropriately carried out, every doubt about examination malpractice will be crystal-clear!

In order to ensure the evidential value of pictures where they are likely to be used by university examination panel or in any other investigation, the new system should meet the following requirements:

Good Quality Pictures

- Before installing the university examination system, you should have a clear idea of what you want the system to do and how it should perform (e.g. recognise the face of student cheating in an examination hall, or read a copied material).
- It should not be expected that enhancement features, such as zoom controls, would provide extra detail. If you can't see it then it's not fit for purpose.
- You should test the system using a volunteer etc.
- Ensure that the time and the date on the system are correct.
- The quality of the pictures should not be compromised.
- Regularly maintain all aspects of the system (e.g. camera focus, cleaning of lenses, etc).

Direct Online Feed

- A trained examination administrator should be available to relate the capturing as live-feed to the section of the university website called University Examination Panel in the university portal that will assist the investigator/panel in replay and decision taking. This makes the evidence not to be altered.

- The system should not apply any compression to the picture when it is exporting as this can reduce the usefulness of the content.

Solar Panel

- This should be provided as a backup in case there is a power outage during examination and capturing. Otherwise, it will no longer be a real live system.

Adequate Storage

- Access to the system and recorded images should be controlled to prevent tampering or unauthorized viewing.
- Physical protection methods such as locked rooms are just as effective as electronic protection methods that require proprietary software or hardware. This can hinder the security (panel's) investigation.

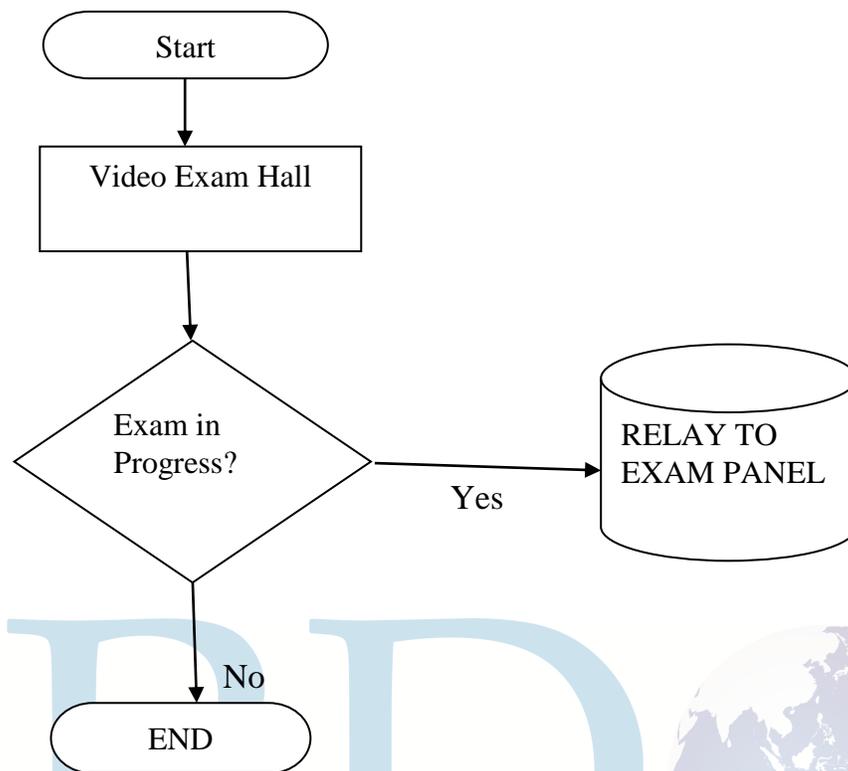


Figure 3: Flowchart of the new model (system)

When examination starts, the system is started. It records every move in the examination hall. You stop the system immediately the examination ends. The Exam Malpractice Panel thereafter watches the recorded video sent directly to the university exam malpractice panel portal as live-feed and if any student is found cheating, the student is identified and invited for Examination Malpractice Panel. If the student is found guilty at the exam panel, he faces the consequences according to his offence. The outputs from the webcam can be sent straight to the university portal

(www.ebsu-edu.net in case of Ebonyi State University) against each individual student cheat who all have database records. These records can be accessed directly by the University Examination Malpractice Panel for onward report to the University Management who then metes out punishment as stipulated by the school regulation.

It is worthy to note that the reason for the new system is not just to punish defaulter but to specifically reduce examination malpractices.

CONCLUSION

Since the whole segments of the nation's life such as home, school, society are fingered in the issues of examination malpractice, the government, non-governmental organizations, individuals and in fact the general public should organize enlightenment campaigns that will highlight the consequences of examination malpractice on the individual, schools and the society. This should be mounted and sustained at all tiers of governance through the use of modern and traditional mass communication media. Also, the government should sensitize all citizens to basic ethical values of self worth, dignity of labour, integrity and personal responsibility. Society itself should lay good examples by de-emphasizing ostentations, unbridled and flagrant display of materialism which could very easily be associated with success acquired through reaching the pinnacle via certificate awarding examination (Abdulkareem, 2003).

RECOMMENDATION

The main advantage of this system over manual method of examination invigilation is that clear and undoubted evidence abound from the system. The system makes open the webcam for all students to see. This puts caution in them thereby instantly reducing examination malpractice. Thus your

identification becomes evidence against you. No denial!

It is therefore recommended that this new system "A Model of University Examination Monitoring System" be adopted and deployed in our universities through the parallel change over procedure so that university examination malpractice evidence should not be in doubt.

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