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Evaluation Of The Management Of E-Rogues And Crime Incident Reporting And Analysis System As A Basis For Policing In The Bicol Region

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ABSTRACT
Digital innovation has emerged as a global phenomenon, with artificial intelligence becoming an indispensable tool across various sectors. Not only is AI revolutionizing business operations, but its potential to enhance law enforcement strategies is also being widely recognized. By leveraging AI, law enforcement agencies can significantly improve their policing techniques and capabilities. This research aims to identify and assess the challenges faced by the Philippine National Police and to develop effective solutions to address these issues. The data collected in this research were subjected to a qualitative analysis framework, wherein coding served as the initial step for organizing and categorizing information, subsequently leading to a comprehensive thematic analysis that facilitated the nuanced interpretation of emerging patterns and insights. Within the broader context of the Philippines, the central focus of this study was directed towards the Bicol Region, ensuring a complete and exhaustive examination that covered all six of its provinces. To gather primary data, in-depth interviews were systematically conducted with personnel from the Philippine National Police who possessed direct and relevant operational experience with both the E-Rogues Gallery System and the Crime Information Reporting and Analysis System (CIRAS). Data analysis unequivocally revealed significant security vulnerabilities embedded within the system, thereby exposing it to a high risk of potential cyberattacks. Furthermore, the study identified that users consistently encountered considerable difficulties in maintaining consistent crime reporting, primarily attributed to the inherent limitations of the system.
Keywords: Evaluation, E-Rogues, Crime Information, Policing, Bicol, Philippine

Introduction

Chapter 1
THE PROBLEM
Background of the Study

Digital tools and innovations are emerging as a new trend in the policing system, with the world recognizing their role in advancing the capabilities of organized criminals. The Federal Bureau of Investigation (FBI) started to apply innovations during the 21st century, introducing new tools to fight crime and new categories of crime to fight (Fritsvold, 2022). The Philippine National Police was organized under R.A 6975 or the DILG Act of 1990 under the presidency of late President Corazon Aquino. Later after the reorganization, it was nearly a successful organization in fighting crimes and maintaining peace and order in the whole country. As time goes by, PNP is flexible enough to adapt to a changing environment relying on different crimes committed by different sets of sectors. This phenomenal change triggers their enthusiasm to fight crimes and maintain order by setting different strategies and programs to deny the opportunity to commit crimes and to develop digital innovations on locating wanted persons and criminals (Tupas, 2022).

Statement of the Problem

In light of this, the study aims to answer the following research questions:

1. What is the current status of E-Rogues and CIRAS (E-Blotter), along with:

a. Application, and
b. Management

Chapter 2

DESIGN AND METHODOLOGY

Research Design

A Mixed-method research approach was used in the conduct of this study. **Mixed methods** research combines elements of quantitative research and qualitative research to answer the research question. Mixed methods can help you gain a more complete picture than a standalone quantitative or qualitative study, as it integrates the benefits of both methods (George, 2023).

Population and Locale of the Study

For the qualitative research method used in the statement of the problem for the Status (except in Community Awareness), Challenges and Key Factors needed to address challenges of E-Rogues and CIRAS, the criteria for choosing the participants are the following:

a. They must be from the investigation division handling cases which involve the use of digital tools such as e-rogues and CIRAS (e-blotter);

b. those police officers who are in aid of investigation such as Non-Uniformed Personnel (NUP) and other officers who have a direct use and knowledge of the e-rogues and e-blotter; and,

c. their immediate superiors such as Chief RIDMD or its equivalent.

Chapter 3

RESULTS AND DISCUSSIONS

The succeeding section presents the data, analysis, and interpretation of the data gathered in the study.

Current Status of E-Rouge and CIRAS

For the E-Rogue, the themes derived are:

A. Application: Serving Its Purpose and Offers Convenience

B. Management: Operationally Accurate. Also, in CIRAS, the themes derived are:

A. Application: Working Stable

B. Management: Convenient and Reliable.

Status on the level of community awareness of the e-rouge and CIRAS is discussed in the succeeding discussions.

According to Bantay (2020), the E-Rogue system stands out as a reliable tool for criminal investigations. It facilitates efficient record-keeping of information and photographs of arrested criminals, ensuring vital details are readily accessible. Furthermore, the system boasts fast data transmission capabilities, allowing investigators to share information quickly and streamline the investigative process.

E-ROGUE

Application

Serving Its Purpose. E-rouge is an advanced innovation developed by the PNP-Information Technology Management Service (PNP-ITMS) to replace the conventional system. This interface creates state-of-the-art innovation where the recording of the suspect's profile is already in the database to cater to centralized reporting.

From the results of the interviews with the PNP, E-Rouge is serving the purpose for which it was made. This is evident as the PNP continues to use the system since its installation. This is an affirmation that the PNP's move to hire IT experts in their organization resulted in the development of innovations that facilitated and lessened the burden of tasks related to crime reporting.

Specifically, participants disclosed that the current status of e-rogues today is effective, operational, and stable (P2 and P3), which conforms to the abovementioned paragraph.

P2 said: "The current status of e-rogues today is effective and operational. My men continue to use this application as one of the directives by the National Headquarters."

P3 also stated that: "We are experiencing stability on the system, though there are some bugs and errors, but during its use, we record the profile of the suspects in the system."

The respondents confirm that the system serves its purpose of storing electronic data reflecting the profiles of the arrested and wanted persons (P2 and P3). Hence, it was a valuable aid to the police organization as it smoothens the function of the investigation section in recording the profiles of the arrested person. Further, the E-Rogue system's strength lies in its centralized design. This not only ensures efficient internal data management but also facilitates seamless integration with other PNP digital tools. For instance, the system can directly access and reflect information from the National Police Clearance System (NPCS). This eliminates the need for duplicate data entry and allows for a more comprehensive overview of a person's criminal history. By leveraging this interconnectedness, the PNP can conduct investigations with greater efficiency and accuracy (P2).

This is the response of P2:

"Today crime reporting is much easier as it covers almost anything in the system, it is already centralized, and even the National Police Clearance System is connected to the e-rogue, meaning, booked suspects are automatically reflected in the other e-systems."

The statements that follow further showcase the current usefulness of E-Rogue: the PNP organization in developing digital tools particularly the e-rogues which are timely and convenient for the user as they do not need to use paper-based reporting system, lessen the workloads and promote speedy disposition of the case (P6).

P6: "When there were still no e-rogues, we used a paper-based reporting system, but it offered more workloads and slow processing that consumed more time."

It is also supported by the statement of P8, stating that:

"When there was still no e-rogue, the recording of the suspect's profile was difficult as you needed to manually put the names and other profiles into the case record, it is time-consuming."

Based on the responses, using E-Rogue creates a spacious and conducive working environment for the personnel, thanks to its fast and reliable reporting capabilities. As P2 mentioned, it has already begun advancements wherein all inputs are automatically recorded across relevant digital tools through a centralized database. This system facilitates swift and reliable crime reporting, thereby bolstering the PNP's crime prevention and suppression strategy.

We can conclude that the PNP has already gone to the old and outdated computerized system used in criminal investigations. Police Investigators can now say goodbye to the voluminous paper reports received on a day-to-day basis, stocking records of the traditional blotter, buying commercial crime maps, keeping rogue galleries of rotten pictures, and printing posters of Wanted Persons. Thus, innovation through the use of electronic or digital tools in investigation is now the byword among detectives and investigators in the Philippine National Police.

The official newsletter for PNP Investigators in celebration of their over two (2) decades in the field highlighted how investigators' morale has improved starting from the time that the PNP adopted new digital technologies. The positive atmosphere stemmed from the Philippine National Police's (PNP's) embrace of various digital advancements. These initiatives were led by the Directorate for Investigation and Detective Management (DIDM) through the Information Technology Management System (ITMS), and include the E-rogues system. Finally, lower-ranking officers have found renewed morale due to the commitment of senior leadership to preserving the department's core objectives.

Bruno (2013) stressed that the PNP through the Directorate for Information and Communications Technology Management (DICTM) has a crucial role in optimizing law enforcement operations. This includes integrating various information systems to ensure seamless data exchange, fostering the proactive

identification and promotion of advanced technologies that can enhance public safety, and guaranteeing clear communication of strategic ICT plans that outline the roadmap for technological advancements within the PNP.

Hence, Oville et al. (2024) further emphasized the importance of innovative tools in the reporting process, particularly E-Rogue. This digital system became especially valuable during the COVID-19 pandemic, offering a convenient and safe way to report a suspect's profile and other relevant information. Further, developed through PNP research, E-Rogue is a crime prevention and suppression tool designed to enhance the effectiveness of police operations.

Building on the work of Finn (2017), who emphasized the critical role of E-Rogue and its transition from the traditional Rogue Gallery system, this study aims to further explore the positive impact of E-Rogue on law enforcement efficiency. By analyzing data on suspect identification rates and case resolution times before and after the implementation of E-Rogue, this study seeks to quantify the system's effectiveness in enhancing police operations. Finally, the implementation of E-Rogue signifies a substantial transformation within the PNP organization. This innovative system offers a more effective approach to upholding the law and navigating the ever-evolving landscape of law enforcement. E-Rogue's capabilities have the potential to elevate the PNP's enforcement processes by streamlining procedures and providing valuable tools for officers.

Application

Offers Convenience. The Philippine National Police (PNP) National Headquarters prioritizes the development of electronic tools like e-rogue to expedite the reporting process and prevent miscarriages of justice. As the initiating agency in the Criminal Justice System, the PNP recognizes the importance of swift and dependable service.

Committed to serving the public good, the Philippine National Police (PNP) has developed a groundbreaking innovation that significantly aids in criminal investigations.

The study's findings suggest that the e-rogue system represents a significant improvement in criminal record-keeping, particularly for data categorized according to P9 and P12.

P9 said: "When there was still no e-rogue, we used the conventional recording of data, and it was time-consuming, unlike today when we can cater several reports at a time."

P12 supported this by saying: "Before, we manually put the record in the record book, but today it has become easier as you need only to put the data in the provided database."

The feedback suggests that the new features of the system are a positive development, offering a significant improvement over the traditional methods of recording suspect profiles. This results in the faster reporting of subjects' profiles during the booking procedure; with this, the entire police organization can access and search the names, case records, and other important details without the need to request it from the reporting office. This means that e-rogue maintained its reliability from the moment it was introduced by the PNP-ITMS.

Furthermore, P6 and P8 highlight a significant improvement
in crime reporting as compared to the conventional rogues gallery. It contributes to the digital transformation of the PNP by offering a prompt and efficient crime reporting strategy, particularly in the profiles of arrested and wanted criminals.

Still, criminal records can be easily and readily available if requested by the competent tribunal during criminal proceedings (court trials) due to the fast, reliable, and easy generation of the status of the offenders. In addition, the word "easy" and "convenience" was saturated in these responses during the conduct of the interview, to provide some proof, P8 and P9 responded by saying:

"It gives us an easy way of recording the suspects' profiles, and you can conveniently search the names of previous arrestees."P8

Subsequently, P9's accounts are: "It contributes to the digital transformation of the PNP by offering fast and reliable crime reporting, particularly in the profiles of arrested and wanted persons."

Analysis reveals the state of e-rogue in its status, it contributes to the digital transformation of the organization by giving projected features to lessen the work of the personnel. It entails a wide array of crime reporting as the data is always available at hand, all you have to do is to click the application and you're already a few steps to accessing the data.

Convenience is something that we can ensure, especially if we are in the work area, Many wish that they can efficiently perform their task without interference and without creating volumes of paperwork.

Relative to the data shown above, the PNP-DIDM, in its Memorandum Circular 2022-028 or the Revised Guidelines in the Arrest and Accounting of Wanted Persons, issued a protocol on the comprehensive accounting of Wanted Persons (WPs) as they are having problems in the records of WPs. Consequently, the e-rogue plays a vital role in this cycle as they use these e-tools to locate and retrace the aforementioned WPs. The sustainability of the data in the e-rogue saves the problems that arise in the other system. That is why it plays a crucial role in the conduct of an investigation, especially if the court requests it during the trial.

Finally, P2 as chief of the investigation in the Bicol Region reiterated in the interview the word "follow up" because their team is always abreast to cater to the possible challenges that may arise anytime during the use of the e-rogue, following the directive of the national headquarter and sending their team to undergo seminars, workshops, and trainings to improve the personnel's capability in performing the assigned tasks.

Management

Operationally Accurate. As part of the transparency, correct and exact reporting of the suspect's profile is essential. It provides better identification of the identity of the arrested person even though you have not yet seen the actual picture of it.

This idea is from the responses of the participants to the question of how they maintain and sustain he reliability of the e-rogue system. This part proves the reliability approach of the system as the investigators must always look forward to the proper and accurate way of reporting the subject's profile.

As discussed in the preceding paragraphs, P2 responded about the consistency of their office to monitor the reports of the lower units regarding the profiles of the arrested persons.

P5 responded to the question of how they sustain/maintain the reliability of e-rogue by saying:

"We perform a consistent report of the data encoded in the system, that is the only thing that we can do as we do not have full control of the system."

To maintain the consistency of the system, analysis reveals the strict compliance of the users in the system due to the strict regulation by the national headquarters. The reason for this is due to the crucial role of the police officers in using E-Rogue as they used it to analyze suspects' data. Hence, the accuracy of the data and the ethical considerations surrounding the suspect information must be the main concern.

Additionally, based on the account of P2, he stated:

"We always monitor the compliance of lower units and their performance as to the immediate input of the suspect's profile in the system."

The account of P2 evidenced the maintenance of reliability of the e-rogue to ensure the transparency of the PNP in the conduct of crime reporting. On this account, the intuitiveness and convenience of the e-system were maintained, and its benefits to the users are always in high regarded to promote the case's speedy and hasty disposition.

It was also supported by P3, and P6 stating that:

P3: "The measure we used to maintain the reliability of the system is to request in the national headquarters the upgrade of the system to have quick and convenient access, especially when entering the system."

Based on the account of P3, they find it hard to log in to the system as it sometimes experiences system maintenance, system bugs, and errors, which cause delays in the execution of reports.

P6 also stated that:

"Requesting system maintenance in the headquarters is the measure we resort to maintain the reliability of the e-rogue."

Based on the responses, different sustainability and reliability techniques were disclosed by the participants. The PNP directives are serious and strict in terms of complying with the accurate and detailed reports of their personnel in the lower units. Consequently, personnel should need to explain comprehensively the cause of the delay, and other unnecessary problems that arise which cause delayed data entry. Unfortunately, computer bugs can arise due to unforeseen issues within the processing unit or software, which are beyond the control of personnel. These bugs can lead to delays and disruption for users, causing frustration and inconvenience. While numerous studies have explored computer bugs and their corresponding fixes within traditional software systems, a critical gap exists in our understanding of these issues within the realm of machine learning systems (*An Empirical Study of Bugs in Machine Learning Systems*, 2012). This distinction is crucial because machine learning systems are fundamentally different. Their heavy reliance on complex algorithms and potential application to massive datasets necessitate a dedicated focus on bug identification and resolution strategies. These issues resonate with the challenges users encounter when reporting suspect profiles through E-Rogue. Unforeseen bugs or software problems can further hinder the already complex process of using E-Rogue, leading to frustration and delays.

Moreover, as provided by the salient laws of the PNP such as memorandums and letters of instructions, provisioned the proper uploads of suspect's profiles, the wanted persons and persons already released either bail or by the court dismissal of the case. Subsequently, Chief of the Directorate for Information and Communications Technology (DICT) Major General Valeriano de Leon started to advocate the use of advanced technology in all stages of crime reporting including also the reporting of suspect profiles. He stressed that the PNP organization should do a massive recruitment process to add manpower at all levels of police stations, as they are already embarked on the advancement of technology.

Additionally, Fox (2019) stressed that, as with other technologies, the coming years will likely see ongoing debate and criticism surrounding the use of E-Rogue. This stems largely from two sources: public distrust of the police and the question of police independence from political figures. These concerns will likely manifest in discussions about accountability, legitimacy, and transparency regarding E-Rogue's use.

CIRAS

Application

Working and Stable. Stability and consistency are factors that can sustain digital tools, particularly the CIRAS. This encompasses the potency of the system in reporting crimes and recording data which is advantageous to the PNP organization.

In a nutshell, CIRAS was created to supersede the stand-alone blotter book and to record crime incidents in the database for consolidated reporting. It was already connected with other digital tools such as the National Police Clearance System (NPCS), meaning, part of its stability is important as it is one of the means to document the existence of criminal activity within a particular area. The original feature of CIRAS is having an electronic database system that facilitates crime documentation and systematic data storage and retrieval. Streamlined reporting is a new strategy that was developed by the PNP, it is a real-time reporting system that records the incident and disseminates it to other concerned units in just a single click of the button. It was designed to promote a faster and more reliable crime reporting strategy and to cater to the immediate response of the requesting unit regarding the status of the offense committed.

PNP-Directorate for Information and Communications Technology (DICT) Director Maj. Gen. Valeriano de Leon said that even the criminal organizations are up to date in digital innovations, the PNP must be at least one step ahead of them in terms of technological advancement of technology. Hence, based on the findings, the status of CIRAS is good and stable, and it was continuously maintained by the concerned office in the PNP Organization (P1, P4, and P6).

P1: "The current status of CIRAS today is stable, as of now we don't have any problems yet except those major problems that the main headquarters are authorized to fix, but aside from this, the system is operational."

Another is the response of P4, saying: "The essence of why the CIRAS was created is to perform a uniform crime reporting strategy, and now, he can do what was its true purpose. The system as of today is stable and operational."

Also, P6 stated that: "The system today is active, we can perform quick, fast, reliable transmission of crime information from lower police units and offices to the National Headquarters at Camp Crame."
The data shows the status of the CIRAS in terms of crime reporting and analysis, the stability and reliability of the system, and important aspects to promote speedy dissemination of the information to the different police offices (P1, P4, and P6). Thus, remembering the previous recruitment of the PNP which is exclusive only for the I.T graduates with a purpose of cascading it to different police stations to meet at least the demand of competent men to use the digital tools.
Consequently, the recruited I.T. experts were assigned to the investigation division to facilitate the use of CIRAS and other electronic tools. The PNP organization aims to fully transform into a newly organized and digitally transformed agency.
Moreover, since the system is operational and stable, it resulted in the active cascade of information about wanted persons and arrested criminals including their crimes committed, and the forecasting and computation of the exact crime rate at a particular area and the most effective policing approach applicable to them.
Data shows that one of the core objectives of accurate digitalized crime reporting is to put detailed and reliable data to avoid confusion and to maintain its probative value. The probative value should be the highest priority in executing the report as it is observed even when the CIRAS is not yet developed. The essence of the report was observed even when the time of the stand-alone blotter was still in use; accurate and reliable inputs are needed to preserve its identity and probative value. Thus, when the CIRAS was already installed as a new crime reporting strategy, it served as an upgrade of the conventional blotter which creates multiple features for easy crime reporting to bolster fast and reliable crime documentation.
However, the system was still in the stage of middle of perfection as it was struck by some major problems that the organization is facing today. It was discussed in the succeeding articles on how problematic the challenges that the users have encountered. To corroborate the preceding discussions, CIRAS or E-blotter was evaluated previously in Batangas Police Provincial Office in the effort of Alincastre and Dalugdog (2022) where the findings of the status of CIRAS are fully operational and stable. Thus, it resulted in the favorable construction by the authors that the CIRAS or e-blotter provides an easy methods for crime reporting.
A memorandum circular 2020-037 of the PNP prohibits the access of information included in the CIRAS and other e-tools of the PNP and treats this with the utmost confidentiality. With this, the reliability of information and its accuracy must be preserved well in order not to jeopardize the case or violate the rights of an accused as its name, place of abode, crime committed, and other relevant information are recorded in the said digital tool. Additionally, the memorandum adheres to strict compliance that even media practitioners though considered as stakeholders are prohibited from accessing the said sensitive information. Finally, responses from participants directly corroborated the memorandum on the part of putting accurate and reliable data in the system.

Management

Convenient and Reliable. The purpose of the newly introduced CIRAS is to reduce the workload of the personnel to have more focus on the other tasks. Convenient crime reporting wins the perceptions of the participants in its fast and reliable reporting.
The theme focuses on the benefit of the CIRAS on how it performs to cater to the objective of the PNP organization in reporting crimes accurately but fast and quickly.
Based on the findings, crime incidents be directly encoded in the system, hence, providing real-time crime statistics and eliminating delays (P1, P6, and P7).

P1: "CIRAS contributed to the digital transformation of the PNP as it encompasses timely inquiry and searching of data in real-time is always obtainable. This creates a better working environment for the personnel because it offers more convenience in terms of crime reporting and crime mapping."

An account of P6 is also recorded, saying: "It enhances the conventional crime reporting or the stand-alone blotter system, it is more on offering different features that upgrade the classic system of crime reporting and statistics."
P7 also added his account by saying:"There is an easy retrieval of information that has reliability in terms of record keeping and provides a guide and accurate data on crime incidents."
Based on the accounts of the participants, CIRAS provides state-of-the-art features that provide ample opportunities for the users to perform their tasks promptly without any interference. Thus, the successful launch of this digital tool revolutionized the PNP organization in terms of centralized and timely crime reporting and crime data restoration. In addition, the efforts of the national headquarters located at Camp Crame Quezon City have reached their maximum tolerance to think and decide on what particular innovation they want to develop to provide perfect digital tools.
To substantiate the points in the previous paragraph, the responses of P1 and P2 disclosed the condition of the PNP when there was still no CIRAS by saying:
"Before, tallying of data was done manually, and searching of blotter was also done manually. It requires time and effort if you are going to search a particular crime incident as you'll need to trace it back manually when it was committed." P1
To support the account of P1, P2 stated that:
"In a stand-alone blotter system, you'll need extra time and effort before we put the crime report into the blotter book especially if we are going to compare it to today's electronic blotter."
Data shows the optimization of the system in helping the PNP community to accomplish crime reporting, this implies that the CIRAS as part of the digital shift not only inspires the morale of the users in reporting crime incidents but also saves their effort and time.
To fully understand the reliability of the CIRAS application, P6, P7, and P8 responded by saying: "To maintain its reliability, we give accurate information, completeness, and consistency of the data." P6
"To maintain its reliability, we use data validation, access control, regular back-ups, and an update system of the application."P7
Another response from P8, stating that:
"To sustain electronic reliability, our organization never stops concerning the electronic upgrade and development of the program."
The responses of the P6, P7 and P8 was also supported by the response of P2, stating that:
"Making a detailed report to sustain its reliability is always observed, and making sure that the 5Ws (who, what, where, when, and why) and 1H (how) or the cardinal rules should always be observed."
The Philippine National Police in its Secured, Mobile, Artificial Intelligence-Driven, and Real-Time (SMART) Policing Program and ICT development roadmap continues to explore its ongoing commitment to leverage technology for enhanced law enforcement capabilities and improved service delivery to the Filipino populace. Further, the S.M.A.R.T policing system is a newly born policing roadmap to gain more efficiency in preventing and suppressing criminality, this was created to encompass the advancement of technology worldwide and to promote a safer community.
Newly appointed Chief, PNP Rommel Francisco Marbil is looking into a five-year development plan on the use of Artificial intelligence (AI) and other modern technologies as part of SMART policing (*New PNP Chief Eyes 5-year "smart Policing" Dev't Plan*, n.d.). The implementation of this digital tool exemplifies the PNP's forward-thinking approach to law enforcement. This innovative system demonstrates the PNP's commitment to exploring unique strategies that enhance public safety and safeguard the well-being of the Filipino people.

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