American Journal of Computer Science and Information Engineering
2015; 2(2): 23-27
Published online April 30, 2015 (http://www.aascit.org/journal/ajcsie)

AASCIT American Association for Science and Technology

Keywords
Crime Detection,
ICT Facilities,
Availability and Utilization,
CCTV,
Security,
Nigeria

Received: March 23, 2015
Revised: April 3, 2015
Accepted: April 4, 2015

Availability and Utilization of Information Communication Technology Facilities, in Early Detection and Prevention of Crime in Ogun State, Nigeria

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Citation
Akinola Kayode Emmanuel, Ogunobi Steven Gbenga. Availability and Utilization of Information Communication Technology Facilities, in Early Detection and Prevention of Crime in Ogun State, Nigeria. *American Journal of Computer Science and Information Engineering.* Vol. 2, No. 2, 2015, pp. 23-27.

Abstract
Crime rate in recent times in Nigeria has risen to its highest level ranging from terrorism, insurgency (Boko Haram), bomb attacks, suicide bombing, kidnapping, ritual killings, baby factory, selling of human parts, human trafficking, armed robbery, human abduction and lots more have been the order of the day in Nigeria. Criminals in Nigeria now make use of very sophisticated and latest technology facilities to carry-out their operations. As a result of this, government has come up with the use of computer-based security framework like Closed Circuit Television (CCTV) cameras and other Information and Communication Technology (ICT) facilities in some public places, to record and monitor what is taking place in specific locations in the country. The study is set out to survey the availability and utilization of a computer-based security framework for early detection and prevention of crime in Ogun State, Nigeria. Community response were sought through the use of questionnaires which were distributed in bus terminals, market places, churches, mosques, motor parks, parties, political gathering, train stations, offices, streets and banks to know their view on the availability, utilization and effectiveness of these facilities in public places. The data obtained were analyzed, using mean and descriptive statistics frequency tables to analyze the questionnaire respondents, while Chi-Square and Crosstab were used to analyze the hypotheses. The findings revealed that, there is an inadequate provision of ICT facilities and CCTV cameras in most of public places in Ogun State and that there is no significant difference between the availability and extent of effective use of ICT facilities and CCTV cameras for early detection and prevention of crime in Ogun State. It also reveals that crimes are being committed daily in Nigerian communities without been detected. It is however recommended that our government should give more priorities to security of lives and properties of the citizen by making adequate provision for facilities and equipment that can aid in early detection and prevention of crime in Ogun State, Nigeria. Major findings were discussed and recommendations were made for the availability and utilization of ICT devices in early detection and prevention of crime in Ogun State, Nigeria.

1. Introduction

The importance of security to human existence cannot be over emphasized. That is to say security to human existence is the synonymous with survival and existence CAFRAD(2014). The extent of security available in any country will go a long way in determining its growth and development. In Nigeria and Africa at large today, insecurity is greatest threat confronting all and sundry, insecurity ranges from terrorism arising from al-Quaida, in the west, east, central and southern Africa.

The porous border of Africa, have continued to stimulate cross-border crime and instability, owing to the lack of appropriate mechanism for monitoring movements and illegal activities across these borders an example is the border between Nigeria, Cameroon and Mali where terrorist freely cross to bring into Nigeria weapons of mass destruction Addo Prosper (2006)

ICT tools such as CCTV technology, tracking technology, bomb scanner and explosive detector are efficient in early detection and prevention of crime. ICT facilities has a significant role to play in fighting crime as a result of this, our government need to invest large amount of money in this area if our community must be safe from different forms of criminal activities.

In spite of the numerous advantages offered by the use of ICT facilities in early detection and prevention of crime, Nigeria government do not make extensive use of these facilities in curbing the menace of insecurity ravaging the land.

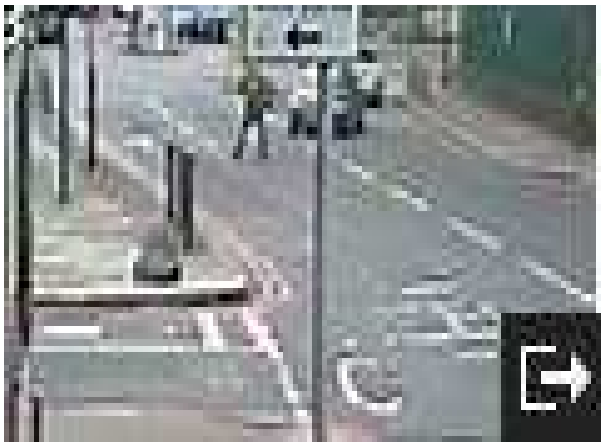

Figure 1. *Lee Rigby Murder CCTV Video*

Before Impact: this CCTV footage shows a Vauxhall Tigra about to crash into Lee Rigby as he crosses the road on 22nd May, 2013.

2. Literature Review

Information Communication Technology (ICT) can be defined as computer based tools used by people to work with the information and communication processing needs of an organization. It encompasses the computer hardware and software, the network and several other devices (video, audio, photography camera etc) that convert information (text), images, sound, motion, and so on into common digital form (Milken Exchange on Education Technology, 1999). Langley and Shain (1985) defined ICT as the acquisition, processing , storage and dissemination of vocal, pictorial, textual and numeric information by micro-electronic based combination of computing and telecommunication. Similarly, Wirsey and Shafack (2002) described ICT as any technology that is used in gathering, storage and retrieval of information that can be in textual or numeric, pictorial and vocal forms using combination of all the multi-media including computers telecommunication. Information and Communication Technology (ICT) facilities like: Closed Circuit Television (CCTV) Cameras, Explosive Detector, Narcotics Detector and Bomb Scanner, play a significant role in early detection and prevention of crime as well as assisting the police in investigation of crime. The UK is one of the most watched countries in the World (Mc Cahill and Norris, 2003; Philips, 1999). It is projected that there are about five million CCTV cameras in use today, and this number is likely to rise in the future (Gill, 2006). CCTV in the security environment can be very beneficial generally in crime prevention/reduction strategy, and its efficacy can be recognized, measured and valued (Ogunleye, Adewale, Alese and Ogunde, 2011). Technology usage within the police forces in England have greatly improved the way in which the police serve, protect and defend the population for the better Maria Cheng (2013).

3. Purpose of the Study

This study aims at investigating the availability and level of utilization of information and communication technology facilities in Nigerian public places in early detection and prevention crime in Nigeria.

4. Research Questions

The following research questions were formulated to guide the study.

1. Are ICT facilities and equipment available for early detection and prevention of crime in Nigerian public places?
2. Which types of ICT facilities do Nigerians use in public places for early detection and prevention of crime?
3. How adequate is the ICT facilities in Nigerian public places in early detection and prevention of crime?
4. Is there any difference between church/mosque, bus terminal/train stations/airports, banks, university/polytechnic/colleges of education as regards the availability of ICT facilities and equipment in crime detection and prevention?

5. Research Hypothesis

The following hypotheses were used to test the research questions at 0.05 level significant:

H0: There is no significant difference between

church/mosque, bus terminal/motor parks, train stations/airports, banks, university/polytechnic/colleges of education as regards the availability of ICT facilities and equipment in crime detection and prevention.

HA: There is significant difference between church/mosque, bus terminal/motor parks, train stations/airports, banks, university/polytechnic/colleges of education as regards the availability of ICT facilities and equipment in crime detection and prevention.

6. Methodology

Survey method was used to gather data for the study using structured questionnaires. Random sampling technique was used with two hundred and sixty questionnaires administered to different categories of people in market place, banks, churches, mosques, motor parks, universities, colleges, polytechnics and airport. Out of this number, only 240 (92%) questionnaires were duly responded to and returned to the researcher.

Table 1. *Distribution of Respondents by Education*

EDUCATION					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	Secondary School	33	13.6	13.8	13.8
	Bachelor Degree	118	48.6	49.2	62.9
	Master's Degree	60	24.7	25.0	87.9
	Doctorate Degree	18	7.4	7.5	95.4
	Professors	11	4.5	4.6	100.0
	Total	240	98.8	100.0	
Missing	System	3	1.2		
Total		243	100.0		

Table 1: showed that out of the 240 questionnaire duly answered and returned to the researcher, 33(13.6%) respondents were secondary school degree holders, 118(48.6 %) respondents were Bachelor's degree holders,60(24.7%) respondents were Master's degree holders,18(7.4%) respondents were Doctorate degree holders, 11(4.5%) respondents were professors. Based on the above analysis it could be concluded that majority of the respondents were literate.

7. Result of Analysis and Discussion

7.1. Research Question 1

Are ICT facilities and equipment available for early detection and prevention of crime in Nigerian public places?

Table 2. *Availability of security technology in public places*

Availability of security technology in public places	**Yes**	**%**	**No**	**%**
Home	53	22.1	187	77.9
Place of work	90	37.5	150	62.5

The table2 above, shows that majority of the respondents (77.9%) did not agree that ICT facilities and equipment are available for early detection and prevention of crime in home while 62.5% did not agree that they are available in place of works.

Table 3. *Availability of identified ICT facilities in public places*

Security Technology available at	**CCTV cameras**	**%**	**Explosive detector**	**%**	**Bomb scanner**	**%**	**None**	**%**
Home	38	15.8	18	7.5	2	0.8	182	75.8
Place of work	86	35.8	16	6.7	4	1.7	134	55.8

From the table, majority (75.8%) are of opinion that, identified ICT facilities are not available in the home while 55.8% are of opinion that they are not available in places of work.

7.2. Research Question 2

Which type of ICT facilities do Nigerians use in public places for early detection and prevention of crime?

Table 4. *Percentages of ICT facilities used by Nigerians in public places*

Place	**CCTV**	**%**	**Expolsive detector**	**%**	**Narcotics detector**	**%**	**Bomb scanner**	**%**	**None**	**%**
Bank	170	70.8	24	10.0	0	0.0	46	19.2	0	0.0
Market	72	30.0	4	1.7	0	0.0	0	0.0	164	68.3
Institutions	51	21.3	11	4.6	14	5.8	0	0.0	164	68.3
Church	60	25.0	3	1.3	2	0.8	0	0.0	175	72.9
Mosque	30	12.5	13	5.4	0	0.0	0	0.0	197	82.1
Motor park	39	16.3	0	0.0	8	3.3	4	1.7	189	78.8

The table reveals that all the facilities are used in the banks but in other places, majority ranging between 68.3% and 82.1% believe that none of the facilities are used.

7.3. Research Question 3

How adequate are the ICT facilities in Nigerian public places for early detection and prevention of crime?

Table 5. *Adequacy of ICT facilities in Nigerian public places*

Are there enough Security facilities in Ogun State?	Frquency	%
Yes	86	35.8
No	154	64.2

From the above table and figure below, only 35.8% of the respondents are of opinion that security facilities are enough while the remaining 64.2% believe that they are not enough.

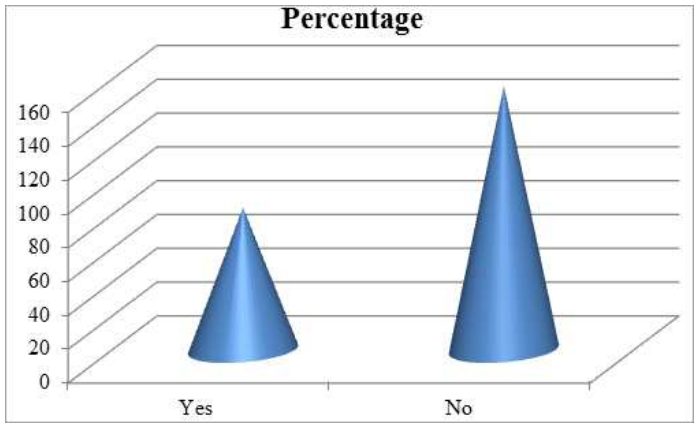

Figure 2. *How adequate are ICT facilities in Nigerian public places for early detection and prevention of crime?*

7.4. Research Question 4

Is there any difference between church, mosque, motor park, banks, institutions and market as regards the availability of ICT facilities and equipment in crime detection and prevention?

Table 6. *Differences in availability of ICT facilities in crime detection and prevention in Nigerian public places.*

Places	CCTV CAMERAS	EXPLOSIVE DETECTOR	NARCOTICS DETECTOR	BOMB SCANNER	NONE	Total	Chi-square	Sig
Bank Count	170	24	0	46	0	240		
Expected	70.3	9.2	4.0	8.3	148.2	240.0		
Market Count	72	4	0	0	164	240		
Expected	70.3	9.2	4.0	8.3	148.2	240.0		
Institutions Count	51	11	14	0	164	240		
Expected	70.3	9.2	4.0	8.3	148.2	240.0		
Churches Count	60	3	2	0	175	240	658.99	0.00
Expected	70.3	9.2	4.0	8.3	148.2	240.0		
Mosques Count	30	13	0	0	197	240		
Expected	70.3	9.2	4.0	8.3	148.2	240.0		
Motor park Count	39	0	8	4	189	240		
Expected	70.3	9.2	4.0	8.3	148.2	240.0		
Total Count	422	55	24	50	889	240		
Expected	422.0	55.0	24.0	50.0	889.0	240.0		

The table shows a chi-square value, 658.99 which is significant at 0.05, ($P<0.05$). This shows that there is significant difference between church, mosque, motor park, banks, institutions and market as regards the availability of ICT facilities and equipment in crime detection and prevention.

8. Major Findings of the Study

1. The result of this study shows that, there are grossly inadequate provisions of ICT facilities in Ogun State. Most public places like: Schools, Churches, Mosques, Motor Parks/Bus terminals and Markets lack ICT facilities for detection of criminals.

2. There is significant difference between Church, Mosque, Motor Park, Banks, Airport and Tertiary institutions as regards to availability of ICT facilities.
3. As a result of lack of ICT facilities for crime detection in most public places, its effective use could not be ascertained.

9. Conclusion

The fight against crime in Africa requires a unified and coordinated approach supported by strong ICT security system. The research recommends the use of these technologies (CCTV technology, Narcotics detector, Bomber scanner and Explosive detector) which are not too expensive to purchase, install and operate. Crime nowadays is borderless in nature and this makes fight against criminals more complicated for law enforcement agents. To successfully tackle crime, African leaders need to gain knowledge from the steps taking by most developed countries in using ICT to combat crime.

Recommendations

Because of considerable amount of lives and properties already lost to insecurity and the present and future threats posed thereby the following recommendations are hereby given:

1. Nigeria government should install Closed Circuit Television (CCTV) cameras on public highways and in shopping malls and arcades. The police services in Nigeria should adopt what their counterparts in developed countries use CCTV for, such as surveillance of target premises and locations where police have intelligence that crime is likely to occur. These types of CCTV operations are used to remotely monitor premises without having to have police officers engaged in long term operational surveillance. It can be used in emergence response, patrol management, individual and vehicle tracking and gunshot detection;
2. The problems of insecurity should not be left to the government alone. Individuals, private and public as well as non-governmental organizations must join hands in combating crime;
3. Individuals must be encouraged to use ICT facilities to detect and fight criminality at any level.

Acknowledgment

The author acknowledges the immense help received from the scholars whose articles are cited and included in references of this manuscript. The author is also grateful to authors / editors / publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

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