Use of Closed Circuit Television (CCTV) for Ensuring Quality Learning and Internal Policing in Early Years Centers

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Abstract

This study examined the use of Closed Circuit Television (CCTV) surveillance cameras for ensuring quality learning and internal policing in early years centers in Delta State. The study was piloted by three research questions which were answered and two hypotheses which were tested at a level of significance of 0.05. The study was a descriptive survey had a population of six hundred and eighty-eight (688) Private Early Childhood Care Centers spread across the 25 Local Government Areas of Delta State. A total of 79 Caregivers and 60 Attendants were selected and used for the study through a purposive random sampling method. The structured questionnaire for data collection titled; 'Impact of Closed Circuit Television Surveillance Camera in Monitoring and Ensuring Quality Care-giving'(ICCTSCMEQCG) was validated prior to its use by two Chief Lecturers in Measurement and Evaluation, College of Education, Agbor and another Chief Lecturer from the Department of Early Childhood and Primary Education, Nnamdi Azikiwe University, Awka. The study questionnaire had its reliability determined at a coefficient of 0.84, using Cronbach Alpha reliability test and was personally administered to the sample with 95% retrieval rate. The mean and standard deviation statistical techniques were used to answer the two research questions, while t-test was used to test the stated null hypotheses. Study results revealed that there are great impact if Closed Circuit Television (CCTV) surveillance camera is used for ensuring quality learning and internal policing in early years centers, amongst others, Care giving will be done at the best when caregivers and attendants are aware of being watched by the installed closed circuit television cameras. Also pupils learning activities are easily monitored on playback from the recorded tape of the camera system. Flowing from the findings, it was recommended that public early childhood care centres should key-in into the technology drive of the use of closed circuit television surveillance cameras for ensuring quality learning and internal policing early years' centres.

Keywords: Closed-Circuit Television (CCTV), I.P Camera, Monitoring, Evaluation, Curriculum, Surveillance, Quality, Care-giving, Feedback, Scaffolding, Curriculum Policing

Introduction

The symbiotic relationship between educational technology and care-giving/learning situation is best described as that of "Egg and Hen" relationship – education helps to develop science and technology, while technology on the other hand improves quality education –. No wonder Ughamadu, (2012) averred that the primary role educational technology plays in the care-giving and teaching/learning process is essentially that of improving the process. This study is devoted to the potential of Closed Circuit Television (CCTV) surveillance cameras, a piece of educational technology which has been introduced into education as veritable tool for ensuring quality learning and internal policing in early years centers. Quality care-giving, internal policing and learning in the early years deviates significantly

from the conventional primary and post-primary or tertiary education practices, objectives/goals. In as much Caregiver/Attendants only guide/scaffolds, allowing the child to construct knowledge by self-efforts, rather than directly teaching the children (as in the old practice of "Ota-Akara" early years' education practices).

Talking about quality learning and internal policing in early years centers through the use of Closed Circuit Television (CCTV) surveillance cameras, it is important to define the concept of Early Childhood Education (ECE). Cherrie (2017), sees Early Childhood Education (ECE) as the education of children from birth through age 8 (which when quality care giving, policing and learning could not be guaranteed, will mare the child's lifelong education, promotes negative transfer and poverty). It is on this premise that Eziechina, Ugboaja and Esiagu (2017), asserts that "the single most important key to development and poverty alleviation is quality education" if the nation wishes to achieve the Sustainable Development Goals (SDG) in poverty alleviation and only quality education can ensure that. In line with this, Umezinwa and Chigbata (2013), posits that in recognition of the importance of education in providing the quality of an individual's life, the Federal Government made specific policy statements on the education of every Nigerian, in section (1) of the National Policy on Education (2013) under the heading, philosophy of Nigerian education'. The document states that: Education shall continue to be highly rated in the national development plans because education is the most important instrument of change; any fundamental change in the intellectual and social outlook of any society has to be proceeded by an educational revolution (NPE 2013).

The use of Closed Circuit Television (CCTV) surveillance cameras for ensuring quality learning and internal policing in early years centers is a very vital tool for social transformation and education of the child in any society. Any effort in ensuring this is a welcomed development; as that could provide the shift from the conventional simplicity and practices of the years past. This will assure faster achievement of the nation's curricular objectives and goals of setting up early year's education in the nations' educational system. It will also allow public-private partnership in its provision, conduct and practices in pursuance of the Sustainable Development Goals (SDG) on universal and compulsory basic education. This is why the Federal Government introduced the National Integrated Minimum Standard for the practice of Early Childhood Care Education in Nigeria, with the assurance of participation and collaboration from every sector and stakeholders in the country. Quality learning, internal policing and care-giving at the Early Child Care Education across the nation, which cannot be downplayed.

This study defines CCTV surveillance camera as one of the product of educational technology for ensuring quality learning and internal policing in early years centers, that is why ENSTER-China Security CCTV IP Camera OEM Factory Director (2019) averred that "Thieves flee at the sight of your security camera while employees maintain right working ethics having the knowledge of the camera within them" finally the concept of quality learning and internal policing in early years centers as used in this paper simply means the concerted effort through effective human resource management in the utilization and provision of all it takes to provide for the child purposeful development at the early years vide the use of CCT V surveillance camera, (Ashby, (2017), Advik (2017),and Slateret, al. (2013). Closed Circuit Television surveillance camera (CCTV) is a system consisting of electronic or other devices designed, constructed or adapted to monitor or record images on or in the vicinity of promises. To Eziechina, et al. (2017), CCTV surveillance is the monitoring of behaviour, activities, or other changing information for the purpose of influencing, managing, directing, or protecting people. While, Leighton and Maximino (2014) see it as surveillance technology used for surveillance and observation from a distance by governments for intelligence gathering, prevention of crime, the protection of a process, persons, group or objects, or the investigation of crime. In this paper, CCTV is seen as the advanced technology used for the monitoring, evaluation and reportage of feedback to parents, stakeholders and others that needs knowledge of the child's developmental processes on day-to-day basis.

The issue of the use of Closed Circuit Television (CCTV) surveillance cameras for ensuring quality learning and internal policing in early years centers is very important. It cannot be over-emphasized as it justifies the aim and sacrifices parents make by dropping off their children in the ECCE centres and picking them at close of the day. Suffices to say that parents do not just keep their children in the ECCE centers away from them so that they can be focused on their works, in offices, markets, farms and other places but hopes that dropping them off will provide for the needed quality learning and internal policing of the child. The early years' classrooms provide different curricular and extra-curricular practices such as sleeping, playing with toys, tools, gadgets and so on. These activities are necessary antidotes for the child's physical, mental and motor development, which are not possible provided without such gadget like the use of CCTV surveillance cameras (NPE (2013), ENSTER-China Security (2019) & Advik Digital Solution (2017).

Purpose of the Study

The purpose of this study was to examine the use of Closed Circuit Television (CCTV) surveillance cameras for ensuring quality learning and internal policing in early years centers in Delta State. The study shall superficially:

1. Examine how Closed Circuit Television (CCTV) surveillance cameras is used to ensure quality learning and internal policing in early years centers in Delta State,
2. Find out parents and public perception of how the use of Closed Circuit Television (CCTV) surveillance cameras caters for quality learning and internal policing in early years centers in Delta State and
3. Examine the constrains Early Years Education providers in the state encounters in the use of Closed Circuit Television (CCTV) surveillance cameras for ensuring quality learning and internal policing in early years' centres.

Research Questions

The following research questions guided the study:

1. How can the use of Closed Circuit Television (CCTV) surveillance cameras provide for quality learning and internal policing in early years centers in Delta State?
2. How do parents/public rate the use of Closed Circuit Television (CCTV) surveillance cameras for ensuring quality learning and internal policing in early years centers in Delta State?
3. What are the major constrains Early Years Education providers experiences in the use of Closed Circuit Television (CCTV) surveillance cameras for ensuring quality learning and internal policing in early years centers in Delta State?

Hypotheses

The following null hypotheses guided the study at 0.05 level of significance

Ho_1 There is no significant difference in the rating of Caregivers and Attendants on use of Closed Circuit Television (CCTV) surveillance cameras and the quality of learning/internal policing of children in early years centers in Delta State.

Ho_2 There is no significant difference in parents/public rating of use of the use of Closed Circuit Television (CCTV) surveillance cameras for ensuring quality learning and internal policing in early years centers in Delta State.

Method

This study took the descriptive survey design aimed at examining the impact of Closed Circuit Television (CCTV) surveillance camera for monitoring and ensuring quality care-giving in Early Year's Centers in private Early Childhood Care Centers in Delta State. The study was piloted by three research questions and two hypotheses which were tested at a level of significance of 0.05. The study population comprised of six hundred and eighty-eight (688) private Early Childhood Care Centers spread across the 25 Local Government Areas of Delta State, (according to the Federal Ministry of Basic Education, Asaba 2018 Diary). A total of 139 Caregivers were used for the study through a purposive random sampling method to which the structured instrument for data collection titled; 'CCTV for Ensuring Quality Learning and Internal Policing' (CCTVEQL/IP) was administered to. This instrument was validated prior to its use by two Chief Lecturers in Measurement and Evaluation, College of Education, Agbor and the assigned supervisor from the Department of Early Childhood and Primary Education, Nnamdi Azikiwe University, Awka. The study instrument also had its reliability determined a coefficient of 0.84, using Cronbach Alpha reliability test and was personally administered to the sample with 95% retrieval rate. The mean and standard deviation statistical techniques were used to answer the two research questions, while t-test was used to test the stated null hypothesis. The instrument contained two sections – A (contained respondents' Bio-data) and B (contained 21 item structured on a weighted four point scale of Very True (VT) 4 points, True (T) 3 points, Not Very True (NVT) 2 points and Not True (NT) 1 point.

Results

Research Question One: How can the use of Closed Circuit Television (CCTV) surveillance cameras provide for quality learning and internal policing in early years centers in Delta State?

Table 1: Mean rating and Standard Deviation Scores of Caregivers and Attendants on Use of CCTV for Quality Learning/Internal Policing in Early Years Centres

NO.	ITEMS	CAREGIVERS (N=77)			ATTENDANTS (N=51)		
		Mean	SD	Decision	Mean	SD	Decision
1	Without CCTV camera quality learning/policing cannot be ensured	2.43	0.94	Disagree	2.46	1.09	Disagree
2	With CCTV camera hardworking caregiver is well rewarded and appraised	2.57	1.05	Agree	2.59	1.12	Agree
3	With CCTV camera in place every caregiver will put in their best to be well appraised	2.67	1.08	Agree	2.61	0.89	Agree
4	CCTV surveillance camera could prove a perfect monitoring tool in ensuring quality care giving	2.65	1.10	Agree	2.72	1.11	Agree
5	Early Childhood Care practices improves with playback from CCTV recorder	2.47	1.13	Agree	2.49	1.15	Agree
6	Your interest in an Early Childhood Care Center improves with CCTV in place	2.44	1.03	Disagree	2.46	1.09	Disagree
	Grand Mean	2.54	1.06	Agree	2.55	1.07	Agree

The data as analysed on Table 1 shows that the mean scores of Caregivers and Attendants at the ECCE centres are far above the mean benchmark of 2.56 for the items of assistance CCTV surveillance cameras provides for Caregivers and Attendants, excluding item number 1 and 6 respectively. Meanwhile, pooled standard deviation scores of 1.06 and 1.07, also revealed the homogeneity of responses of Caregivers and Attendants on how CCTV surveillance camera could be used for quality learning/internal policing in Early Years Centres.

Research Question Two: How do parents/public rate the use of Closed Circuit Television (CCTV) surveillance cameras for ensuring quality learning and internal policing in early years centers in Delta State?

Table 2: Mean Ratings and Standard Deviation Scores of Parents and Public Perception on the use of CCTV Surveillance Cameras in Ensuring Quality Learning and Internal Policing.

NO.	ITEMS	CAREGIVERS (N=77)			ATTENDANTS (N=51)		
		Mean	SD	Decision	Mean	SD	Decision
7	Parents welcomed the use of CCTV cameras in your center	2.53	1.03	Agree	2.58	1.04	Agree
8	Parents interest in an Early Childhood Care center improves with CCTV around	2.43	1.05	Disagree	2.49	1.04	Disagree
9	Parents are better satisfied with CCTV camera playback records	2.47	1.05	Disagree	2.41	1.15	Disagree
10	Parents do ask for playback from camara system during visits	2.61	1.04	Agree	2.65	1.00	Agree
11	Use of CCTV cameras improves parents/school collaboration	2.60	1.17	Agree	2.58	1.02	Agree
12	Playbacks from CCTV system reassures parents of educational services provided at the centre	2.57	1.04	Agree	2.60	1.14	Agree
	Grand Mean	2.54	1.06	Agree	2.55	1.06	Agree

Data as analysed on Table 2 shows that the mean scores of Caregivers and Attendants at the ECCE centres are above the mean benchmark of 2.50 for the items of assistance CCTV surveillance cameras provides for Caregivers and Attendants, excluding item 8 and 9 respectively. Meanwhile, pooled standard deviation scores of 1.06 and 1.07, also revealed the homogeneity of responses of Caregivers and Attendants on parents rating of the use of CCTV surveillance cameras in monitoring and ensuring quality care giving in ECCE centres.

Research Question Three: What are the major constrains Early Years Education Providers' experiences in the use of Closed Circuit Television (CCTV) surveillance cameras for ensuring quality learning and internal policing in early years centers in Delta State?

Table 3: Mean Ratings and Standard Deviation Scores of Constraints Early Years Providers Encounters in the use of CCTV Surveillance Cameras in Ensuring Quality Learning and Internal Policing in Early Years Centres.

NO.	ITEMS	CAREGIVERS (N=77)			ATTENDANTS (N=51)		
		Mean	SD	Decision	Mean	SD	Decision
13	Constant power supply for powering the CCTV cameras is a constraint	2.53	1.03	Agree	2.58	1.04	Agree
14	Public and Parents do not improve in payment made for care-giving of babies even with CCTV in place	2.43	1.05	Disagree	2.49	1.04	Disagree
15	Public and Parents patronise of ECCE centers do not improve even with CCTV cameras in place	2.47	1.05	Disagree	2.41	1.15	Disagree
16	Cost of procuring, installation, maintenance and recorder capacity is a constrain in use of CCTV	2.61	1.04	Agree	2.65	1.00	Agree
17	Weather, thunder storm and lightning bolts affect CCTV cameras	2.60	1.17	Agree	2.58	1.02	Agree
18	Cooling the CCTV Recorder system under Air-Conditioner is a challenge.	2.57	1.04	Agree	2.60	1.14	Agree
	Grand Mean	2.54	1.06	Agree	2.55	1.06	Agree

Table 3 shows that the mean scores of caregivers and attendants at the ECCE centres on the constraints early years' providers encounter in the use of CCTV surveillance cameras in ensuring quality learning and internal policing in early years' centres shows that items 13, 16, 17 and 18 has mean score above 2.50 while items 14 and 15 have mean scores below 2.50. This shows that items 13, 16, 17 and 18 are the constraints early years' providers encounter in the use of CCTV surveillance cameras in ensuring quality learning and internal policing in early years centres while items 14 and 15 are not constraints.

Hypothesis 1: There is no significant difference in the rating of Caregivers and Attendants on use of Closed Circuit Television (CCTV) surveillance cameras and the quality of learning/internal policing of children in early years centers in Delta State.

Table 4: t-test of significant difference between the mean ratings of Caregivers and Attendants on the Impact of CCTV Surveillance Cameras on the Monitoring and Ensuring Quality Care-giving in ECCE centres.

Responses	N	X	SD	t.Cal.	t.Crit.	df	∞	Decision
Caregivers	77	2.54	1.06					
				0.05	1.96	126	0.05	N. Sigf.
Attendants	51	2.55	1.06					

Data presented in Table 4 shows that the t-calculated value of 0.05 is far less than t-critical value of 1.96 at 0.05 level of significance and 126 degree of freedom. This means that the null hypothesis was not significant. Therefore, null hypothesis was accepted.

Hypothesis 2: There is no significant difference in parents/public rating of use of the use of Closed Circuit Television (CCTV) surveillance cameras for ensuring quality learning and internal policing in early years centers in Delta State.

Table 5: t-test of significant difference between the mean ratings of Caregivers and Attendants on Parents Rating of use of CCTV Surveillance Cameras on the Monitoring and Ensuring Quality Care-giving in ECCE centres

Responses	N	X	SD	t.Cal.	t.Crit.	Df	∞	Decision
Caregivers	77	2.55	1.07					
				0.05	1.96	126	0.05	N. Sigf.
Attendants	51	2.54	1.06					

Data presented in Table 5 shows that the t-calculated value of 0.05 is less than t-critical value of 1.96 at 0.05 level of significance and 126 degree of freedom. This means that the null hypothesis was not significant. Therefore, null hypothesis was accepted.

Discussions

The finding of this study revealed that Close-Circuit Television (CCTV) surveillance cameras could assist caregivers and Attendants at ECCE centres on their daily jobs of fulfilling curricular objectives vide quality learning, policing, care-giving, concerted monitoring and proactive evaluation geared towards developing the child's innate

intelligence, through proper scaffolding on the one hand. While on the other CCTV could provide the needed synergy between quality policing and learning in the ECCE centre and parents/guidance on reportage of child's performance evaluation in line with the ECCE curriculum for parents/teachers further necessary actions on the child. The findings further revealed that CCTV could help in the attainment of quality policing and leering and the attainment of curricular objectives for chirmed 0–5 years by reducing all caregivers/child misdemeanours, anti-social and maladjustment problems that could impact negatively on the child's educational development, while promoting quality policing and learning. The study further answers such questions as: How can CCTV surveillance camera could ensure quality policing, learning, monitor and ensure quality care-giving in ECCE centres? How do parents rate the use of CCTV surveillance cameras in monitoring and ensuring quality policing and learning including quality care-giving in ECCE centers? This result goes in line with the opinions of Graham and Homel (2008), Marie and WimBernasco (2018) and Eziechina, et al. (2017), who posits that CCTV surveillance camera could help in the modification of caregivers' pedagogical knowledge and skill.

The result of the study further revealed that there is no significant difference in the monitoring and quality policing and learning with or without the use of CCTV surveillance cameras in ECCE centres and there is no significant difference in parents rating of use of CCTV surveillance cameras in ensuring quality policing and learning in ECCE centres. This result is more probably on either parents' awareness level of importance of feedback/reportage on children development or cost of time in relying on such advanced technology like as it is in developed economies of the world.

Again the result further buttresses that difference in the educational system of our country compared to foreign countries with advanced technology for a social survive like education. Subsequent on this result, it is not surprising that in face of the advantages of use of CCTV surveillance cameras in early years education centre, parents are yet to key-in into the technological trend.

The study further revealed that the cost of running this advanced technology is high especially when natural phenomenon like thunder, lightning bolts and irregular power supply, cooling system for the CCTV system could obstruct its uses. These acts as constrains in the use of CCTV for ensuring quality learning and policing in ECCE centers in Delta State. Finally, the Caregivers and Attendants believed that the technological wind supporting its uses in the big cities and advanced nation has not affected the centres sampled. Thus, the null

hypotheses were held. This result is also supported by the opinions of Eziechina, et al. (2017) and Leighton et al (2014).

Conclusions

The use of CCTV surveillance cameras in public and private schools is only novel in less developed towns and rural areas in Nigeria. Most tertiary institutions are using it as alternative in curbing examination malpractices and other examination ethics related offences. Recently, most schools are using CCTV surveillance cameras for several security measures and protection of the students in the wake of rampant school children adoption as akin to Northern Nigeria states. Based on the findings of this study, the sooner the uses of CCTV surveillance cameras become relevant, the better of our early years education system. Again, it should not be used only as means of curbing examination malpractice, providing safety/security of properties and others it should also be used in the supervision of instruction and other essential educational/pedagogical practices in every tier of education. With this, use of CCTV surveillance cameras will help to ensure internal policing and quality care-giving capable of reducing pupils' negative transfer of knowledge into the former primary school system as it could ensure/pursue and attain a curriculum-goal attainment.

Recommendations

The following recommendations were made:

1. Parents/guidance, early years educational providers and school proprietors, NGOs/NGAs and other relevant bodies should partner in providing CCTV surveillance cameras in every public and private ECCE centres to monitor and ensure quality care-giving and policing of pupil's developmental progress.
2. State Governors should liaise with Presidency to reduce VAT and other custom duties on every educational equipment/resources/materials imported from overseas to encourage schools in procurement from local markets in Nigeria.
3. To save cost and issue of constraints in use of CCTV surveillance cameras, State Government should empower local technicians and artisans in making prototype of these foreign technological devices without interfering with copyright ownership of such products so that every ECCE center could afford it.

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CCTV CAMERA RECORDER



SIMPLIFIED CCTV CAMERA PHONE RECORDER



MOUNTED CCTV CAMERA



WIRELESS CCTV CAMERA SYSTEM



WIRELESS CCTV CAMERA SYSTEM