
Assessment of CCTV and Teachers' Effectiveness

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ABSTRACT

This paper assesses Close Circuit Television (CCTV) and teachers' effectiveness. The paper provides an overview on the trends of using security measures in schools, the use of CCTV and teacher's effectiveness in teaching of subject matter, class room discipline and effective supervision of examinations. The paper highlighted that with CCTV installation in schools, the public generally feel happier and safer that teachers who teach their children will do so with due diligence, having known that their conducts are also being watched by school higher authority via CCTV Cameras. One of the recommendations made was that government should encourage schools by donating and installing CCTV in schools, this will help checkmate different malpractices and nefarious activities around the school surrounding.

KEYWORDS: CCTV and Teachers' Effectiveness

Introduction

Education is very important for every nation of the world. It is important because the transmission of cultural heritage and technological advancement of any nation depends on it. In recognition of the importance of education, every nation earmarks huge budgetary allocations for it yearly (Nwosu, 2008). A high quality assurance in school's entails providing most of the factors that enhance effective teaching and learning which ultimately affect students' academic achievement. These factors as enumerated by Postlethwaite (2007) include but not limited to teacher-variables, environment/family –variables and school -variables. Of all these factors, the ones that are touted to exact most influence on the learning outcome are the “teacher-variables” as the teacher is the ultimate implementer of the curriculum (Postlethwaite, 2007). One of the teacher-variables which contributes immensely to enhance students' academic achievement is the teaching (teacher) effectiveness. Afe (2003) defined effective teaching as the type of teaching characterized by the exhibition of intellectual, social and emotional stability, love for children and positive disposition towards the teaching profession and ability to inspire good qualities in students. According to Evans (2006) teaching effectiveness is a measure of the extent of realization of the instructional objectives. It is a net growth in intellectual aptitude and skills as measured by students' achievements.

Closed-circuit television (CCTV), also known as video surveillance, is the use of video cameras to transmit a signal to a specific place, on a limited set of monitors. Though almost all video cameras fit this definition, the term is most often applied to those used for surveillance in areas that may need monitoring such as bars, banks, casinos, schools, hotels, airports, hospitals, restaurants, military installations, convenience stores and other areas where security is needed. CCTV is widely used in schools due to its success in preventing bullying, vandalism, monitoring visitors and maintaining a record of evidence in the event of a crime. Cameras are generally acceptable in hallways, parking lots, front offices where students, employees, and parents come and go gymnasiums, cafeterias, supply rooms and classrooms. The installation of cameras in classrooms may be objected to by some teachers. CCTV installation makes students very happy because they know they are on a school site where they are safe and this promotes their attention to the teacher (Addington, 2009). Bill Gates (1990) view of teaching and learning is simple. According to him, measuring what students learned in a course was actually quite easy to decide using the stored record data in CCTV. According to him, video can be an effective tool for teachers only if they are in control of how, when, and why video technology is used in their classroom (Beger, 2003).

Theoretical Framework

Instructional theory by Robert M. Gagne in 1965

Instructional theory focuses on how to structure material for promoting the education of humans. Gagné's theory stipulates that there are several types and levels of learning, and each of these types and levels requires instruction that is tailored to meet the needs of the pupil. While Gagne's learning blueprint can cover all aspects of learning, the focus of the theory is on the retention and honing of intellectual skills.

Five Categories of Learning

1. Intellectual skills: Create individual competence and ability to respond to stimuli.
2. Cognitive strategies: Capability to learn, think, and remember
3. Verbal information: Rote memorization of names, faces, dates, phone numbers, etc.
4. Motor skills: Capability to learn to drive, ride a bike, draw a straight line, etc.
5. Attitudes: Approach to ideas, people, or situations, that affects how one acts towards these things.

Each category requires different methods in order for the particular skill set to be learned. In 1956, based on the degree of complexity of the mental process, the American educational psychologist Robert M. Gagné suggested a system of analyzing different conditions or levels of learning from simple to complex. According to Gagne, the higher order of learning in the hierarchy is built upon the lower levels, requiring greater amount of previous knowledge for progressing successfully. To analyze final capability into subordinate skills in an order such that the lower- levels can be predicted for positive transfer of higher level learning. The lower four orders focus on the behavioral aspects of learning whilst the higher four focus on the cognitive aspects. In his original study on Instruction, through a study derived from an analysis of learning

of a task of constructing formulas for the sums of number series. Gagne attributed Individual differences or differences in intelligence in learning.

1. Signal Learning: A general response to a signal. Like a dog responding to a command.
2. Stimulus-Response Learning: A precise response to a distinct stimulus.
3. Chaining: A chain of two or more stimulus-response connections is acquired.
4. Verbal Association: The learning of chains that are verbal.
5. Discrimination Learning: The ability to make different responses to similar-appearing stimuli.
6. Concept Learning: A common response to a class of stimuli.
7. Rule Learning. Learning a chain of two or more concepts.
8. Problem Solving. A kind of learning that requires higher order of thinking.

Signal learning: Is the same as the Classical conditioning of behavioral Psychologist Pavlov. Classical conditioning is a learning process that occurs through associations between an environmental stimulus and a naturally occurring stimulus.

Stimulus-Response Learning: (also known as Trial and error) is a fundamental method of solving problems. It is characterized by repeated, varied attempts which are continued until success, or until the agent stops trying. Here there is strong bond between S-R theory taking place.

Chaining: Chaining is a procedure used in behavioral psychology, it involves reinforcing individual responses occurring in a sequence to form a complex behavior. It is a process of connecting a set of individual stimulus response in sequential order. There are two different types of chains: homogeneous and heterogeneous. The prior homogeneous chains occur when the form of response is similar in each element. By contrast, a heterogeneous chain requires different types of responses for each link.

Verbal Association Learning: is connected to Chain learning by using words. Here the learner is able to verbalize the acquired knowledge and intellectual skills in a highly organized manner. Learning Hierarchy, in another interpretation is a form of associate learning called "paired association" such as learning the meanings of a word by splitting the word.

Discrimination Learning: is the ability to distinguish or discriminate one chain from another. In this the learner can distinguish one stimulus from another and respond as per the change in stimulus. The process is made more difficult by the act of interference, whereby one piece of learning affects or inhibits the other.

Concept Learning: is the learning of a generalized idea. In this the subject acquires the ability to understand the common but variable properties of a concept. "Concept" stands for generalized

idea of a group of stimuli. In concept learning, the change in behavior as a result of learning is not controlled by a particular stimulus but by the abstract idea of each stimulus.

Rule Learning: Chaining of two or more concepts is involved in learning a Rule. This requires higher level cognition process. It involves building relationship among two or more concepts before learning higher order rule that is enveloping them.

Problem solving: Problem solving is the highest level cognitive process, it is formulating of new and complex rules and procedure for the purpose of solving the problem. Problem solving leads to permanent change in the learner's capabilities where in the learner has learned something more than learning of parts.

Conceptual Framework

Trends in the Use of Security Measures in Schools

Sixty-eight percent of students ages 12–18 reported in 2009 the presence of security guards or police officers in their schools; 70% reported the use of security cameras; and 11% reported the use of metal detectors, (Green, 2005). In the 2009–10 school year, 61% of public schools reported that they used one or more security cameras to monitor their students (up from 19% in 1999-2000). By grade level, the rates were 84% of high schools, 73% of middle schools, and 51% of primary schools. Stringent security measures are increasingly being used in U.S. public schools, even in schools where there are no discernible threats to safety. Schools are also employing strict discipline policies to keep students in line and maintain safety.

Use of CCTV and Teachers Effectiveness in Teaching the Subject Matter

According to Baldry & Painter (2000), there is no doubt that CCTV surveillance Cameras have become one of the electronically monitoring measures used by teachers to enhance their efficiency in controlling/monitoring their students' activities, especially when they are not physically present with them. With CCTV installation in schools, the public generally feel happier and safer that teachers who teach their children will do so with due diligence, having known that their conducts are also being watched by school higher authority via CCTV Cameras. Kaighin, (2000) asserts that CCTV cameras is increasingly being deployed by schools in a more proactive and intelligent way to provide a safe and secured environment for students and teachers. Choosing a reputable supplier is essential to achieving teachers' effective modern teaching techniques in monitoring their students' activities/valuables.

The introduction of CCTV to schools helps a great deal in enhancing teachers' effectiveness and confidence while on duty in the following areas (Ludlow, 2001):

1. CCTV surveillance systems help in the protection of teacher's vehicles.
2. It helps in keeping track of teacher attendance and punctuality.
3. CCTV cameras can help keep track of teacher's attitude and methodology in teaching professions.

4. Installation of CCTV Cameras make teachers to organize and conduct themselves in an orderly manner within school compound. CCTV cameras aid monitoring and preventing bullying amongst students.
5. Keep parents mind at ease about school security and environment

Lawlink (2000) opine that teachers see CCTV surveillance cameras as stress-freed solutions that can help them to supervise or monitor their students from cheating during exams from the comfort of CCTV operator office. With this surveillance, it can also help to lessen cases of bullying among students simply because they know that somebody's watching them like a big brother. Making use of the Best CCTV Cameras, school teachers will have an easier time monitoring any untoward doing inside the school premises like vandalism, trespassing, and even drug use and other prohibited activities. These issues might not be common on most of the school but the fact is, these problems exists in some school campuses. Images are being recorded with the help of Spy CCTV Cameras also, which can give a hard evidence in case that a situation will arise. Teachers in schools where CCTV Cameras are installed bother no more to know what happens in places like; hallways, stairs, classrooms and cafeterias in their absence, because CCTV Cameras are well mounted capturing every activities going on there and as well as outdoor CCTV Cameras commonly placed on schools' entrances and parking areas. High Resolution CCTV Cameras are truly beneficial in monitoring who goes in and out of the school premises.

According to Dee (2000), CCTV is very convenient for teachers to monitor how their students interact with their parents when visited them. These surveillance systems are being also used to monitor whether teachers and students are obeying laws that were implemented in the school. A lot of teachers /students are just following school laws whenever there is a superior around them but still commits dishonest actions whenever no one's around. The real purpose of having CCTV cameras installed in schools, is to reduce the situations inside the campus and to offer the school teachers a better security.

CCTV and Teachers' Effectiveness in Classroom Discipline

There is no clear evidence that the use of metal detectors, security cameras, or guards in schools is effective in preventing school violence, and little is known about the potential for unintended consequences that may accompany their adoption, (Nickerson, & Martens, 2008). According to him, there has not been sufficient research to determine if the presence of metal detectors in schools reduces the risk of violent behavior among students. Some researchers have expressed concern about the widespread use of guards, cameras, and other security technologies, given that so little is known about their effectiveness. Research has found security strategies, such as the use of security guards and metal detectors, to be consistently ineffective in protecting students¹⁶ and to be associated with more incidents of school crime and disruption and higher levels of disorder in schools. Evidence from a school-police partnership implemented in New York City reveals that students in these schools continue to experience higher than average problems linked directly to future criminality, compared to students in other New York City schools not involved in the partnership. According to Schreck, & Miller, & Gibson, (2003) surveillance cameras in schools may have the effect of simply moving misbehavior to places in schools or outside of schools that lack surveillance. Even more troubling, it's possible that cameras may function as

enticement to large-scale violence, such as in the case of the Virginia Tech shooter who mailed video images of himself to news outlets. Research suggests that the presence of security guards and metal detectors in schools may actually increase levels of violence in schools by strengthening the influence of youth “street” culture with its emphasis on self-protection.

In his note Brady, Balmer, & Phenix, (2007) stated that the widespread public impression that schools are unsafe fueled by rare, but highly visible school shootings is contradicted by empirical evidence. In fact, schools are not only safe, but are arguably safer today than they were a decade ago. Research comparing the levels of fear among 12- to 18-year-old students before and after the Columbine tragedy found that, contrary to expectations, students were only slightly more fearful after Columbine. In fact, evidence suggests that students believe their schools to be safe places and that their schools’ security strategies are unnecessary. Analysis of media reports of the Columbine shooting suggests that perceptions of that tragedy were merged with terrorism as part of a broad framework of fear and national security, stimulating increased use of stringent security measures in U.S. schools.

Studies have shown that the presence of security guards and metal detectors in schools negatively impacts students’ perceptions of safety and even increases fear among some students. Many types of school security correspond with a significantly greater likelihood that students will be worried about crime while none reduce feelings of worry, (Warnick, 2007). The use of metal detectors is negatively correlated with students’ sense of safety at school, even when taking into account the level of violence at the schools. Studies suggest that restrictive school security measures have the potential to harm school learning environments. The adoption of rigid and intrusive security measures in schools diminishes the rights of students and increases the likelihood that trivial forms of student misconduct that used to be handled informally by schools will result in arrest and referral to the courts, (Borum, Cornell, Modzeleski, & Jimerson, 2010). Along with the increasing use of security measures, schools are employing strict discipline policies to keep students in line and maintain safety, which undoubtedly negatively influences the social climate of schools. According to the courts, surveillance cameras provide students with a reasonable expectation of safety and if they are attacked in full view of a camera and no one comes to their aid, schools could be successfully sued.

Research suggests that the presence of school resource officers does not change students’ views of the police or of offending, and their presence has engendered concern that schools are criminalizing student behavior by moving problematic students into the juvenile justice system rather than disciplining them at school. Analysis of the use of surveillance cameras in schools suggests that they may work to corrode the educational environment by, among other things, implicitly labeling students as untrustworthy (cameras magnify this impact since their sole purpose is to record misbehaviors and deter through intimidation), (Altheide, 2009).

CCTV and Teachers’ Effectiveness in Supervision of Examinations

Ryan (2007) defines surveillance as a careful watching of an individual or group of individuals especially by the police or army. Surveillance refers to observation of individuals or groups by governmental organization. The word Surveillance may be applied to monitoring from a distance by means of digital device (such as CCTV cameras), or interception of electronically, transmitted information (such as internet traffic or phone call. Surveillance is the system for collection,

analysis, interpretation and dissemination of data and information on an ongoing basis. It is also seen as a mechanical or electronic system or device that enables continuous or periodic video recording, observation or monitoring of an individual or group.

According to Browning (2001), surveillance by means of CCTV Cameras has helped many teachers to monitor their students against examination malpractice in schools. Teachers use CCTV Cameras also to monitor students behaviour/activities, or other changing information, usually of people for the purpose of influencing, managing, directing, or protecting them. This is by way of monitoring from a distance by means of digital device (such as CCTV Cameras), or interception of electronically transmitted information (such as internet traffic or phone calls); and it can include simple, relatively no-or low-technology methods such as human intelligence agents and postal interception. Surveillance by means of digital cameras [CCTV] is very useful in our today institutions of learning. It helps in maintaining social control, recognize and monitor threats and prevent/investigate malpractice activities. The World Bank (2001) defines examination malpractice as a deliberate wrong doing that is contrary to official examination rules and is purposed to place a candidate at an unfair advantage or disadvantage.

Nwahunanya (2004) defines examination malpractice as the act of omission or commission intended to make a student pass examination without relying absolutely on his or her independent ability. It is therefore clear that examination malpractice is committed by a candidate single handedly or in collaboration with other people such as other higher education students, parents, lecturers, supervisors, invigilators, printers and anybody or group of people before, during or after examination in order to obtain undeserved marks or grades. Fraud is defined as a deception deliberately practiced in order to secure unfair or unlawful gain or the use of dishonesty, deception, or false representation in order to gain a material advantage or to injure the interests of others. Therefore, the introduction of surveillance cameras otherwise known as CCTV has become one of the best electronically interventive measures to bring to the bearest minimum rampant examination malpractice in schools today.

Dee (2000) asserts that there is immediate need for computerized surveillance systems in schools. Mounting CCTV cameras is cheap, but finding available human resources to observe the output is expensive. There are a variety of situations in which CCTV cameras are used to provide surveillance, especially schools. It is not uncommon for some schools to install CCTV security systems in their premises to monitor and keep track of all the activities that take place. Sometimes, in larger schools, providing security guards is not enough for school security. This is usually done with complete awareness on the student's, parent's and teacher's parts.

Nwahunanya (2004) noticed that some candidates stretch beyond normal sitting space to copy from one another, a practice referred to as 'giraffing' because of the rubber necking involved. They bring to the examination hall prohibited materials such as computerized Calculators, in which mathematical formula and short notes are stored, for use, during examination. Some even indulge in illegal carrying of materials often called 'missile', 'bullet', and 'chukuli' relevant to examination hall, and illegal inter-group communications e.g. exchange of question papers, answer booklets, and/or relevant materials in the examination hall; organized unauthorized communications e.g. use of signs, gesticulations, bells at intervals, whistles, whispering, dictation, loud speakers, drums etc. Below are the benefits of using CCTV surveillance systems to monitor examinations malpractices in schools;

1. CCTV security systems help in preventing or identifying unauthorized intruders who enter the premises or class room during examinations thereby promoting school security.
2. Keeping track of remote entrances and exits is easier through the use of CCTV cameras.
3. CCTV surveillance systems can keep track of candidates who arrive exams hall on time.
4. The use of CCTV surveillance system helps in organizing exit in case of emergencies.
5. It helps also in School security measures to protect exams materials / property and identify perpetrators and vandals.
6. CCTV surveillance system helps in the protection examiners vehicles.
7. It helps in keeping track of examiners in attendance and punctuality.
8. CCTV cameras can help keep track of examiner's attitude and methodology in monitoring.

Keim (2001) opine that CCTV surveillance systems in schools is one of the ways in ensuring a safe, secured and healthy learning environment for children, therefore, it is advisable to always consult with experts to work out the most strategic places to install CCTV cameras in schools, especially during examinations period. Post examination malpractices or irregularities are considered by the perpetrators to be the safest, surest and most reliable form of malpractices that are capable of achieving desired objectives. The agents commonly used here are Supervisors, Custodians, Examiners, Computer Operators, Typist, Subject Officers, and Office Clerks etc. This occurs by inducing the personnel with sex, gifts, money etc. to buy over personnel of examination bodies as well as those connected with the marking and co-ordination of candidates' scripts and storing of scores etc. According to Williams (1995), CCTV Camera can help to also capture the following abnormacies during exams:

- Substituting a candidate's original script with a re-written one.
- Alteration of scores in favor of candidates.
- Falsification of Statement of Results/Certificate Forgery.

Conclusion

According to the review, it is concluded that CCTV surveillance systems in schools is one of the ways in ensuring a safe, secured and healthy learning environment for children, therefore, it is advisable to always consult with experts to work out the most strategic places to install CCTV cameras in schools, especially during examinations period. CCTV surveillance systems can keep track of candidates who arrive examination hall on time and help curb examination malpractices. Also, with CCTV installation in schools, the public generally feel happier and safer that teachers who teach their children will do so with due diligence, having known that their conducts are also being watched by school higher authority via CCTV Cameras

Recommendations

1. The government should encourage schools by donating and installing CCTV in schools, this will help checkmate different malpractices and nefarious activities around the school surrounding.
2. Remarking the benefit of CCTVs in school premises, tertiary institutions and secondary/primary schools should install CCTV in their school environment, this will increase teacher's/lecturers commitment and preparedness in teaching their subject.
3. The school administration should provide justification for the use and extent of a video surveillance program on the basis of addressing specific and significant concerns about safety and/or the theft or destruction of property.

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