

EFFECTIVENESS OF INTEGRATED BALLISTICS IDENTIFICATION SYSTEM AS A TOOL FOR INVESTIGATION IN SELECTED BARANGAYS IN NORTH CALOOCAN

ABSTRACT

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In the Philippines, Republic Act No. 10591 mandates the registration of all firearms and the establishment of a centralized database to monitor ownership and accountability. This legislation plays a crucial role in ensuring that only qualified individuals are permitted to possess firearms, thereby helping to prevent misuse and illegal distribution. In this context, the study assessed the effectiveness of the Integrated Ballistic Identification System (IBIS) as an investigative tool in selected barangays in North Caloocan. It specifically examined IBIS's role in strengthening criminal investigations, expediting the identification of firearms used in crimes, and enhancing overall law enforcement operations through the use of advanced ballistic matching technology. The study involved 20 police investigators and 10 firearm examiners from the Investigation and Detective Management Section, North Extension Office of the Caloocan City Police Station (CCPS). Participants were selected through purposive sampling to ensure that only individuals with relevant expertise and experience were included. A descriptive research design was employed, and data were gathered using a researcher-validated questionnaire. Before the distribution of the instrument, appropriate permissions and ethical clearances were obtained. The questionnaires were administered personally and systematically collected for analysis to ensure the integrity and reliability of the data. The findings indicated that most respondents were between the ages of 30 and 35 (40%), predominantly male (87%), college graduates (67%), and had six to ten years of experience in law enforcement (60%). In assessing the effectiveness of the Integrated Ballistic Identification System (IBIS), respondents strongly agreed that the system is highly effective (mean rating = 3.89). It was also perceived to accurately identify ballistic evidence (mean rating = 3.76) and serve as a valuable tool in criminal investigations (mean rating = 3.74). A key challenge identified was the limited public awareness of IBIS and its benefits. To address this, the most frequently recommended strategy was to conduct regular audits and updates of IBIS data to ensure its continued accuracy, reliability, and relevance in law enforcement operations. The study proposed comprehensive strategies to enhance the effectiveness and utilization of the Integrated Ballistic Identification System (IBIS). Key recommendations include expanding training programs and awareness initiatives for law enforcement personnel to ensure competent system usage. Establishing a dedicated technical support unit and strengthening inter-agency collaboration were also emphasized to improve operational efficiency. Forensic investigators should be provided with continuous education on IBIS functionalities and standardized protocols for evidence handling. Policymakers are encouraged to allocate sustained funding for system upgrades and to lead community education campaigns that highlight the public safety benefits of IBIS. In the judicial sector, the integration of IBIS-generated findings into courtroom procedures and the training of legal personnel were recommended to reinforce its evidentiary value. Additionally, fostering public trust through community engagement and transparency is vital. Future researchers are encouraged to assess IBIS's long-term impact and explore innovations that can further enhance crime-solving capabilities through ballistic technology.

RECOMMENDED CITATION

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