Involvement of Technological Growth on Policing Performance in Ghana

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Abstract

Purpose: The purpose of this study was to investigate the involvements of technological growths on performance of police officers and suggest the best ways to enhance technology use in the Ghana Police Service.

Methodology: The study adopted a descriptive research design survey. The sampling techniques used were simple random sampling. Raw data from respondents was obtained using questionnaires, interviews and focused group discussions. The qualitative data was analyzed thematically and by looking for patterns. They were presented in the form of narrative and verbatim quotations. Quantitative data was analyzed using descriptive statistics includes percentages and means. They were presented in tables, graphs and pie charts.

Findings: The results of the study established that the performance of police officers has greatly improved due to growth of technology. The study established that there was use of technology in Ghana police service though not very much advanced.

Conclusion: The study concluded that Globalization and new technologies have facilitated certain cyber-criminal operations, thereby placing an additional burden on law enforcement agencies.

Recommendation: The study recommends the government of Ghana should increase the allocation of funds to the National Police Service for the acquisition of updated equipment, to provide training at appropriate levels in forensic techniques and in technological skills for policy makers and law enforcement and investigative personnel, introduce appropriate procedural and substantive laws to deal with crimes committed in an electronic environment and raise public awareness, on the appropriate use of the internet.

Keywords: New technology, performance, Ghana police service, policing.
1.0 INTRODUCTION

Over the past several decades, there have been dazzling technological innovations that seem to occur with ever-increasing speed all over the world (NIJ, 1998). According National Institute of Justice, Systematic photography for criminal identification was first used in San Francisco in the late 1850’s. Police use of telegraph began in Albany, New York, in 1877, one year later; in 1878 the telephone was used in police private grounds in Washington, DC. In 1901, Scotland Yard adopted a fingerprint identification system. This facilitated identification of criminals. In 1923, the first police crime laboratory in the United States was established by the Los Angeles Police Department and the teletype machine was inaugurated by the Pennsylvania state police and this helped in investigating crimes. Detroit police began using the one-way radio in 1928, Boston police began using the two-way radio in 1934, in 1930, the prototype of the present-day polygraph was developed, and radar was introduced to traffic law enforcement in 1948. In 1955, the New Orleans police department was one of the first departments in the country to install an electronic data processing machine and this had a great impact on communication (National Institute of Justice, 1994).

Use of computers, finger print reader, internet, wireless computers cell phones and global positioning systems are other growths that have been discovered. The introduction of the telegraph in the late nineteenth century and the utilization of two-way radios, engine vehicles and PC supported dispatching amid the twentieth century have achieved sensational changes in the association of police work and, with them, new public desires for police administrations. This is the reason behind why individuals expect that the most recent round of technological change will have a similarly significant effect on policing (National Institute of Justice, 1994). Advances in innovation have been a blended gift for contemporary law implementation organizations. Take the dangerous spread of Internet access over the last several decades, for instance. Regular advances like online networking and different applications have made it possible for groups and even terrorist-based gangs associations to organize, making a completely new, computerized space that requires policing (National Institute of Justice, 1994).

Social media is not the main innovation that has drawn concern from police. Numerous in the law enforcement network have especially referred to Waze, a movement following application that shows the present area of cops, as conceivably permitting those with criminal plan to maintain a strategic distance from (or search out and hurt) law requirement officers. While this unquestionably confuses crafted by keeping the general population safe, criminals utilizing the Internet, whatever they utilize it for, regularly abandons a trail. With the best possible learning and instruments on their side, law requirement officers can utilize this extensive channel of correspondence against potential or suspected criminal guilty parties. The Internet has turned into an expansive trap of shared individual data that remaining parts allowable as proof when accomplished legitimately; making a natural database of recorded practices that can give one-of-a-kind knowledge into each case. Whenever dissected, this information can even be valuable in distinguishing criminal patterns and foreseeing dangers (Koper, 2009).

Police are being entrusted with an undeniably muddled test as the state of innovation advances, however the present best officers aren’t precisely lacking in technical muscle. A similar fast development of innovation driving brisk adjustment with respect to police has set the phase for energizing, imaginative tech that enables officers to serve their networks. Law implementation
officers around the nation have perceived the estimation of these apparatuses, utilizing them to meet the moving requests of police work. Some are still generally untested, others are dubious, yet each new deadly implement in the battle against wrong doing can possibly profoundly modify the manner in which law requirement works (Koper, 2009). As per the 2014 criminal justice information services annual reports, South Africa has a high crime rate recorded at 47 kills daily. Greater Mayfair Safety and Security (GMMS) that watches the Mayfair rural areas in Johannesburg has detailed wrong doing decay and capture of numerous crooks since the presentation of WhatsApp and BBM Messages as a method for revealing violations and suspicious episodes. Inhabitants have communicated a great deal of thankfulness for the presentation of these applications as a way to guarantee security on the zone as the reaction to wrong doing exercises by the police and security organizations has expanded and occupants are more vigilante (CJIS, 2014).

South Africa's City Center has additionally encountered the equivalent extraordinary fall in crime rate since the presentation of CCTV cameras in the city. The CCTVs have reduced violent muggings, cash-in-transit heists, bank burglaries and other violent crimes in what used to be the riskiest city in South Africa. Organizations have since turned out to be protected attributable to the more than 240 cameras covering all boulevards, 'Wrongdoing Line'; a mysterious wrong doing tip-off administration and in addition SMS informing wrongdoing revealing. The utilization of long-range informal communication applications and being the main nation to present SMS messages wrong doing revealing has helped South Africa significantly diminish the wrong doing rate, capture offenders and recoup millions worth of stolen products. The activity being unique enhances the network policing and carefulness in battling and diminishing wrong doing and in addition collaboration in securing offenders (CJIS, 2014).

Kumbuti, 2013, found that in Kinsasha city information and communications technology (IT) has upset the manner, in which individuals live, learn, work and cooperate. As crime and criminal exercises have turned out to be more refined and new patterns in crime designs have developed, law enforcement organizations have reacted by upgrading their gear and technologies. She found out that Ghana police service has not adopted the latest technological growth in crime prevention. Ghana police service hardly use soft technologies which enable strategic use of information to prevent crime. They use personal mobile phones and walkie-talkies as the main communication equipment in crime prevention (Kumbuti, 2013). Simple things like occurrence books are still kept in hard copies instead of being in soft copies which may be retrieved anywhere and easily. At times criminals are taken to courts and the occurrence book reports are missing delaying the dispensation of justice.

Technological growths have molded policing in numerous essential ways throughout the years. One needs just to consider that the essential police technique for a significant part of the twentieth century, mechanized preventive watch and fast reaction to calls for administration was created because of the development of the vehicle, two-way radio communications, and Personal computers supported dispatch frameworks. In recent decades, there have been numerous essential growths regarding data advances (IT), scientific frameworks, video surveillance frameworks, tag pursuers, deoxyribonucleic corrosive testing innovations that have had broad impacts on police offices. Ghana police service has attempted to ensure that police officers are prepared on new technologies. For example, recruits at Ghana Police College have access to computer where they
are instructed on the essentials of personal computer technology. Ghana police benefit has likewise purchased Personal Computers for a few stations, new vehicles, and present-day weapons to distinguish and deflect crime, yet notwithstanding these endeavors, they have not possessed the capacity to control all the innovation related crimes. Ghana Police Officers are constantly being confronted by the ever advancing and increasingly sophisticated nature of new technology. Simple things like occurrence books are still kept in hard copies instead of being soft copies which can be retrieved anywhere and easily. It is against this background that this study wanted to find out the involvements of technological growths on the performance of police officers.

The general objective of the study was to investigate the involvements of technological growth on performance of police officers and recommend the most ideal approaches to upgrade technological use in the police benefit.

2.0 LITERATURE REVIEW

2.1 Theoretical Framework

This study used postmodern hypothesis of technology by John Watkins Chapman which portrays both a time and a wide development which was created in the late-twentieth. Postmodernism is commonly characterized by a state of mind of suspicion or doubt toward stupendous accounts, belief systems, and different principles of enlightenment, including the presence of target reality and total truth, and in addition thoughts of sanity, human instinct, and growth. The theory asserts that information and certainties is the result of novel frameworks of social, authentic, and political talk and elucidation, and are in this manner logical and developed. Appropriately, postmodern idea is extensively described by propensities to epistemological and moral relativism, pluralism, self-preferentiality, and irony (Thompson, 1914).

In policing, the rise of technology and its effects on organizational conduct, crime patterns, individual work conduct and individual ways of life cannot be overemphasized. Past trends in the economy and moves in industrial management, changes in National policing are additionally inserted in social advances that have been encouraged by developments in technology. A few models are found in the terminations of specific kinds of businesses, for example, book shops, record stores, and camera shops; disappointments of real daily paper organizations; and the noteworthy cutting back of U.S. Postal Service tasks. Every of these reflect change in correspondence achieved by innovation. Different changes have gotten comfortable images of present-day life, for example, web based life, texting and web journals, alongside Twitter, YouTube, Myspace and Facebook. Conversely, the latter impact systems and present complications for police, as seen in the already strained broadband demands brought about by the marriage of cell phones, televisions, computers, and an inventory of handheld, portable Web connected devices that respond to desires for flexibility, speed, miniaturization and electronic efficiencies. These are trends that are becoming familiar constructs of modern society and embedding technological change into our way of life.

2.2 Empirical Review

According to Cohen (2007), the type of equipment used by our police officers range from the simple but outdated 1940s walkie-talkies and the 1950s G3 rifles that are still fundamental in the day to day running of Ghana police operations to blue tooth-controlled chipsets and modern day 9 mm revolvers. When we compare the standards of police equipment in use today in relation to
what is in use elsewhere and shared with you a particular image depicting Ghana’s 999 service center with US 911 service center. Criminals and terrorists use the modern-day sophisticated communication gadgets and weaponry at a time when our police service is still stuck with old mid-20th century technologies. Police agencies have embraced an array of new mobile and stationary technologies in a quest to not only keep up with but stay well ahead of criminals and wrongdoers (Cohen, 2007).

According to Kumbuti (2013), information technology has revolutionized the manner in which individuals live, learn, work and collaborate. As crime and criminal activities have become more advanced and new patterns in crime designs have been devised, law enforcement agencies have reacted by upgrading their gear and technologies. The research objective was to determine the level of application of technology as a strategy by Ghana Police to detect crimes in Kinsasha City. Primary data source was used in this study where data was obtained through interactive interviews. The nature of data collected was qualitative and was therefore analyzed using content analysis technique. In regard to the level of application of technology, the study established that Ghana police force has not adopted latest technological growths in crime prevention. Ghana police force hardly uses soft technologies which enable strategic use of information to prevent crime. The key finding was that Ghana police use personal mobile phones and walkie-talkies as the main communication equipment in crime prevention. With reference to application of Technology in innovation, the study established that technology has not been used to improve efficiency in crime detection by Ghana police force. However, the use of mobile phones has enables police officers to call for assistance whenever they come across crimes.

With the fast growth of different technologies, law enforcement officers have found themselves barraged with a consistent stream of creative technological tools, which are all intended to enhance fight against crime. It is an overwhelming experience to keep abreast with all the new developments (Smyth, 2011). Finding a so-called better mouse trap has faced each generation of police leaders. The production of new instruments has dependably been done for significant issues for public officials including officer safety, public protection, operational efficiencies, cost regulation, enrollment and maintenance benefits, et cetera. Over the decades, the so-called hard technologies (e.g., cars, guns, vests, less-lethal weapons, restraints, and barriers) have been the instruments requiring consistent assessment. These devices have differing degrees of significant worth to officers and their associations (Smyth, 2011).

On account of the today technology, law implementation officers can discover suspects reasonably effortlessly, and secure citizens in an easy way. Deoxyribonucleic Acid (DNA) can be tried and is utilized for proof in wrong doings. Crime trackers are utilized to recognize crime ridden regions and are utilized to distinguish where law enforcement officers ought to be watching to protect citizens. There is a considerable measure of other innovation utilized in law authorization that subjects enormously appreciate. This kind of technology is utilized to ensure or offer equity to individuals. This positive innovation is constantly expressed gratitude toward and extraordinarily refreshing by the residents of America (Lexington Police Department Official Web Site). Despite the fact that law implementation technology has constructive outcomes, it can likewise have negative impacts. Numerous individuals trust that law implementation specialists are snooping in their private business. Not as much as a year back, officers were conceded the authorization to take advantage of people groups’ cell gadgets without a court order. This made a significant contention.
Many trust that it is wrong for officers to be permitted to tune in into their discussions. They believe they are being dealt with like crooks (Lexington Police Department Official Web Site).

3.0 METHODOLOGY

The study adopted the postmodern theory of technology by John Watkins Chapman. The study adopted a descriptive research design survey where it targeted 1700 police officers, who formed the target population of this study. A total of 170 police officers formed the sample size. The sampling techniques used were simple random sampling for junior police officers followed by purposive sampling technique for senior police officers. Raw data from respondents was obtained using questionnaires, interviews and focused group discussions. The qualitative data was analyzed thematically and by looking for patterns. They were presented in the form of narrative and verbatim quotations. Quantitative data was analyzed using descriptive statistics includes percentages and means. They were presented in tables, graphs and pie charts.

4.0 DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Demographic Characteristics

The study found out that majority were aged between 31 and 40 years at 54% followed by those aged between 20 and 30 years at 22%. Those aged between 41 and 50 years were at 20% and 4% for those aged between 51 and 60 years. The males who participated in the study were 61% and the females were 39%. The findings showed that 5% of the respondents were deployed in administration, 40% in general duties, 20% in crime investigations, 5% in records, 20% in operations and 10% in human resource department. From the respondents 17% were university graduates in various disciplines which included criminology, human resource management and information technology 83% were college graduates which included the mature officers who had experience in police work.

4.2 Descriptive Analysis

4.2.1 Technologies used in Ghana Police Service

According to the respondent’s pocket phones were the most used in Ghana police service at 60% followed by computers at 20%, CCTV cameras at 10% and in-vehicle computers at 5% and use of apps that can alert officer ‘s locations of known criminal offenders at 5%. A respondent during a focus group discussion noted that;

“...most of the technologies used in Ghana police service include the pocket phones which you will find in every police station and even police posts and bases, few stations have computers ...”

With use of pocket phone being at 60%, most police stations have pocket phones whereby in one station you can find at least five pocket phones. One used by the officer in charge of the police station, the duty officer, the crime standby, and the in-charge patrols, in charge armory and the other by the report office personnel.
4.2.1.1 Benefits of Technology

Table 1: Benefits of technology on performance of police officers

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree</th>
<th>Disagree</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>It has Improved accuracy</td>
<td>46%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Improved Speed of case investigations</td>
<td>43%</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>Improved communication in the organization</td>
<td>50%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Reduced response time</td>
<td>26%</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>Improved Motivation to perform duties</td>
<td>7%</td>
<td>34%</td>
<td>13%</td>
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As indicated by Bailey (1999), firearms were the most punctual type of assurance utilized by peace officers. Be that as it may, even those did not show up until the late 1860s, fundamentally on account of a reaction against the armed and severe police powers of Napoleonic France. Cops wore civilian clothes, had no formal preparing, and, on the off chance that they carried guns, they were concealed. That changed with the military draft mobs of that time and the beginning of the Civil War. Suddenly the uniform, once the image of oppression, was a symbol of respect. American lawmakers and nationals dismissed the European model of unchecked power, and made the neighborhood police responsible to non-military personnel specialist (Dowling, interview). Guns turned out to be more ordinary as residents acknowledged the viciousness that occasionally emitted in police-native experiences, and uphold the officers' have to secure themselves.

4.2.2 Challenges Police Officers Face in adopting New Technology

The study found out that, due to fast technological growths the digital forensic tools become obsolete too often. 40% of the respondents had the view that this has become a major challenge because they are expensive and the budget allocation to acquire them is limited. 22% of the respondents noted that lack of motivation in terms of welfare of police officers remains to be a challenge. One of the respondents noted that;

“......if police officers were paid well, they could go a step higher to improve their knowledge on new technologies, but if the pay is a meagre then are they going to pay school fees for their children or take themselves to school to know about technology?”

About 10% of the respondents noted that lack of specialized training is also a challenge that is facing police officers in adopting new technology. Respondents noted that police officers by the date of this research were not equipped with up-to-date technical knowhow to adequately investigate technology related crimes. With rapid changes in technology, law enforcement officers are not adequately equipped to detect and deter cyber-crime. A respondent indicated that scenes of crime personnel ought to have training on forensic evidence recognition and collection techniques to avoid contamination and destruction of critical evidence. The above view corresponds with (Hollis et al., 2000), that police officers need specific levels of training and certification to correctly, effectively and efficiently carry out their roles when investigating electronic crimes, collecting and examining evidence and providing evidence in court.
Unemployment of techno-savvy personnel was seen a major challenge in adopting technology in Ghana police service. 54% of the respondents cited that while conducting police officers, there is no a consideration of which courses one undertook in the case of graduates. This leads to eliminating techno-savvy individuals just because they are not good athletes per say. One of the respondents during a focused group discussion cited that;

“.....you find that the recruiting officer is more concerned with physical appearance of the candidate other than the academic potential. Police service is seen as a profession where if you fail in high school studies, then you are only suited for disciplined forces. This perception locks out potential candidates who would bring in a wide range of expertise that could improve investigations and curbing crime...”

Job placement being poor was also seen as a challenge in adopting technology. A respondent noted that;

“......in the Ghana police service, you will find an ICT expert is deployed on patrol duties while a person deployed in banking fraud unit is a specialized in something different. If only police officers could be placed where they fit based and not on the basis of who knows who, then we could be very far in terms of performance...”

The expansive scale computerization of U.S. police offices starts. Significant PC based applications in the 1970s incorporate PC helped dispatch (CAD), administration data frameworks, brought together call accumulation utilizing three-digit telephone numbers (911), and concentrated coordinated dispatching of police, fire, and restorative administrations for vast metropolitan areas.1972The National Institute of Justice starts an undertaking that prompts the growth of lightweight, adaptable, and agreeable defensive body protective layer for the police. The body defensive layer is produced using Kevlar, a texture initially created to trade steel belting for spiral tires.

4.2.3 The Effects of Technology Use on Performance of Police Officers

4.2.3.1 Use of Technology in Detecting Crimes

About 90% of the respondents had the opinion that technology has helped in detecting crime. This was because intentions of the offenders could be detected even before the offence is committed; this is facilitated by the closed-circuit television (CCTV) cameras which are fitted in major cities. One of the respondents noted that;

“... The CCTV cameras located at major cities have helped very much in detecting and curbing crime, an example is an incident that happened in Kinsasha city in 2017 where personnel at national police service headquarters, noticed a gang of four men following a member of the public. They monitored them for a while and realised they were actually after the man, they alerted the personnel on the ground and managed to arrest the four, after they were arrested, crude weapons were recovered. That is just one of the cases of how offenders have been caught recently thanks to the new technology.....”

Regardless of the frequent use of CCTV cameras, tracking of phones other technologies, 10% of the respondents seemed ignorant on the technology use in curbing and detecting crime. Most of those respondents in this category were the elderly respondents of the age between 51-60 years. One of those respondents had this to say during a focused group discussion;
“...police work is experience, the new generation is making the police work complicated, they should borrow some knowledge from the old folks...”

4.2.3.2 Use of Technology in Investigating Crimes

According to the study, 80% of the respondents were of the opinion that technology has helped in investigating crimes. Most of them cited the Deoxyribonucleic Acid (DNA) sampling which has been used in most of the rape cases. This has really helped in knowing the real offender. Other respondents cited the cyber-crimes where investigations have been made easier due to tracking devices used to establish where the offence was committed, the presence of the offender and offenders accomplishes. A respondent noted that the technology has helped in investigating crime but also could work for the disadvantage of the general public. He cited a case where a man was arrested for murder after having been found with a phone of the victim. The respondents had a deep discussion on that case and had the view that the man could be as well innocent. The burden of proofing his innocent could be very minimal. 5% of the respondents were of the view that use of technology does not help in investigating a crime. They said that experience in police work is what is needed and the use of technology is not necessary. 10% of the respondents were not even aware of technology use in investigations. Most of those respondents were mainly deployed in patrol duties. One of the respondents had this to say;

“…..if a criminal is arrested, let him be arraigned in court. That’s the work of crime branch personnel....”

Generally, most of the respondents acknowledged the use of technology in investigating crime. The respondents noted that all police stations should equip with the latest gadgets to help in investigations. Most of the respondents had the opinion that cyber-crime units should be placed in every police division so that it would enhance crime investigations.

4.2.4 Best Strategies to Help Police Officers Adopt New Technology

4.2.4.1 Budgetary Allocation of Funds to the Police Service

The study found out that if the government of Ghana could allocate funds for the acquisition of updated equipment’s then the performance of police officers would improve a lot. A total of 66% of the respondents were of the opinion that budgetary allocations towards digitization of Ghana police service should be increased. Police executive research forum (1996), noted that Technological advances are useful only if police agencies can afford them. That point is made in the results of a survey issued in 1996 by the Police Executive Research Forum (PERF). The PERF survey found that in their efforts to improve the patrol function and maximize the impact of community policing programs, police nationwide are acquiring new technology designed to decrease response time and speed information dissemination. But the PERF survey also found that 83 percent of survey respondents listed the high cost of acquiring these technologies as the primary deterrent in their past efforts to become better equipped.
4.2.4.2 Sensitization Programs

The national police service should initiate programs to create awareness to police officers on the current cyber-crimes, use of computer systems, use of internet, use of software’s, and use of antivirus and possible counter measures of such cyber-crimes. The government of Ghana should raise open public awareness, particularly among guardians and teachers; of the way those youngsters using the Internet might be presented to digital violations like improper recordings and photographs and that the technological way to square or channel such recordings and photographs are accessible. Network access providers ought to expand the act of setting up hotlines to which the overall population can report hostile or unlawful substance of locales on the Internet before substance control can be controlled. Sites are blocked out and out by methods for oversight, as happens in nations where the Government controls web get to. Somewhere else, either Internet specialist co-ops or site managers can be held criminally at risk on the off chance that they intentionally circulate material that is viewed as illicit or destructive under any of the laws of our nation.

4.2.5 Appropriate Legislation to Support the use of Technology in National Police Service

4.2.5.1 Legislation to Support use of Technology

A total of 60% of the respondents were of the opinion that there was no legislation in Ghana to support use of technology in Ghana police service. 20% of the respondents said that there was legislation in support of use of technology in Ghana police service while 20% said they do not know whether there was any legislation to support the use of technology in the Ghana police service. The study found out that the criminal procedure code in Ghana does not talk of the guidelines on prosecution of cyber-crime offenders; therefore, it should be rectified to show clearly on how such offenders should be prosecuted. The police officers and prosecutors should be trained on how to handle digital evidence so as to understand the nature of technology-based offending so as to be able to curb, detect and deter occurrence of such offences.

4.2.5.2 Trained Personnel Involved in the Implementation of Technological growth

64% of the respondents did not know whether the personnel involved in the implementation of technological growth were adequately trained. 30% of the respondents were of the opinion that they are not adequately and sixteen percent said that they were trained. The respondents felt that most of the ones who get training majorly through their own private studies always exit police service due to poor remunerations and poor conditions of work. New technologies can offer police many useful methods for combating criminal activity, with such tools as GPS and advanced communications systems. Technologies such as body armor and less-lethal projectiles also improve the safety of both police and the public. However, in an increasingly high-tech world, more and more crimes involve technologies and police must be prepared for them.

According to NIJ (2014), National institute of justice sponsors a broad array of research and development of equipment and technology for police. Its research priorities are based on the needs of the law enforcement community. NIJ both creates new technologies and evaluates technologies on the market for effectiveness and safety. Its evaluation programs are often conducted in real-world environments in partnership with local law enforcement and other outside entities. NIJ is also central in the development of standards for new technologies, such as ballistics standards for body armor.
5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

The study discovered the performance of police officers has greatly improved due to growth of technology. Specifically, the study established that there was use of technology in Ghana police service though not very much advanced. Advanced telecommunication technologies constitute the motor of today’s globalized economy and, as such, cannot be held back from expansion and technological evolution, nor is it desirable that they should. It must be recognized, however, that Globalization and new technologies have facilitated certain cyber-criminal operations, thereby placing an additional burden on law enforcement agencies. Although collaboration between industry and law enforcement is often good, inevitably, the public and private agenda do not always coincide, since companies have a duty to protect the privacy of their customers and the profits of their shareholders.

It is essential that law enforcement agencies other national institutions responsible for fighting Cyber-crimes be given the technical and legislative means to develop an appropriate response capacity. But this alone is not sufficient. The study found out that the challenges to cyber-crime law enforcement can also be met through cooperative partnerships involving the government, the information technology industry and citizens, whose separate interests must be recognized and reconciled. The need for law enforcement structures to modernize and to adapt to changing circumstances and new challenges has become more acute. New technologies should be seen not as an enemy in the fight against technology related crimes, but as potential tools in the prevention of the same.

5.2 Recommendations

The following actions were recommended, which if adopted will improve performance of police officers in terms of detection, investigation and prevention of crime. This will benefit the entire Ghana police service fraternity. It will also be of help to members of the public who will enjoy the benefits of a safe nation. The government of Ghana should increase the allocation of funds to the National Police Service for the acquisition of updated equipment then the performance of police officers would improve a lot. Funding should be made available to provide and training at appropriate levels in forensic techniques and in technological skills for policy makers and law enforcement and investigative personnel. The Government should find ways of attracting high caliber technology specialists to work within law enforcement agencies. The Ghanian Government should ensure that proper procedural and substantive laws reintroduced to manage wrongdoings submitted in an electronic situation. Law requirement offices ought to be furnished with basic framework security to shield their data and knowledge databases from digital assault. National police administration ought to present particular wrongdoing units at the district level. These units ought to keep up helpful courses of action with different organizations against digital wrongdoing.

The legislature ought to guarantee that law authorization offices and legal experts are given fitting assets and hardware to explore, recognize, catch and indict guilty parties who utilize new innovations in carrying out innovation related violations. The administration of Ghana should raise open mindfulness, particularly among guardians and instructors; of the way those youngsters utilizing the Web might be presented to digital wrongdoings like unseemly recordings and photographs and that the innovative way to square or channel such recordings and photographs are
accessible. Network access suppliers ought to broaden the act of setting up hotlines to which the overall population can report hostile or illicit substance of locales on the Web.

**Funding Sources**
Authors received no financial support for the research, authorship, and publication of this article.

**Conflict of Interest**
Authors declares no conflict of interest.

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