



ROLES OF TECHNOLOGY IN MODERN POLICING: THE NIGERIAN PERSPECTIVE

Augustine Ikechukwu OBAH and Ebere J. OKORIE

Emails: bennick222@gmail.com; ebereokorie@uniuyo.edu.ng

Department of Sociology/Anthropology,
University of Uyo, Akwa Ibom State, Nigeria

ABSTRACT

Technology has undoubtedly permeated our contemporary society's enforcement institutions, and Nigeria is no different. These technologies are being developed to help prevent crimes and improve the police's ability to address crime-related concerns. However, crime has been steadily increasing in recent years despite the utilization of technology. As a result, this study examined the role of technology in contemporary policing from a Nigerian perspective. The study employed an analytic research design while social construction of technology theory served as its theoretical base. Reviewed studies revealed that it was in the 1990s that digital technologies such as computer-aided dispatch (CAD) systems, crime mapping software, and early data collection systems enabled law enforcement agencies to better analyse patterns in criminal activity and deploy resources. Furthermore, it was not in doubt that technology aids modern policing statutory service delivery to the public, ensuring a coordinated organisational framework capable of facilitating not just seamless operations, but also imbuing internal organisational dynamics. From the findings, it was recommended among others that as technology evolves, ethical concerns about privacy, bias and accountability must be addressed in order to ensure that technology is used fairly and responsibly.

Keywords: Crime, modern policing, Nigeria, Technology, Security, Law enforcement

INTRODUCTION

Over the years, technology has been seen as a key motivator of law enforcement plans and techniques. The arrival of the telephone, automobile, and two-way radios in the twentieth century caused seismic upheavals in what police do, driving agencies towards a policy of rapid response to civilian requests for police aid (Harris, 2007; Strom, 2017). These technology capabilities enabled stronger contacts and information sharing between police officers and the community they serve (Strom 2017).

According to Strom (2017), powerful technological advancements in the twenty-first century include closed-circuit television, automatic license plate readers (LPRs), in-car cameras, and body worn cameras (BWCs), predictive policing software, and social media communication and monitoring tools, among others. The integration of these technologies has emerged as a key force, allowing law enforcement to function more efficiently and effectively in protecting communities (Global Resourcing, 2024). This is due to the deep role of policing in society,

which ensures public order, enforces regulations, and defends residents' well-being (Bikarevic, 2012). It also maintains the judicial system's integrity, promotes community cohesion, and discourages illegal behaviour (Khan, Ahmed, and Ahmed, 2021).

Hess et al. (2015) define policing as the actual application of law enforcement, with police personnel at the forefront of responsibilities such as law enforcement, community order maintenance, and emergency response. The concept of modern policing may be traced back to Sir Robert Peel's efforts, which resulted in the founding of the Metropolitan Police Service in the early nineteenth century. Taylor (1997) defines policing as the activities, strategies, and institutional processes carried out by law enforcement agencies and people. Its goal is to enforce legal status, maintain societal order, dissuade and investigate illegal actions, and ensure the well-being of residents in a certain area (Taylor, 1997).

Reports of high crime, including armed robbery, assassination, kidnapping, ritual killings, and child trafficking, seem to be on the rise, despite Nigeria's police force's efforts to maintain the nation's internal security (Onyeneke, 2022). Additionally, there seems to be increasing uncertainty in public order. Amidst growing concerns about rapidly expanding cities and impoverished, nameless, and potentially hazardous slums, it has been stated that police officers rarely consider themselves as the society's protectors against lawbreakers. As a result, the public has criticised the police for their incapacity to combat crime in society, and police morale has dwindled over time (Ibikunle and Adefihan, 2018). As a result, there is no doubt that the need for technologies to assist police in combating crime cannot be overstated, as the relationship between police and technologies plays a significant role in determining the achievement and sustainability of their ultimate goals, as well as the success and well-being of the nation.

According to Ibikunle and Adefihan (2018), technology has been integrated into Nigerian policing to improve communication and collaboration among law enforcement bodies, to support data-driven policing with analytics and predictive tools, and to introduce surveillance innovations such as body-worn cameras and drones. Furthermore, advances in forensics, artificial intelligence, and machine learning are improving investigative procedures and resource management (Uduma et al., 2021). Furthermore, social media, cyber security, and community engagement technologies have emerged as critical components of modern police in Nigeria (Ibikunle and Adefihan, 2018). As a result, technology's role in modern police has

long been recognised as both relevant and equivocal. This is because they are perceived to have an impact on police organisation and practices in ways that are closely related to the police function of crime control (Ogunbameru, 2008, cited in Nweke and Anim-Wright, 2024).

Nonetheless, given the continuous rise in crime in Nigeria because of the use of technology tools, it is unclear whether these technical advancements have boosted the police's efficacy in enforcing the law. Furthermore, the usefulness of these technological tools in tackling crime in our current society has not been examined by comparing crime statistics before and after the emergence and implementation of technology in Nigeria's policing system, resulting in a knowledge gap that this study seeks to solve. Considering the foregoing, this study has been meticulously designed to conduct a comprehensive analysis of studies on the role of technology regarding modern policing in Nigeria.

REVIEW OF RELEVANT LITERATURE

In this section, themes related to the topic are reviewed under sub-headings, as follows:

Evolution of Technology in Modern Policing Historically, policing depended on physical force, intuition, and basic instruments to solve crimes and preserve order. However, when crime rates rose and criminals began to employ more advanced techniques, the necessity for more effective and efficient instruments became clear (Alan, 2024). By the late twentieth and early twenty-first centuries, technology has begun to be interwoven into previously inconceivable policing tactics. According to Alan (2024), as processing power increased, so did the sophistication of technology solutions deployed by police departments. By the 1990s, digital technology such as computer-aided dispatch (CAD), crime mapping software, and early data collection systems allowed law enforcement organisations to evaluate trends in criminal behaviour and deploy resources more effectively (Alan, 2024).

Key Technologies for Modern Policing in Nigeria According to Ayinde and Agwu (2016), there are numerous technologies used in modern policing, but five stand out: surveillance and security technologies, DNA testing and other forensic equipment such as crime mapping and hotspot analysis, crime analysis and Geographical Information System (GIS), and predictive policing and data analytics.

Surveillance Technologies Surveillance technologies refer to a variety of tools that are currently available to law enforcement organisations for tracking individual movements and/or providing efficient guardianship to a specific site. Police monitoring is one action justified by its ability to prevent crime. According to Manning (2008), defenders of surveillance claim that it prevents crime through deterrent, particularly when open, because it alerts potential perpetrators to the presence of police.

Deoxyribonucleic Acid (DNA) Testing Police and other law enforcement agencies have recently used a variety of forensic technology to identify criminal criminals (Koper and Lum, 2015). One of the most significant enhancements to these capabilities is the introduction of identification testing utilising deoxyribonucleic acid, also known as DNA. This test detects unique individual genetic codes in DNA samples obtained from biological evidence such as blood, sperm, hair, and saliva (Marx, 2009). It was developed in the 1980s and has since become a popular method of identification, particularly for sex crimes and other serious acts. It is commonly regarded as the cutting edge of offender identification (Marx, 2009).

Crime Mapping and Hotspot Analysis Police personnel use this technology to visualise and study crime patterns in specific geographic locations. Police departments can deploy officers to "hotspots" of criminal activity to prevent crimes or respond to situations more rapidly (Alan, 2024). This strategy is based on the premise that crime is not spread randomly, but rather in predictable patterns. Modern crime mapping software analyses previous crime data and predicts future patterns using advanced algorithms and machine learning models (Alan, 2024).

Crime analysis This is the process of collecting and analysing data about criminal incidents, offenders, and targets. Crime analysis flawlessly guides police managers in deploying and allocating resources based on a genuine grasp of the problem. Canter (2000) explained that there are three (3) essential criteria for crime analysis that police departments should use when designing data collection processes as well as when interpreting the meaning of the information resulting from crime analysis, which are timeliness, relevance, and reliability.

Geographical Information System (GIS) A GIS is an automated system that captures, stores, retrieves, analyses, and displays spatial data (Clarkes, 1990; Ayinde & Agwu, 2016). It is a visual depiction of geographically located data sources such as crime events, land use, property values, racial and ethnic mix, and so on.

Predictive Policing and Data Analysis Predictive policing use data analytics and algorithms to estimate where and when crimes are likely to occur, helping law enforcement agencies to better deploy resources and prevent crimes before they occur (Alan 2024).

The Roles of Technology in Modern Policing in Nigeria Technology has greatly aided modern policing in Nigeria, boosting criminal investigation, case management, and evidence presentation. The use of technology in modern policing has clearly enhanced efficacy and efficiency, introduced new forms of police management and accountability, and met the information needs of external agencies (Chan, Breteon, Legosz, and Doran, 2001, as quoted in Joshua, Idowu, Olanrewaju, and Ajayi, 2021). This implies that technology improves modern policing statutory service delivery to the populace, ensuring coordinated organisational structure that can facilitate not only smooth operations but also imbued with internal organisational dynamic ability; and enhancing external relations and collaboration capacity for achieving a safe global society while acknowledging the use of electronic aided policy tools (Joshua et al., 2021).

Lazaros and Lilians (2013) suggested that technology allows effective communication between the community and police, which improves partnership, increases access to information, and holds the latter accountable to the former. Similarly, in a recent study, Nweke and Anim-Wright (2024) concurred that implementing technology-driven policing tactics had tremendous promise for tackling security concerns and improving modern policing in Nigeria. This is because experts such as Adesola (2019) have suggested that the usage of technology improves real-time crime detection and prevention. Also, Adigun (2020) stated that the Nigerian Police's use of technology gives them a clear strategic competitive advantage over sophisticated criminals. For example, Nte (2020) in his study discovered that Closed Circuit Television Cameras (CCTV) in Abuja have acted as a deterrent to criminal activity.

Challenges of Using Technology in Modern Policing in Nigeria

The incorporation of technology into Nigeria's enforcement system in our modern world clearly faces significant challenges. Financial constraints are a key impediment, since many police agencies lack the resources to invest in technology and give sufficient training (Nte, 2020). Furthermore, the police force faces a technical skills shortfall, with many officers

missing proper technology training (Uduma, 2020). Furthermore, the use of surveillance technologies such as CCTV cameras raises privacy concerns, and social media platforms facilitate the dissemination of false information, which can be a further impediment, as some officials benefit from the current situation and resist reform efforts (Ikueyijo, 2009; Nweke and Anim-Wright, 2024).

THEORETICAL FRAMEWORK

The Social Construction of Technology (SCOT) theory was propounded by Pinch and Bijker in 1984. The theory argues that human actions shape technology, as technology is seen as a product of the social political, economic, and cultural environment in which it is situated (Humphrey, 2005). According to Pinch and Bijker (1984), technology is not just a tool or a neutral entity, but rather it is shaped by social factors such as values, beliefs, norms, and power dynamics. Also, SCOT theory emphasizes the importance of considering the perspectives of different stakeholders in the development and implementation of technology.

Applying this theory to the study, the SCOT theory argues that the adoption, integration, and implementation of technology in our modern policing system are as a result of human actions. In Nigeria, technological tools such as CCTV, and automated plate number readers amongst other sophisticated equipment were integrated into the policing system following the urgent need to address the incessant rise in crime in recent times. Therefore, from the theory, it is glaring that the role technology plays in modern policing is hugely influenced by a variety of social factors including political agendas, public perceptions, and cultural norms. The theory however has faced numerous criticisms. The criticisms by scholars include the overemphasis on social factors, lack of empirical evidence, lack of predictive power, and limited applicability.

MATERIALS AND METHODS

This paper adopted an analytical research design. Primary data was not generated, rather the researcher relied on secondary sources for information. Analytical design helps to undertake critical assessment, interpretation and appropriation of the secondary information required for the understanding of issues or subject matter of the research.

DISCUSSION OF FINDINGS

Most of the papers, articles, and academic works reviewed firmly believed that technology plays an important role in modern police since its applications improve criminal investigation, case management, and evidence presentation. The findings were consistent with those of Clavell, Zamorano and Zavala-Perez (2018), who stated that the use of technologies such as crime mapping, facial recognition, DNA testing, and prediction algorithms improves police efficacy and accountability.

However, moving forward, some studies found that technology-based policing had no substantial influence in Nigeria, this is particularly with reference to when crime figures were compared before and after technology adoption in policing in Nigeria. This was supported by scholars such as Nweke and Anim- Wright (2024), who argued that while technology-driven strategies hold promises for improving security in Nigeria, they have yet to be fully realised due to significant challenges such as financial constraints, lack of adequate training of police men in technology utilisation, intelligence gaps, as well as corruption, among others.

CONCLUSION AND RECOMMENDATIONS

There is no doubt that technology has dramatically transformed many sectors of society, including the police force. It has become an essential component of modern policing, providing police officers with cutting-edge tools for combating crime, gathering evidence, and protecting the public. However, as technology advances, so do the issues it creates, particularly in Nigeria. Thus, ethical considerations about privacy bias and accountability must be addressed to ensure that technology is used fairly and responsibly. Thus, police and other law enforcement organisations should strike a balance between leveraging technology and protecting citizens' rights.

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