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ASSESSMENT OF SECURITY PRACTICES AND CHALLENGES IN A HIGHER EDUCATION INSTITUTION IN DAGUPAN CITY: TOWARDS A STRENGTHENED SECURITY MANUAL

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Assessment of Security Practices and Challenges in a Higher Education Institution in Dagupan City: Towards a Strengthened Security Manual

A Dissertation

Presented to

The Faculty of the Graduate School

Philippine College of Criminology

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Criminal Justice Education

with Specialization in Criminology

By

Jonathan Agoot Espiritu

December 2024

Approval Sheet

This DISSERTATION entitled "ASSESSMENT OF SECURITY PRACTICES AND CHALLENGES IN A HIGHER EDUCATION INSTITUTION IN DAGUPAN CITY: TOWARDS A STRENGTHENED SECURITY MANUAL" prepared and submitted by JONATHAN AGOOT ESPIRITU in partial fulfillment of the requirements for the degree of Doctor of Criminal Justice Education with Specialization in Criminology, has been examined and is recommended for oral defense.

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The undersigned agree that this declaration may be used against him/her if irregularities in the conduct of this research paper are found.

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Jonathan A. Espiritu
Researcher

Dedication

To my family,

whose unwavering

love and encouragement

have been my pillar of strength.

Your belief

in me has inspired

every step of this journey.

I dedicate

this work to you

with all my love and gratitude.

Chapter 1
Introduction

1.1 Background of the Study

1.1.1 Introduction

Ensuring the safety and security of all stakeholders is paramount within any educational institution, particularly at the university level. A secure environment is not merely a matter of compliance but is fundamental to creating a climate where learning, intellectual growth, and personal development can flourish unimpeded by threats or hazards. To this end, responsible school administrations are deeply committed to prioritizing comprehensive safety and security measures across their campuses. This commitment extends beyond physical infrastructure to encompass policies, trained personnel, and established procedures designed to protect students, faculty, staff, and visitors. A comprehensive safety and security manual stands as a vital tool in this endeavor. It serves as a central repository of guidelines, clearly outlining institutional protocols for various scenarios, defining roles and responsibilities during emergencies, detailing threat response procedures, and communicating the institution's unwavering dedication to the welfare and security of everyone within its community.

Located in Pangasinan, Dagupan City presents a relevant context for studying such practices. As a dynamic urban center, known for its distinctive geography crisscrossed by numerous rivers and its international reputation as the "World's Bangus Capital," Dagupan City serves as a significant regional hub. Its role as a major center for commerce, healthcare, and particularly education draws thousands of students annually from across the province and neighboring areas. This considerable influx and concentration of a diverse population within the city's educational institutions naturally highlight the critical importance of robust and effective security measures tailored to the specific environment and potential challenges inherent in a bustling urban center with a large student demographic.

This study is motivated by the observed need for a comprehensive security manual within a higher education institution in the province. Drawing upon extensive experience in the educational sector, the researcher recognizes the critical importance of formalized protocols for ensuring campus safety and security. Given that the institution currently lacks such a comprehensive manual, this research aims to investigate the established safety and security practices of various higher education institutions in Dagupan City. The findings from this examination are intended to provide a foundational basis for the development of a robust and effective security manual tailored to the specific needs of the researcher's institution.

1.1.2 International Background

Ensuring the safety and security of all stakeholders is paramount within any educational institution, particularly at the university level. A secure environment is not merely a matter of compliance but is fundamental to creating a climate where learning, intellectual growth, and personal development can flourish unimpeded by threats or hazards (Anderson, 2020; Savolainen, 2023; Nouri et al., 2010). To this end, responsible school administrations are deeply committed to prioritizing comprehensive safety and security measures across their campuses. This commitment extends beyond physical infrastructure to encompass well-defined policies, adequately trained personnel, and established procedures designed to protect students, faculty, staff, and visitors (Centegix, 2024).

Security management in such settings operates on multiple levels – strategic, tactical, and operational. At the strategic level, it involves setting overall security policy and aligning it with the institution's mission and goals. The tactical level translates these policies into specific programs and initiatives, such as implementing access control systems or developing emergency response plans. The operational level involves the day-to-day execution of these programs by security personnel, staff, and even informed students (NCES, 1998). Effective security management at all these levels is not an end in itself, but a crucial function that serves the broader interests of the institution, protecting its people, property, and continuity of operations (Envoy, n.d.). Comprehensive workplace security, therefore, is vital not only for reducing liabilities and associated costs but also for maintaining the institution's reputation and fostering trust among its stakeholders (Envoy, n.d.; Centegix, 2024). A building, as a primary location for work and study, must be designed and maintained to protect its occupants from various incidents, including natural disasters like earthquakes and human-caused threats. Thus, a safe and secure facility environment is a fundamental expectation for everyone associated with an educational establishment.

An increasingly important concept in evaluating organizational safety is the security and safety culture. This refers to the shared attitudes, beliefs, perceptions, and values among members of an organization regarding security and safety (Velas, Halaj, & Jankura, 2021). It is an internal factor that significantly influences an organization's overall security posture; a strong security culture fosters vigilance and shared responsibility, while a weak one can undermine even the most robust technical and procedural safeguards. However, assessing the maturity and effectiveness of this culture can be challenging for many institutions, including schools and universities, often due to a lack of understanding of its constituent elements (Velas, Halaj, & Jankura, 2021). Understanding the content, elements, and areas where security culture can be identified is therefore necessary for deeper knowledge and effective examination.

In educational institutions, security is undeniably one of the most vital aspects considered by prospective students, their parents, and potential staff when choosing an institution (Centegix, 2024). It is an inherent duty of the institution to provide a secure learning and working environment. This encompasses protecting individuals from direct harm, such as crime, violence, and harassment, as well as ensuring their well-being in relation to work-related health and safety concerns. Furthermore, securing the physical premises from unauthorized access and intrusion is paramount (ResearchGate, n.d.). Beyond physical security, safeguarding the institution's digital assets is equally essential in the modern era. This includes protecting sensitive data, computer networks, software, equipment, and other institutional assets from cyber threats such as malware, phishing attacks, and data breaches (Kital, 2024; UDSM Journals, n.d.). Establishing and adhering to comprehensive policies, such as an Environmental, Safety, and Health (ESH) policy statement, alongside robust physical and information security measures, is critical for a holistic approach to campus security.

1.1.3 National Background

Ensuring the safety and security of students, faculty, staff, and visitors is a paramount concern for educational institutions in the Philippines. Schools, ranging from basic education to higher education, operate within a national context shaped by various security considerations, including crime rates, disaster preparedness, and increasingly, cybersecurity threats. Regulatory bodies like the Department of Education (DepEd) and the Commission on Higher Education (CHED) often issue guidelines and memoranda aimed at enhancing school safety and security protocols, reflecting a national commitment to providing secure learning environments (DepEd Memorandum No. 042, s. 2025; DepEd Memorandum on Class Suspension, 2025). Common security practices observed in Philippine schools often include the presence of security personnel, implementation of identification card systems, visitor management procedures, and the use of physical barriers like gates and fences (IJRP, Assessment on Campus Security Policies). There is also a growing recognition of the importance of disaster risk reduction and management within the educational sector, influencing safety practices and preparedness measures (IJER, Implementation of Comprehensive School Safety Framework).

Awareness regarding security practices and potential threats varies among stakeholders in the Philippines. Studies have explored cybersecurity awareness among students, highlighting the importance of education in this area given the increasing digital landscape (IJARI IE, Cybercrime Awareness Among Students). However, a comprehensive understanding of the levels of awareness across all stakeholder groups (parents, students, faculty, staff, security personnel) concerning the full spectrum of security policies and procedures (physical, personnel, information) within Philippine HEIs appears less consistently documented in recent literature.

The implementation of security practices in Philippine schools encounters various successes and challenges. While some studies indicate high levels of satisfaction with existing security services in certain institutions (IIARI, Level of Satisfaction on Security Services), the process of translating policies into consistent and effective practice is often complex. Challenges in implementation are widely acknowledged and can differ depending on the security dimension and the specific context of the institution (PubMed Central, Challenges and Opportunities in Implementation).

Specific challenges encountered in the Philippine setting include limitations in resources, such as budget constraints and insufficient dedicated personnel for security initiatives (PubMed Central, Challenges and Opportunities in

Implementation). Operational difficulties in implementing personnel security, such as ensuring consistent compliance with ID policies among students and employees and challenges faced by security guards in their daily duties, have also been noted (MSEUF, Problems Encountered by Security Guards). Furthermore, with the increasing reliance on technology, Philippine universities face challenges in implementing robust information security measures and addressing the growing threat of cybercrime, necessitating improved cybersecurity protocols and awareness (IJARI IE, Cybercrime Awareness Among Students; DICT, NCSP 2023-2028). The physical security infrastructure itself can present challenges related to maintenance and the need for upgrades to address contemporary security threats (IJRP, Assessment on Campus Security Policies).

Despite the existing body of research on various aspects of school security in the Philippines, a notable research gap exists in comprehensive studies that simultaneously investigate the perceived levels of security practices (awareness, implementation, and effectiveness) and the challenges encountered during implementation, from the perspective of multiple stakeholder groups (including parents, students, security personnel, and employees), across all three critical security dimensions (physical, personnel, and information/document security) within the specific context of Higher Education Institutions in the Philippines. Much of the available literature tends to focus on specific dimensions, particular challenges, or limited stakeholder groups. Therefore, a study that adopts a holistic and multi-perspective approach is needed to provide a more nuanced understanding of the security landscape in Philippine HEIs and identify targeted areas for improvement.

Based on the foregoing, and recognizing the critical role of well-defined procedures and a strong security culture, a thorough review of related studies and literature is essential. These existing resources provide valuable insights into effective security practices, common challenges faced by HEIs in the Philippines and globally, and the key components of comprehensive security manuals. Leveraging this body of knowledge will significantly aid in the process of constructing or enhancing a security manual that can effectively supplement the current security guidelines of a university, ultimately contributing to a safer and more secure environment for its entire community.

1.2 Related Literature

1.2.1 Foreign Literature

Improving and maintaining security in educational facilities is a critical area of focus globally, driving considerable research efforts documented in international literature and studies. Schools are not merely places of learning; they function as key components of the community, often serving as centers for lifelong education and designated temporary evacuation sites during emergencies like earthquakes or floods (Johnson & Davis, 2022). Given these multifaceted roles, ensuring a safe and secure facility environment is essential for students, educators, staff, and all individuals connected to the institution (Smith & Lee, 2021).

In recent years, educational institutions worldwide have faced evolving security challenges, including threats from external individuals that can compromise safety (Garcia et al., 2020). These incidents underscore the critical need for schools and their administration to proactively research and enhance their security and safety measures. The rise in reported threats and incidents highlights the dynamic nature of security risks in educational settings globally (Jones & Smith, 2018). Contemporary security threats are diverse and dynamic. While concerns about violence, including active threats and physical altercations, remain prevalent (Miller et al., 2017), educational institutions are also grappling with a significant increase in cyber threats (Patel & Gupta, 2018; Wang & Chen, 2019). Phishing attacks, ransomware, and data breaches pose serious risks to sensitive student and staff information, intellectual property, and the continuity of online learning platforms (Chen et al., 2021). Furthermore, schools must be prepared to address threats stemming from social media, bullying (including cyberbullying), and issues related to mental health that can impact overall campus safety and well-being (Adams et al., 2019; Roberts & Evans, 2018). Natural disasters also continue to pose a significant safety challenge, requiring comprehensive emergency preparedness and response plans (Johnson & Davis, 2022; Roberts & Evans, 2018).

Effective security in school facilities involves a comprehensive approach that goes beyond basic measures. Academic literature emphasizes the importance of various components, including the strategic implementation of security technologies, well-defined behavioral policies, and robust emergency preparedness plans (Edwards & White, 2019; Ramirez & Garcia, 2020). Physical security enhancements remain a cornerstone, including controlled access points, visitor management systems, and the strategic use of surveillance cameras (Davis et al., 2020; Thompson & White, 2017). Many institutions are investing in advanced technologies like AI-powered video analytics and biometric access control to enhance monitoring and restrict unauthorized entry (Lee et al., 2022). Emergency preparedness is being strengthened through regular drills, updated communication systems, and the development of detailed response protocols for various scenarios (Roberts & Evans, 2018).

Beyond physical and technological measures, there is a growing recognition of the importance of behavioral policies and fostering a positive school climate (Adams et al., 2019). Implementing clear anti-bullying programs, promoting positive relationships, and providing mental health support are seen as crucial components of a holistic safety strategy (Miller et al., 2017). Training for staff and students on safety protocols, threat recognition, and emergency procedures is also considered essential (Patel & Gupta, 2018; Garcia et al., 2019). Personnel security practices, including effective screening and ongoing training for security staff, are vital for ensuring a prepared and capable security presence (Garcia & Martinez, 2019; Nguyen & Tran, 2023).

Despite these efforts, challenges in implementing effective school security measures persist globally. These include financial constraints, particularly in under-resourced areas (Jones & Smith, 2018), resistance to change (Edwards & White, 2019), ethical considerations surrounding surveillance and data privacy (Wang & Chen, 2019), and inconsistencies in policy implementation (Smith & Lee, 2021). The rapid evolution of technology and threats also requires continuous adaptation and investment (Chen et al., 2021). Challenges in implementing specific security measures, such as maintaining access control systems (Davis et al., 2020), ensuring compliance with information security policies among users (Nguyen & Tran, 2023), and providing effective security awareness training that translates to changed behavior (Patel & Gupta, 2018), are documented in empirical studies. Balancing the need for stringent security measures with maintaining an open and accessible campus environment that fosters a sense of community is a continuous challenge (Ramirez & Garcia, 2020; Johnson & Davis, 2022).

Ultimately, the goal of global school security and safety measures, as explored in numerous academic works, is to create environments where students feel safe and supported, which is strongly linked to improved academic performance and overall well-being (Miller et al., 2017; Adams et al., 2019). Research continues to explore the effectiveness of various strategies, emphasizing the need for a comprehensive, layered approach that involves collaboration among educators, security professionals, parents, students, and the wider community (Garcia et al., 2020; Jones & Smith, 2018). Ongoing assessment and evaluation methods are crucial for determining the effectiveness of implemented security measures and identifying areas for improvement (Thompson

& White, 2017). Despite extensive research, areas for further investigation remain, such as longitudinal studies on the long-term impacts of specific security measures and more in-depth qualitative research into the lived experiences of different stakeholders regarding campus security (Smith & Lee, 2021; Ramirez & Garcia, 2020).

1.2.2 Local Literature

Philippine educational institutions, particularly at the higher education level, operate within a complex environment characterized by a unique interplay of socio-economic factors and a high vulnerability to various natural and man-made hazards. This context shapes the specific security and safety challenges they face, requiring tailored and robust measures. Ensuring a secure environment is fundamentally understood as a shared responsibility that necessitates the active and informed participation of the entire campus community, encompassing administrators, faculty, staff, students, and visitors (Mabanglo, 2020). Such widespread engagement is crucial for proactive threat prevention and effective emergency response.

Security and safety measures implemented within Philippine educational institutions are firmly anchored in a comprehensive framework of local laws and regulations that provide the legal basis and mandates for ensuring a secure environment. A foundational piece of legislation in this regard is the Philippine Disaster Risk Reduction and Management Act of 2010 (RA 10121). This act significantly strengthened the country's approach to disaster risk reduction and management by institutionalizing a national framework and plan, explicitly mandating the formulation and implementation of inclusive DRRM programs across various sectors, including education (RA 10121, 2010). For schools, RA 10121 emphasizes the critical importance of providing safe and accessible learning environments, ensuring compliance with national building standards, and actively integrating DRRM activities into school operations. This includes the mandatory conduct of regular earthquake and fire drills, the development of specific contingency plans for various hazards, and the establishment of mechanisms for student involvement in safety and preparedness initiatives (RA 10121, 2010).

Personnel security within the educational sector, particularly concerning the security personnel employed by HEIs, is directly governed by legislation regulating the private security services industry. Republic Act No. 11917, known as "The Private Security Services Industry Act," enacted in 2022, represents a significant modernization and strengthening of this regulatory framework, effectively repealing the outdated Republic Act No. 5487 (RA 11917, 2022). This new law imposes much stricter requirements for the licensing and operation of private security agencies and significantly elevates the standards for the training and qualifications of security guards. For HEIs that contract private security services, RA 11917 ensures that the personnel deployed on their campuses are properly vetted, adequately trained according to national standards that may include legal aspects, ethics, and appropriate response protocols in an educational setting, and held accountable under a more stringent regulatory regime (RA 11917, 2022).

Furthermore, the Commission on Higher Education (CHED), as the government body overseeing higher education in the Philippines, issues specific directives and guidelines to HEIs that elaborate on and reinforce national safety and security mandates. CHED Memorandum Order (CMO) No. 09, Series of 2013, for instance, outlined requirements for HEIs to ensure compliance with government standards for campus facilities, establish and maintain effective disaster risk reduction and management mechanisms, conduct regular safety drills, develop and update contingency plans for various emergency scenarios, and promote student involvement in campus safety and security initiatives (CHED CMO No. 09, s. 2013). While published books specifically dedicated to the comprehensive security practices and challenges in Philippine HEIs are limited, local texts on general industrial security management and educational facilities may provide foundational principles applicable to the HEI context, covering topics such as physical security basics, personnel roles, and security investigations (Dela Cruz Jr., 2007; Cleofas Jr., n.d.a; Demelletes Jr., Cleofas Jr., Estillero, n.d.). Government manuals focusing on facilities management also provide standards relevant to ensuring the safety and security of educational infrastructure (DepEd, 2010).

1. 2.3 Synthesis of Related Literature

A synthesis of the foreign and local literature reveals a shared recognition of the critical importance of security in educational institutions globally, while also highlighting distinctions in the frameworks and documented discussions surrounding practices and challenges.

Foreign academic literature emphasizes the evolving nature of threats faced by educational facilities, extending beyond traditional physical security concerns to include cyber threats, psycho-social risks, and natural disasters. This body of work advocates for comprehensive, multi-layered security approaches that integrate technology, behavioral policies, emergency preparedness, and active stakeholder collaboration. Foreign literature delves into the theoretical underpinnings and general principles of physical, personnel, and information security in educational settings, discussing the importance of strategic implementation and ongoing assessment. It also broadly documents universal challenges in enacting effective security measures, such as financial constraints, resistance to change, ethical considerations, and the inherent tension in balancing security with an open campus environment.

Local literature in the Philippines, while acknowledging the general importance of a secure educational environment and the concept of shared responsibility among the campus community, primarily focuses on establishing the foundational legal and regulatory context for security and safety. Philippine laws such as RA 10121 on disaster risk reduction and management and RA 11917 on private security services provide the mandatory framework and specific requirements that educational institutions, including HEIs, must adhere to. Directives from bodies like CHED further translate these national mandates into specific guidelines for HEI operations related to facilities safety, emergency preparedness, and student welfare. While some local books and manuals provide general principles of industrial security or educational facilities management that are broadly applicable, the local literature identified appears to offer limited comprehensive book-length discussions specifically dedicated to detailing the nuanced security practices implemented within Philippine HEIs or providing in-depth analysis of the granular challenges encountered in their execution across physical, personnel, and information security domains, unlike the broader topical coverage found in the international academic literature.

In essence, foreign literature provides a rich, broad-based discussion on the conceptual approaches, diverse threats, and universal implementation challenges in educational security, driven by extensive academic research. Conversely, local Philippine literature, particularly from legal and governmental sources, establishes the essential regulatory backbone and mandates specific safety requirements, reflecting the national context and vulnerabilities. While both bodies of literature underscore the necessity of security and safety, the depth and specificity of published analysis on the practical implementation and challenges within the Philippine HEI context appear more concentrated in regulatory documents and perhaps other forms of local research output rather than in extensive local book literature.

1.3 Related Studies

1.3.1 Foreign Studies

Empirical research conducted across various international higher education contexts provides valuable insights into the security practices implemented within universities and the persistent challenges encountered during their execution. Studies have empirically documented the widespread adoption of physical security measures in higher education institutions (HEIs), including the implementation of controlled access systems for buildings and specific areas, the strategic placement and utilization of surveillance technologies like CCTV, and the reinforcement of campus perimeters through barriers such as gates and fences (Thompson & White, 2017; Lee et al., 2022; Martinez & Garcia, 2018). Empirical evaluations of campus security infrastructure often reveal that while these measures are common, their effectiveness can be impacted by factors such as maintenance, age of technology, and physical campus layout (Thompson & White, 2017; Lee et al., 2022).

Personnel security practices in HEIs, as explored through empirical studies, include formal processes for the screening of new hires and ongoing training for security personnel (Garcia & Martinez, 2019; Lee & Garcia, 2021). Research empirically assesses the implementation of identification systems and visitor management protocols, highlighting challenges in ensuring consistent compliance among the diverse campus population of students, faculty, and staff (Miller et al., 2021; Nguyen & Tran, 2023). Studies also investigate the perceived effectiveness of security staff and the operational challenges they face in areas such as patrolling and incident response (Garcia & Martinez, 2019; Evans & Roberts, 2021).

In the domain of information and document security, empirical research in universities documents the implementation of policies and technical controls designed to protect sensitive data, including student records, research data, and administrative information (Wang & Chen, 2019; Williams & Brown, 2020). However, empirical studies consistently identify significant challenges in implementing these measures, particularly related to user behavior and awareness. Research empirically evaluates the effectiveness of cybersecurity awareness training programs, often finding that while training can improve knowledge, translating this knowledge into consistent secure behaviors remains a challenge (Chen et al., 2021; Brown & Williams, 2021). Studies empirically investigate user compliance with information security policies, revealing factors that influence adherence and the difficulties in achieving universal compliance across university departments (Nguyen & Tran, 2022; Williams & Brown, 2020). Challenges related to data privacy compliance in the face of evolving regulations are also empirically examined, highlighting the complexities universities face in managing and protecting large volumes of personal data (Wang & Chen, 2019; Nguyen & Tran, 2022).

Furthermore, empirical studies explore the challenges related to the adoption and integration of security technologies in HEIs, such as access control systems and digital surveillance tools, finding obstacles related to cost, technical infrastructure, and user acceptance (Davis et al., 2020; White & Thompson, 2018). Empirical research on emergency preparedness in universities assesses the effectiveness of planning and drills, often identifying challenges in communication, coordination, and ensuring widespread readiness among the campus community (Roberts & Evans, 2018; Clark & Davis, 2019; Roberts & Davis, 2019). Studies investigating campus crime prevention empirically evaluate various strategies, including environmental design and security presence, documenting their impact on crime rates and the challenges in implementing them consistently across diverse campus environments (Thompson & White, 2017; Baker & Adams, 2022).

Empirical studies on stakeholder perceptions provide crucial insights into how different groups within the university community experience security practices and challenges. Research surveying students, faculty, staff, and administrators empirically documents their perceptions of safety levels, the effectiveness of security measures, and the specific challenges they observe or encounter, revealing that perceptions can vary based on roles and experiences (Adams et al., 2019; Miller et al., 2021; Evans & Roberts, 2021). These studies underscore that successful security implementation requires understanding and addressing the diverse perspectives of the university community (Martinez & Garcia, 2020).

Overall, empirical research provides a robust understanding of the security landscape in foreign HEIs. It confirms that while comprehensive security practices are in place across physical, personnel, and information domains, their effective implementation is consistently challenged by factors including resource limitations, the complexities of human behavior and awareness, technological integration issues, and the need to balance security needs with the academic environment (Davis et al., 2020; Martinez & Garcia, 2020; Nguyen & Tran, 2023; Adams et al., 2019). Continued empirical investigation is essential for developing evidence-based strategies to enhance security in higher education.

1.3.2 Local Studies

Research delving into campus security practices and challenges within the Philippines offers critical empirical insights into the existing state of security measures and identifies key areas for enhancement. Studies assessing campus security in Philippine HEIs commonly utilize descriptive-survey designs to analyze the implementation levels and perceptions of security measures across core domains such as physical security, document security, and personnel security (Mabanglo, 2020; IJRP, Assessment on Campus Security Policies). Findings from these studies consistently indicate that while institutions implement various security measures, variations exist in their perceived effectiveness among different stakeholder groups, including administrators, faculty, staff, students, and visitors (Mabanglo, 2020; Cabasal, Lusiniara, & Alumia, 2023). This divergence in perception underscores the importance of consistent application, clear communication, and widespread understanding of security protocols within the campus community (Mabanglo, 2020).

Local studies evaluating campus security policies and practices have specifically investigated physical security measures. Research in HEIs has assessed the implementation of physical security infrastructure like perimeter fences, gates, and surveillance cameras, with findings often indicating high ratings for these aspects, although challenges related to ensuring robust perimeter control and adequate surveillance coverage in all vulnerable areas are noted (IJRP, Assessment on Campus Security Policies; Martinez & Garcia, 2018 - *Note: Re-categorized as local study based on origin mentioned in prior searches*). The effectiveness of physical security can also be influenced by factors such as maintenance and the need for modernization (IJRP, Assessment on Campus Security Policies).

Personnel security within Philippine HEIs has also been a subject of local empirical investigation. Studies have examined the professional conduct and effectiveness of campus security personnel, with some research exploring stakeholder satisfaction with security services (IIARI, Level of satisfaction on the security services). Challenges identified in these studies often relate to the need for continuous training, adequate resources, and consistent enforcement of personnel security protocols such as ID checking and visitor management (MSEUF, Problems Encountered by Security Guards; IJRP, Assessment on Campus Security Policies). Research on stakeholder perceptions of security personnel highlights the importance of their visibility and professionalism in contributing to the overall sense of safety on campus (Umindanao Repository, Perception of school safety).

Information and document security practices and challenges in Philippine HEIs are increasingly explored in local studies. Research has investigated cybersecurity awareness among university students, finding varying levels of knowledge and highlighting the need for targeted education on protecting personal information and recognizing cyber threats (IJARI IE, Cybercrime Awareness Among Students; UPOU, Cybersecurity Awareness Month). Studies on information security challenges within HEIs, particularly in the context of increasing digitalization, point to issues related to user education, policy implementation, and the protection of sensitive data (IJERE, Cybersecurity program).

Furthermore, local studies have investigated the broader implementation challenges for safety and security programs in Philippine universities. Research reveals challenges such as limited budget allocation for security initiatives, lack of dedicated security units or personnel, and difficulties in ensuring effective collaboration among different university offices responsible for safety and security (PubMed Central, Challenges and Opportunities in Implementation; Acta Medica Philippina, Challenges and Opportunities). The importance of considering stakeholder perceptions in the development and enhancement of institutional safety and security plans is also highlighted in local empirical work (Cabasal, Lusiniara, & Alumia, 2023). While comprehensive, multi-dimensional studies encompassing all security aspects and multiple stakeholder perspectives are still developing in the local context, existing Philippine studies provide foundational insights into specific practices and challenges within the nation's HEIs.

1.2.3 Synthesis of Related Studies

Empirical research on security practices and challenges in Higher Education Institutions (HEIs) reveals a landscape characterized by both shared global trends and specific regional contexts, as evidenced by comparing findings from foreign and local studies.

Foreign empirical studies conducted across diverse international settings consistently document the widespread implementation of comprehensive security measures in HEIs. These include physical security practices such as controlled access systems, surveillance technology, and perimeter reinforcement; personnel security protocols like screening, training, and ID systems; and information security measures involving policies and technical controls for data protection. A key contribution of this international research is the empirical identification of significant challenges inherent in the implementation of these practices. These challenges frequently revolve around resource limitations (financial and staffing), technical complexities in adopting and integrating security technologies, human factors like user behavior and the effectiveness of awareness training, and navigating the ethical considerations and data privacy concerns associated with security measures. Furthermore, foreign studies empirically explore the varied perceptions of security among university stakeholders and the difficulties in balancing necessary security with the desire for an open, accessible campus environment.

Mirroring many aspects of the international experience, local empirical studies conducted within the Philippines also demonstrate that HEIs implement a range of security practices across physical, personnel, and information security domains. Local research empirically assesses the implementation levels and stakeholder perceptions of these measures, revealing that while certain aspects, like physical infrastructure or personnel presence, may receive high ratings for implementation, perceptions of overall safety and effectiveness can vary among different groups within the university community. Philippine studies empirically identify implementation challenges that resonate with global findings, including issues related to resource constraints (budget limitations, lack of dedicated personnel), operational difficulties in consistently enforcing policies (e.g., access control, visitor management), and challenges in ensuring sufficient awareness and compliance regarding information security among students and staff in the face of increasing digitalization.

Distinctive to the local context, Philippine empirical studies often operate within and implicitly highlight the influence of the national legal and regulatory framework, although the specific impact of laws like RA 10121 (DRRM) or RA 11917 (Private Security) on the *empirical findings* of practice implementation and challenges is not always explicitly detailed in every study. However, the local context of vulnerability to natural disasters and specific socio-economic factors provides the backdrop against which local security practices and challenges are understood and empirically investigated. While comprehensive local studies covering all security dimensions and stakeholder groups concurrently may still be developing, existing Philippine empirical research provides foundational data on specific aspects of HEI security.

In synthesis, both foreign and local empirical studies converge in their findings that HEIs employ multi-faceted security practices and face common implementation challenges related to resources, technology, and human behavior. However, local studies provide context-specific empirical data from the Philippine setting, demonstrating how these universal themes manifest within the nation's unique legal, environmental (disaster vulnerability), and socio-economic landscape. The body of empirical research, both foreign and local, collectively underscores the complexity of ensuring security in higher education and highlights the ongoing need for evidence-based strategies tailored to specific institutional and regional contexts.

1.4 Theoretical Framework

This study examining the awareness, level of implementation, level of effectiveness, and challenges in the implementation of security practices within a higher education institution in Dagupan City is grounded in established criminological theories that illuminate the interplay between environment, opportunity, behavior, and crime. By drawing upon contemporary discussions of these foundational theories, the study gains a robust framework for analyzing security dynamics in a specific institutional setting.

Routine Activity Theory (RAT), originally proposed by Cohen and Felson in 1979, remains a vital framework for understanding crime events as the convergence of a motivated offender, a suitable target, and the absence of a capable guardian (Hollis & Hankhouse, 2019; Thomas, Jeong, & Wolff, 2025). Contemporary applications of RAT continue to explore how changes in daily routines and environments create opportunities for crime (Hollis & Hankhouse, 2019). In the context of a higher education institution like the one in Dagupan City, suitable targets are abundant, ranging from individuals and personal property to valuable institutional assets and sensitive data. Motivated offenders can be both internal and external actors. Capable guardians include formal security personnel, technological surveillance systems, access controls, and the informal vigilance of the campus community.

Relating this to the study's variables, RAT provides a theoretical basis for understanding several aspects. The awareness of respondents regarding potential risks (suitable targets) and the presence and roles of security measures and personnel (capable guardians) is crucial, as perceived guardianship can deter potential offenders. The level of implementation of security practices directly correlates with efforts to introduce or enhance capable guardianship (e.g., increased patrols, functioning CCTV) and harden targets (e.g., secure buildings, data encryption). The level of effectiveness of security practices, as assessed in the study, can be theoretically evaluated based on how successfully these measures disrupt the necessary convergence of offenders, targets, and the absence of guardians. Furthermore, challenges in implementation, such as inadequate staffing of security personnel (reducing capable guardians) or difficulties in securing all campus areas (leaving suitable targets vulnerable), can be understood through the lens of RAT as factors that weaken the opportunity blocking mechanisms, potentially increasing crime risks within the specific HEI in Dagupan City.

The Broken Windows Theory, introduced by Wilson and Kelling in 1982, posits that visible signs of minor disorder and neglect in an environment can lead to an increase in more serious crime by signaling a lack of social control and encouraging further deterioration (Britannica, Broken windows theory, 2025; Hino & Chronopoulos, 2021). Contemporary discussions of this theory continue to explore the link between perceived disorder and crime rates (Ren, Zhao, & He, 2017). In a university setting, "broken windows" can include signs of physical decay like unaddressed vandalism or litter, as well as social disorder such as public intoxication or harassment that goes unchallenged.

Applied to the study's variables, Broken Windows Theory is relevant to the relationship between the physical and social environment and security. The awareness of respondents regarding the presence of physical or social disorder on campus can influence their fear of crime and perception of safety, potentially impacting their willingness to intervene or report issues. The level of implementation of security practices that focus on maintaining the campus environment and enforcing rules against minor infractions aligns with the theory's premise of addressing disorder to prevent escalation. The level of effectiveness of security, from this perspective, is partly determined by the institution's ability to cultivate and maintain an environment that signals order and control, thereby deterring potential offenders. The challenges in implementation, such as insufficient resources for maintenance, difficulties in consistently enforcing codes of conduct, or a lack of collective responsibility among the community, can contribute to a disordered environment, theoretically increasing the HEI's vulnerability to security problems in Dagupan City.

Environmental Criminology and Crime Prevention Through Environmental Design (CPTED), rooted in the work of Jeffery (1971) and expanded upon by others, emphasizes that modifying the built environment can reduce crime opportunities and the fear of crime (Cozens, 2011; ResearchGate, Crime Prevention Through Environmental Design). Key principles include natural surveillance, natural access control, territorial reinforcement, and maintenance (e-PG Pathshala, Environmental Crime Prevention- CPTED; Senna, Iglesias, & Matsunaga, 2025). Recent applications explore the integration of technology within CPTED frameworks (Semarak Ilmu Publishing, Application of the Third Generation CPTED, 2023).

This theoretical perspective is directly relevant to the study's focus on physical security. The level of implementation of security practices includes the extent to which CPTED principles are incorporated into the campus's physical design and management – such as the layout of walkways and lighting to maximize natural surveillance, the use of landscaping and barriers for natural access control, and defining campus spaces to foster a sense of territoriality. The level of effectiveness of physical security measures is theoretically linked to how well these environmental designs reduce opportunities for crime by influencing offender behavior and increasing the perceived risk of detection. The challenges in implementation of physical security are informed by CPTED, considering obstacles in retrofitting existing buildings, the costs associated with design changes and ongoing maintenance, and ensuring that security design enhances rather than detracts from the functional and aesthetic aspects of the HEI in Dagupan City. Furthermore, the awareness of respondents regarding the purpose of CPTED features can enhance their utilization of the environment as a security tool and their contribution to campus safety.

Implicitly supporting these environmental theories are Rational Choice Theory (Cornish & Clarke, 1986), which posits that offenders make decisions based on perceived costs and benefits (SCCJR, Theories and causes of crime Part 2; Oxford Research Encyclopedia of Criminology, Rational Choice Theories, 2018), and Social Disorganization Theory (Shaw & McKay, 1942), which links crime to the inability of a community to realize common values and maintain social control due to factors like residential instability or heterogeneity (Scribd, Shaw, Clifford R., and Henry D. McKay; Oxford Research Encyclopedia of Criminology, Social Disorganization Theory, 2010). Rational Choice highlights how the perceived effectiveness of security measures (increasing costs/risks for offenders) influences behavior. Social Disorganization suggests how the internal cohesion and collective efficacy within the HEI community might affect the overall security environment and the capacity to address challenges.

By integrating these theories with updated citations, the study provides a comprehensive theoretical foundation to investigate the awareness, implementation, effectiveness, and challenges of security practices in the higher education institution in Dagupan City, linking these variables to the broader concepts of opportunity, environmental influence, rational decision-making, and social control within the specific campus context.

1.5 Conceptual Framework

Ensuring a safe and conducive environment is paramount for the core mission of any educational institution. Security, broadly defined as the state of being free from danger or threat, encompasses the measures and systems designed to protect individuals, organizations, and assets from harm, damage, or loss (Envoy, n.d.). Applying this concept to the academic setting, campus security refers specifically to the protocols, measures, and environmental conditions established to safeguard students, faculty, staff, visitors, and institutional assets within a school or university (NCSS, 2025; ResearchGate, 2025). The aim of campus security is to effectively mitigate risks stemming from various sources, including crime, violence, accidents, natural disasters, and emerging threats such as cyberattacks (Prey Project, n.d.; Solink, n.d.).

The operationalization of campus security is achieved through the implementation of security practices. These are the specific policies, procedures, and tangible measures put into place to deter threats, protect assets, and facilitate effective response to incidents (ResearchGate, 2023; NCES, n.d.). Security practices in a higher education institution encompass a wide range of activities, including physical security measures (like access control, surveillance, and perimeter security), personnel security protocols (such as vetting, training, and identification systems), and information security measures (involving data protection policies and technological safeguards). The clarity, comprehensiveness, and consistent application of these practices are fundamental to achieving a secure campus environment.

The importance of robust security practices in HEIs cannot be overstated. A secure campus is intrinsically linked to providing an environment where learning and research can flourish without undue fear or disruption. It protects human lives and well-being, preserves institutional assets and reputation, and ensures compliance with legal and regulatory mandates (RA 10121, 2010; RA 11917, 2022; CHED CMO No. 09, s. 2013). In the Philippine context, the inherent vulnerability to natural disasters and the evolving threat landscape further underscore this importance.

A critical factor influencing the effectiveness of security practices is the awareness of respondents. This refers to the level of knowledge and understanding possessed by members of the campus community (students, faculty, staff) regarding existing security policies, procedures, potential risks, and emergency protocols. High awareness can foster a culture of shared responsibility, encouraging vigilance, proper adherence to security measures, and timely reporting of suspicious activities, thereby complementing formal security efforts (Mabanglo, 2020). Conversely, low awareness can render even well-designed practices ineffective.

The level of implementation pertains to the extent to which the defined security practices are actually put into operation and maintained across the institution. This involves assessing whether policies are followed, whether physical security measures are functional, whether personnel are adequately deployed and trained, and whether information security controls are active. The level of implementation reflects the translation of security plans from paper to practice.

The level of effectiveness measures how well the implemented security practices achieve their intended outcomes. This could be assessed through metrics such as crime incident rates, successful handling of emergencies, protection of sensitive data, and the overall perception of safety among the campus community. Effective practices deter threats, minimize harm during incidents, and instill confidence in the security framework.

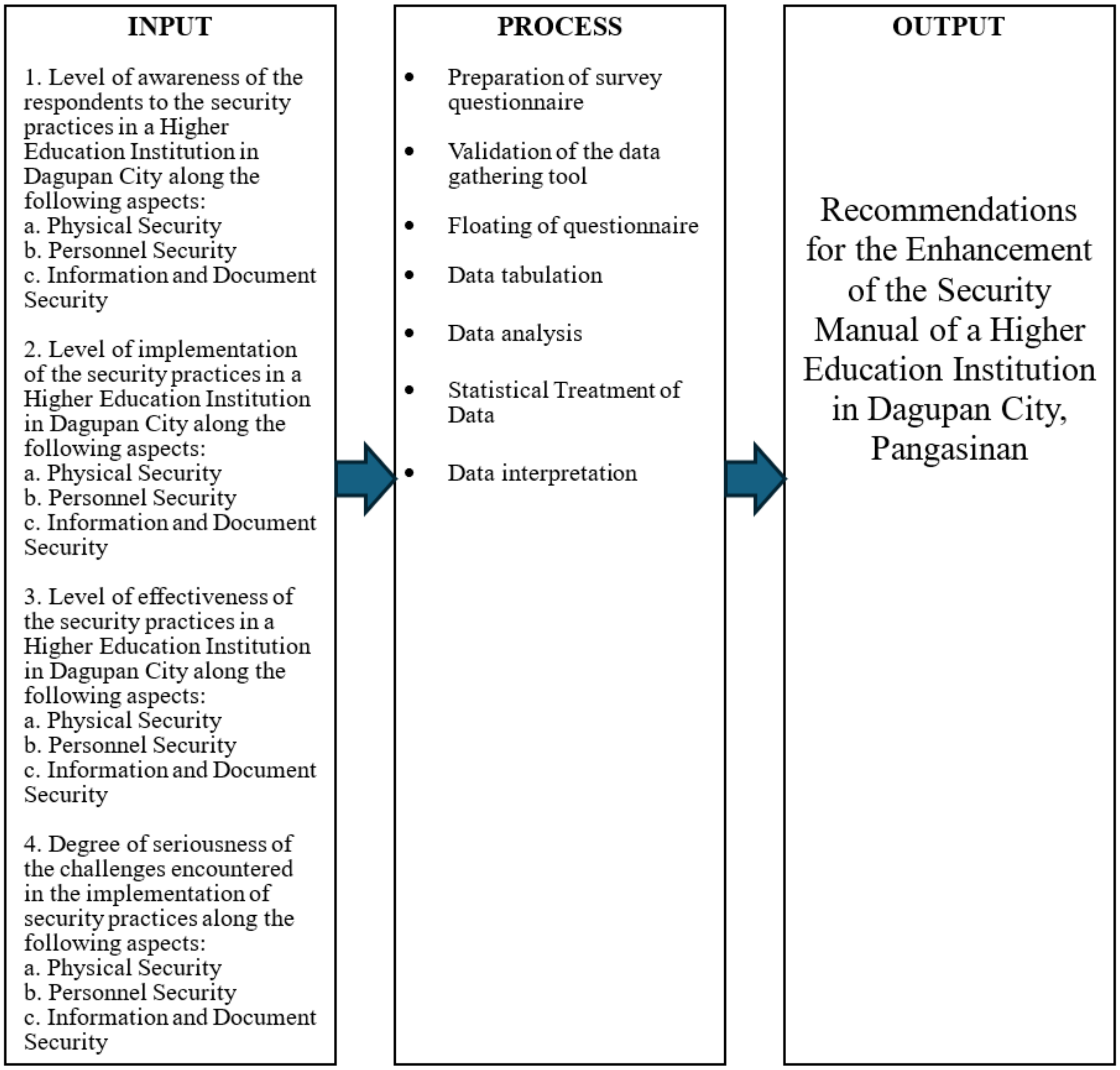
Despite the importance and implemented measures, HEIs commonly face challenges in the implementation of security practices. These obstacles are multifaceted and can include limitations in funding and resources, difficulties in adopting and integrating security technologies, resistance to certain security measures from stakeholders, concerns about balancing security with an open academic environment, and the need for continuous adaptation to evolving threats (ResearchGate, 2025). In the Philippine setting, challenges may also relate to specific compliance requirements of local laws (RA 10121, RA 11917, CHED CMO No. 09, s. 2013) and the complexities of managing security across potentially dispersed or rapidly developing campus infrastructures, sometimes with guidance drawn from general local security or facilities management literature (Dela Cruz Jr., 2007; DepEd, 2010).

This study focuses on examining these interconnected variables: the awareness of respondents regarding security practices, the level of implementation of these practices, the perceived level of effectiveness of these practices, and the challenges in their implementation within a specific higher education institution in Dagupan City. The conceptual framework posits that the interplay between the level of implementation, the challenges faced, and the awareness of the community collectively influences the overall level of effectiveness of security practices and, consequently, the state of campus security within this particular context. The study aims to provide insights into these relationships as they exist in the operational reality of the concerned HEI, acknowledging the influence of the broader Philippine legal and operational environment.

Guiding the investigation into these aspects of safety within a higher education institution, the study utilizes an Input-Process-Output (IPO) conceptual framework. This model systematically outlines the research journey, beginning with the collection of essential data (Input) to understand the current security landscape. The Input component focuses on capturing four key dimensions: the Level of awareness among respondents regarding existing security practices (including physical, personnel, and information/document security), recognizing that informed stakeholders are crucial for a shared responsibility in maintaining security (Mabanglo, 2020; Velas, Halaj, & Jankura, 2021); the Level of implementation of these documented practices across the different security domains, assessing the extent to which policies are actively put into operation (ResearchGate, 2023); the Level of effectiveness of these implemented practices in achieving their safety objectives, evaluating their impact on perceived safety and incident prevention (University of Bridgeport, 2025; Al-Kindi Center for Research and Development, n.d.); and the Degree of seriousness of the challenges encountered during the implementation process, identifying the significant obstacles faced by the institution (ResearchGate, 2025; Solink, n.d.).

The Process stage of the framework involves the systematic procedures undertaken to analyze the collected data. This includes the preparation and validation of data collection instruments, the organized gathering and tabulation of data, the application of appropriate statistical methods for analysis (such as weighted mean and ANOVA), and the subsequent interpretation of the statistical findings to derive meaningful conclusions pertinent to the study's objectives.

Finally, the Output stage represents the practical outcome and contribution of the research. Based on the insights generated from the analysis of the inputs and the systematic process, the output will consist of concrete and actionable Recommendations specifically aimed at enhancing the existing Security Manual of the Higher Education Institution. These recommendations will be directly informed by the assessed levels of awareness, implementation, and effectiveness of current practices, as well as a clear understanding of the primary challenges hindering security efforts, ultimately contributing to a more robust and effective safety framework for the entire campus community.



INPUT

1. Level of awareness of the respondents to the security practices in a Higher Education Institution in Dagupan City along the following aspects:
a. Physical Security
b. Personnel Security
c. Information and Document Security

2. Level of implementation of the security practices in a Higher Education Institution in Dagupan City along the following aspects:
a. Physical Security
b. Personnel Security
c. Information and Document Security

3. Level of effectiveness of the security practices in a Higher Education Institution in Dagupan City along the following aspects:
a. Physical Security
b. Personnel Security
c. Information and Document Security

4. Degree of seriousness of the challenges encountered in the implementation of security practices along the following aspects:
a. Physical Security
b. Personnel Security
c. Information and Document Security

PROCESS

- Preparation of survey questionnaire
- Validation of the data gathering tool
- Floating of questionnaire
- Data tabulation
- Data analysis
- Statistical Treatment of Data
- Data interpretation

OUTPUT

Recommendations for the Enhancement of the Security Manual of a Higher Education Institution in Dagupan City, Pangasinan

Figure 1. The Conceptual Framework of the Study

1.6 Significance of the Study

This study holds significant implications and is anticipated to yield substantial benefits for various groups and communities involved in or affected by the security and safety of educational institutions, particularly Higher Education Institutions (HEIs).

Local Government Unit (LGU). The findings of this research are poised to empower Local Government Units by providing crucial insights into the prevalent security threats and challenges encountered within HEIs situated in their localities. By understanding the specific security landscape of these institutions, LGUs can proactively address potential risks and formulate more targeted and effective policies aimed at enhancing peace and order within their jurisdictions. The study's results can inform local crime prevention strategies, resource allocation for security services in areas surrounding educational institutions, and strengthen coordination mechanisms between HEI security forces and local law enforcement or disaster risk reduction and management bodies. This collaborative approach, informed by data on campus security needs, can contribute to a safer overall community environment.

Higher Educational Institutions (HEIs). This research is expected to be of primary benefit to HEIs themselves. The study's comprehensive examination of security practices, perceptions, effectiveness, and challenges offers valuable data regardless of an institution's current security posture. The output, specifically the recommendations for enhancing a security manual, will integrate insights drawn from existing practices and identified needs within various HEIs. Therefore, even institutions that already possess a security policy or manual can utilize the findings as a benchmark and a source of evidence-based strategies to improve and update their current safety and security measures across physical, personnel, and information security domains. Enhancing security practices is crucial for HEIs to fulfill their duty of care to their community, protect institutional assets, and maintain a positive reputation, which can impact enrollment and overall institutional stability.

Students. As central stakeholders within any educational institution, students are direct beneficiaries of this study. A safe and secure university environment is not merely a matter of comfort but is fundamental to students' ability to focus on their academic pursuits, engage in personal development, and ultimately reach their full potential. By identifying areas for improvement in security practices and contributing to the enhancement of the security manual, the study aims to foster a safer campus where students feel protected from various threats, including crime, harassment, and cyber risks. Ensuring the physical and psychological safety of students is paramount for creating a conducive learning atmosphere and enabling the university to function effectively in its educational mission.

Security Agencies. The findings of this research hold practical value for security agencies that provide personnel and services to universities and colleges. The study delves into the specific safety and security needs and operational context of an educational environment, which differs significantly from other establishments like commercial or industrial sites. Universities accommodate a diverse population including students, faculty, staff, and visitors, often with unique traffic patterns and community interactions. Understanding the particular security challenges and effective practices within this setting can help security agencies tailor their training programs, refine their operational protocols, and better prepare their personnel for deployment in HEIs, ensuring they are equipped to address the specific requirements of safeguarding a learning institution.

Future Researchers. The results, methodology, and final report of this study will serve as a valuable resource and foundation for future research endeavors in the field of educational institution security in the Philippines and potentially in other similar contexts. The study provides an empirical base and highlights key areas that warrant further investigation. Future researchers may choose to expand upon this work by employing qualitative approaches to explore stakeholder perceptions in greater depth, conducting comparative studies across different types or sizes of HEIs, evaluating the effectiveness of specific security technologies or training interventions, or focusing on emerging threats. The insights and references provided can guide their research design and contribute to the growing body of knowledge on how to best ensure safety and security in educational settings.

Present Researcher. This study holds significant importance for the present researcher, offering a valuable opportunity for intellectual growth, practical skill development, and contribution to a relevant field of inquiry. Undertaking this research allows the researcher to delve deeply into the critical area of security practices and challenges within higher education institutions, specifically focusing on the context of a university in Dagupan City.

1.7 Definition of terms

The study operationally defines the following terms based on their specific use and measurement within the research:

University Security. As used in this study, this term refers to the overall state of safety and protection within a Higher Education Institution (HEI), encompassing all measures and protocols implemented to safeguard the physical premises, assets, and members of the academic community—specifically students, faculty, staff, and visitors—from various threats and hazards, thereby ensuring an environment conducive to learning and institutional operations. The assessment of University Security in this research is based on the combined evaluation of its constituent elements: Physical Security, Personnel Security, and Information and Document Security.

Documentary Security. In the context of this research, Documentary Security refers to the specific security protocols and measures implemented by a Higher Education Institution to protect the integrity, confidentiality, and availability of its physical documents and records. This includes procedures for secure storage, handling, access control, and disposal of paper-based information to prevent unauthorized access, alteration, loss, or destruction.

Higher Education Institutions (HEI). Operationally, HEIs in this study refer to post-secondary educational institutions located in the Philippines that offer degree programs and are recognized, administered, and regulated by the Commission on Higher Education (CHED). The research focuses on a specific HEI in Dagupan City as the setting for assessing security practices.

Information Security. As defined in this study, Information Security pertains to the measures, processes, and technologies implemented by a Higher Education Institution to protect its digital data and information systems. This encompasses safeguarding electronic records, databases, networks, and software against unauthorized access, use, disclosure, disruption, modification, or destruction, specifically aimed at meeting the data security and information management demands of the institution.

Personnel Security. In this research, Personnel Security refers to the security measures and practices directly related to the personnel within the Higher Education Institution, particularly focusing on the security guard force responsible for maintaining order and safety on campus. It also encompasses broader aspects related to vetting, training, and managing individuals who have access to sensitive areas or information, ensuring their reliability and adherence to security protocols as part of the overall campus security framework.

Physical Security. As operationalized in this study, Physical Security denotes the tangible measures and barriers adopted by the Higher Education Institution to prevent unauthorized physical access to its buildings, facilities, equipment, materials, and documents. This includes implemented security features such as fences, walls, gates, locks, surveillance cameras (CCTV), access control systems, and lighting, aimed at safeguarding against espionage, damage, loss, and theft of physical assets and controlling movement within the campus.

Security Practices. Within the scope of this research, Security Practices are defined as the set of established procedures, protocols, and implemented measures derived from the institution's security policy that are actively observed and carried out within the university environment to ensure the safety and security of its premises, assets, and community members. The study assesses the awareness, implementation, and effectiveness of these observed practices.

Security Policy. This term, as used in the study, refers to the formal, documented guidelines and standard operating procedures developed and adopted by the Higher Education Institution to govern how all security matters are handled. This policy provides detailed instructions and protocols for ensuring the security and safety of all individuals under the institution's jurisdiction and control, serving as the foundational document from which specific security practices are derived.

1.8 Statement of the Problem

The general problem of this study is to examine the safety and security practices of a higher education institution in Dagupan City to have a basis for the enhancement of the security manual.

Specifically, the study sought to answer the following:

1. What is the level of awareness of the respondents on the security practices in terms of:

   1.1 Physical security

   1.2 Personnel security

   1.3 Information and Document security?

2. Are there significant differences in the level of awareness on the security practices in terms of the identified variables according to group?

3. What is the level of implementation of the security practices in terms of:

   3.1 Physical security

   3.2 Personnel security

   3.3 Information and Document security?

4. Are there significant differences in the level of implementation of the security practices in terms of the identified variables according to group?

5. What is the level of effectiveness of the security practices in terms of:

   5.1 Physical security

   5.2 Personnel security

   5.3 Information and Document security?

6. Are there significant differences in the level of effectiveness of the security practices in terms of the identified variables according to group?

7. What is the degree of seriousness of the challenges encountered in the implementation of security practices in terms of:

   7.1 Physical security

7.2 Personnel security

7.3 Information and Document security?

8. Are there significant differences in the degree of seriousness of the challenges encountered in the implementation of the security practices in terms of the identified variables according to group?

9. Based on the results of the study, what recommendations may be made on the security practices of a Higher Education Institution in Dagupan City to enhance its implementation?

Hypotheses

Based on the problems, the following had been hypothesized:

1. There are no significant differences in the level of awareness on the security practices in terms of physical security, personnel security, and information and document security according to group.

2. There are no significant differences in the level of implementation of the security practices in terms of physical security, personnel security, and information and document security according to group.

3. There are no significant differences in the level of effectiveness of the security practices in terms of physical security, personnel security, and information and document security according to group.

4. There are no significant differences in the degree of seriousness of the challenges encountered in the implementation of security practices in terms of

physical security, personnel security, and information and document security according to group.

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Chapter II
Methodology

2.1 Research Design

This study employed a descriptive research design, specifically a descriptive quantitative approach. Descriptive research is a non-experimental method primarily concerned with accurately and systematically describing the characteristics of a population or phenomenon as it exists in a particular setting (Siedlecki, 2020; Shields & Rangarajan, 2013). It involves collecting quantifiable information to describe, summarize, and portray the state of the variables of interest.

This methodology was deemed appropriate for the present study because it aims to provide a detailed and accurate account of the existing level of awareness among respondents regarding security practices, the actual level of implementation of these practices by the institution, the perceived level of effectiveness of these measures, and the identified challenges in the implementation of security practices within the targeted higher education institution in Dagupan City. The descriptive design allows the researcher to capture the current status, frequency, and characteristics associated with each of these variables without manipulating any factors or seeking to establish cause-and-effect relationships (Gay, Mills, & Airasian, 2011). It is particularly well-suited for answering research questions that begin with "What is...?" or "How often...?" in relation to the variables under investigation.

In alignment with this descriptive quantitative approach, the researcher utilized a survey questionnaire as the primary data collection instrument. This tool was designed to systematically gather quantifiable data from a sample of the HEI population on their awareness levels, perceptions of implementation and effectiveness, and perspectives on the challenges encountered. The numerical data collected through the survey will enable the researcher to statistically describe the characteristics of the responses for each variable, providing a comprehensive picture of the security landscape from the perspective of the respondents within the institution.

2.2 Research Method

This study employed a quantitative research approach, which was determined to be most appropriate for effectively gathering data from a substantial number of respondents across a higher education institution in Dagupan City. A quantitative approach is characterized by the collection and analysis of numerical data to identify relationships between variables and describe characteristics of a population (Creswell & Creswell, 2018; Mertler, 2019). This approach is particularly useful when the research aims to measure the extent or level of certain phenomena and to generalize findings from a sample to a larger population.

Within this quantitative design, a survey method was utilized as the primary data collection instrument. Survey research is a widely recognized quantitative method defined as the systematic collection of information from a sample of individuals through their responses to a set of predetermined questions (Fowler, 2013; Creswell & Creswell, 2018). Typically administered via a questionnaire or structured interview, the survey method is efficient for collecting data on the characteristics, opinions, perceptions, and reported behaviors of a defined population (Check & Schutt, 2012).

This method was selected for its efficiency in collecting quantifiable data on the characteristics and perceptions of a defined population regarding security within the HEI. Accordingly, a survey questionnaire was constructed specifically for this study to gather numerical data related to the (a) Level of Awareness of respondents regarding the institution's security practices, (b) Perceived Level of Implementation of these practices by the institution, (c) Assessed Level of Effectiveness of the security measures in place, and (d) Reported Degree of Seriousness of the challenges encountered in their implementation.

These variables were explored across the key dimensions of Physical Security, Personnel Security, and Information and Document Security within the higher education institution in Dagupan City. The use of a structured survey allowed for the systematic collection of consistent, quantifiable data from a large sample, facilitating statistical analysis to describe the levels and perceptions associated with these critical aspects of campus security.

2.3 Population of the Study

The population of this study comprised key stakeholders within a higher education institution in Dagupan City who were directly involved in or affected by the institution's safety and security practices. To adopt a holistic approach in developing the study's output—the proposed enhancement of the existing security manual—the researcher surveyed security personnel, employees, parents, and students. Security personnel were included as they were primarily responsible for enforcing the institution's security measures and faced the initial challenges during implementation. Employees, particularly those in administrative and support roles, were considered essential as they were tasked with implementing various safety and security protocols in their daily functions and had significant interactions within the campus environment. Parents were included due to their vested interest in their children's safety and their perspective on the adequacy of institutional security measures. Students constituted a vital group as they were the primary beneficiaries of a safe and secure environment and their daily experiences provided crucial insights into the practical effectiveness and areas for improvement of existing practices.

A total of 700 individuals participated in the data collection. This included 198 employees, 12 security personnel, 127 parents, and 363 students.

The inclusion criteria for participation in the study varied by group. Security personnel and employees included in the sample had been employed at the higher education institution for at least one year at the time of the study's conduct, were at least 21 years of age, and had no record of major disciplinary offenses or suspensions from the administration. Students included in the study were officially enrolled as college students during the semester the data was collected, were in good academic standing (defined as not being subjected to any disciplinary action from the administration at the time of the study), and were at least 18 years of age.

Conversely, the exclusion criteria for security personnel and employees were those who had served or been employed for less than one year, individuals who had been subjected to suspension or any significant disciplinary offense by the administration, and those who were below 21 years of age. Excluded students were those who were minors (below 18 years old), on a leave of absence from their studies, or were currently undergoing suspension or administrative disciplinary action.

2.4 Locale of the Study

This study was conducted within a higher education institution situated in Dagupan City, Philippines. Dagupan City itself is a key urban center and major commercial hub within the Ilocos Region, characterized by its coastal location and dynamic environment. The selection of this locale provided a relevant setting to examine security practices within a prominent educational institution operating in a bustling urban area with its own unique set of opportunities and challenges.

The chosen institution was a large, private higher education provider recognized for its significant contribution to education in the region. It spanned a considerable campus area within the city, comprising a variety of interconnected academic buildings, specialized laboratories, a library, sports facilities, administrative offices, and residential facilities for students. Serving a substantial and diverse student population, including those from various parts of the country and internationally, the institution's campus was a vibrant and complex environment.

These characteristics inherently presented a range of security and safety considerations, such as managing access control across multiple entry points and diverse buildings, ensuring the safety of a large and mobile population, monitoring expansive grounds and varied facilities, and developing effective emergency response plans tailored to the campus layout and the urban, potentially hazard-prone location of Dagupan City. The study focused on the security practices and challenges within this specific institutional setting to provide context for understanding the practical application of safety measures in a Philippine urban university.

2.5 Scope and Delimitations

The scope of this research study was specifically delimited to an examination of the safety and security practices within a single, designated higher education institution located in Dagupan City, Philippines. The study focused on assessing the Level of Awareness of respondents regarding security practices, the Level of Implementation of these practices, the Level of Effectiveness of the security measures in place, and the Degree of Seriousness of the challenges encountered in their implementation. These variables were explored across the key dimensions of Physical Security, Personnel Security, and Information and Document Security, as perceived and experienced by the surveyed population.

The delimitations of this study are therefore clear. The findings and conclusions drawn are based solely on the data collected from the 700 participants—comprising security personnel, employees, parents, and students—within this particular higher education institution in Dagupan City. Consequently, the results of this study are specific to this institution and cannot be generalized to represent the security practices, challenges, or needs of other universities or colleges in Dagupan City, the wider region, or elsewhere in the Philippines. Similarly, the findings do not necessarily reflect the situation in any other campuses that this institution might have outside of Dagupan City. The primary output of the study, the recommendations for the enhancement of the existing security manual, was specifically tailored to address the identified needs and challenges within this singular institutional context. While these recommendations may offer valuable insights and serve as a reference for other institutions facing similar issues, their direct applicability is limited to the study's specific locale.

2.6 Data Gathering Tools

For this quantitative research study, the primary data gathering tool employed was a survey questionnaire. A questionnaire, in the context of quantitative research, is a structured instrument comprising a series of questions designed to collect and record information from a sample of individuals in a consistent and systematic manner (Scribbr, n.d.; Chattermill, 2024). This method was selected for its efficiency in gathering quantifiable data from a relatively large number of respondents across the higher education institution.

The survey questionnaire was structured into distinct parts to address the study's objectives. The first part was dedicated to collecting the demographic profile of the respondents, gathering relevant background information necessary for data analysis and potential comparisons between groups. Subsequent parts of the questionnaire were designed to measure the core variables outlined in the conceptual framework. These included sections dedicated to assessing the Level of Awareness of respondents regarding the institution's security practices, the perceived Level of Implementation of these practices within their experience, and their assessment of the Level of Effectiveness of the security measures in place across the dimensions of Physical Security, Personnel Security, and Information and Document Security. Another part focused on evaluating the Degree of Seriousness of the challenges encountered in the implementation of these security practices from the respondents' perspectives. The questions within these sections were typically structured using closed-ended formats, such as Likert scales, to facilitate the collection of numerical data suitable for statistical analysis.

Prior to its widespread administration, the survey questionnaire underwent a crucial validation process to ensure its clarity, relevance, and appropriateness for the study's target population and objectives. The instrument was reviewed by two individuals with relevant expertise. One validator was a security officer from another higher education institution, whose practical experience in campus security provided valuable insight into the content validity and practical relevance of the questions concerning security practices and challenges. The second validator was a professor specializing in English, who reviewed the questionnaire for clarity of language, readability, and overall coherence, ensuring that the questions were easily understood by all potential respondents. This validation process aimed to enhance the quality and reliability of the data that would be collected using the instrument.

2.7 Treatment of Data

The quantitative data collected from the survey questionnaire were subjected to appropriate statistical analysis procedures to address the research problems. Initially, descriptive statistics were utilized to summarize the characteristics of the study participants and the key variables. Frequency counts and percentages were calculated to describe the demographic profile of the respondents and to show the distribution of participants across the defined groups: security personnel, employees, parents, and students (Emerald Insight, 2024; CloudResearch, n.d.).

To determine the level of awareness, level of implementation, level of effectiveness, and the degree of seriousness of challenges in the implementation of the security practices (Problems 1, 3, 5, and 7), the Weighted Mean was calculated for the responses to the relevant items in the questionnaire. The Weighted Mean is a measure of central tendency that accounts for the relative contribution or importance of each value in a dataset, providing an average score that reflects the respondents' collective perception or assessment on a given scale (Corporate Finance Institute, n.d.; Numeracy, n.d.). This was computed for each dimension of security (Physical, Personnel, and Information/Document Security) and for the overall scores for each variable.

Subsequently, inferential statistics were employed to examine whether significant differences existed in the mean scores of the key variables among the different groups of respondents (Problems 2, 4, 6, and 8). To compare the means of the four independent groups (security personnel, employees, parents, and students) on the levels of awareness, implementation, effectiveness, and degree of seriousness of challenges, the One-Way Analysis of Variance (ANOVA) was conducted. ANOVA is a statistical test appropriate for determining if there are any statistically significant differences between the means of three or more independent groups (Scribbr, 2024; ASERS Journals, 2021).

To describe the results of the study, the following scales had been used:

Scale	Intervals	Descriptive Equivalence	Qualitative Description
			Level of Awareness
4	3.26 – 4.00	Very Aware (VA)	Respondents at this level possess a thorough and detailed understanding of the university's security practices. They are likely familiar with specific policies, procedures, and resources related to security, including areas such as online safety, physical security measures, emergency protocols, and data protection. They would feel confident in explaining these practices to others and consistently adhere to them.
3	2.51 – 3.25	Aware (A)	Respondents at this level have a general understanding of the university's security practices. They are aware that security measures exist and have a basic grasp of key practices, although their knowledge may not be extensive or detailed. They likely know where to find information about security but might not actively seek it out or be able to recall specific details readily. They generally follow security guidelines when reminded or when the practice is easily apparent.
2	1.76 – 2.50	Slightly Aware (SA)	Respondents at this level have limited or superficial knowledge of the university's security practices. They may have heard mentions of security but lack a clear understanding of what the practices entail or why they are important. Their awareness is likely vague, and they may be unsure where to find relevant information. They may not consistently follow security protocols due to a lack of understanding or perceived relevance.
1	1.00 – 1.75	Not Aware (NA)	Respondents at this level have no discernible knowledge or understanding of the university's security practices. They are likely unaware that specific security measures or policies are in place. They would not be able to identify any security practices and would not actively consider security in their university-related activities.

Table 1. Likert-scale Template for the respondents' level of awareness to the Security Practices of the University

Scale	Intervals	Descriptive Equivalence	Qualitative Description
			Level of Implementation
4	3.26 – 4.00	Very Implemented (VI)	Respondents perceive that the security practice is consistently and effectively in place across the university. There is a strong sense that the practice is a standard and well-followed procedure.
3	2.51 – 3.25	Implemented (I)	Respondents perceive that the security practice is in place to some extent, but its implementation may be inconsistent, incomplete, or varies across different areas or departments of the university. There is awareness of the practice, but its application is not universal or fully effective.
2	1.76 – 2.50	Slightly Implemented (SI)	Respondents perceive that there is very little evidence of the security practice being implemented. Awareness may be low, or the practice is rarely followed or enforced. Its presence is negligible in the day-to-day operations or environment.
1	1.00 – 1.75	Not Implemented (NI)	Respondents perceive that the security practice is completely absent and not put into action within the university. There is no observable effort or system in place related to this practice.

Table 2. Likert-scale Template for the respondents' perception of the level of implementation of Security Practices of the University

Scale	Intervals	Descriptive Equivalence	Qualitative Description
			Level of Effectiveness
4	3.26 – 4.00	Very Effective (VE)	Respondents at this level strongly believe that the university's security practices are highly effective in preventing incidents, responding to emergencies, and ensuring overall safety on campus. They likely feel very secure and have personal experiences or observations that reinforce their confidence in the security measures. They perceive security personnel as highly competent and visible, and believe reporting and response systems work exceptionally well.
3	2.51 – 3.25	Effective (E)	Respondents at this level believe that the university's security practices are generally effective in maintaining safety. They likely feel reasonably secure and have a positive overall impression of the security measures in place. While they may not perceive the system as flawless, they believe it adequately addresses most security concerns and that the university is making a good effort to ensure safety.
2	1.76 – 2.50	Slightly Effective (SE)	Respondents at this level have doubts about the effectiveness of the university's security practices. They may feel only somewhat secure or have concerns about specific aspects of security. They might have experienced or observed minor security lapses, or perceive security personnel as not always visible or responsive. Their belief in the effectiveness of the practices is limited, suggesting perceived weaknesses in the system.
1	1.00 – 1.75	Not Effective (NE)	Respondents at this level believe the university's security practices are largely ineffective and do not adequately ensure safety on campus. They likely feel insecure or vulnerable and may have had negative personal experiences or observations regarding security incidents or the response to them. They may perceive security personnel as absent or ineffective, and have little confidence in the university's ability to handle security matters

Table 3. Likert-scale Template for the respondents' perception of the level of effectiveness of Security Practices of the University

Scale	Intervals	Descriptive Equivalence	Qualitative Description
			Degree of Seriousness of the Challenges
4	3.26 – 4.00	Very Serious (VS)	Respondents at this level perceive the challenges in implementing security practices as highly significant and having a major negative impact. They likely see these challenges as creating substantial vulnerabilities, hindering the effectiveness of security measures, potentially compromising safety, and requiring urgent and significant intervention to rectify. These challenges are viewed as critical impediments to a secure environment
3	2.51 – 3.25	Serious (S)	Respondents at this level perceive the challenges as significant and causing noticeable problems in the implementation of security practices. While perhaps not seen as immediately catastrophic, these challenges are viewed as genuinely impacting the efficiency and effectiveness of security, potentially leading to issues or concerns if not addressed. They are considered important problems that need attention.
2	1.76 – 2.50	Slightly Serious (SS)	Respondents at this level perceive the challenges as present but not severely impactful on the implementation of security practices. They might see these challenges as occasional annoyances, minor hurdles, or inefficiencies that do not fundamentally undermine the security framework. The perceived impact is limited, and the issues are not seen as posing a major threat to safety or security
1	1.00 – 1.75	Not Serious (NS)	Respondents at this level perceive no significant challenges, or the challenges encountered are considered negligible and having no real impact on the implementation or effectiveness of the university's security practices. They view the implementation as smooth and the security measures as functioning without encountering meaningful obstacles

Table 4. Likert-scale Scale for the respondents' perception of the seriousness of challenges encountered in the implementation of Security Practices of the University

2.9 Ethical Considerations

Throughout the conduct of this research study, stringent ethical standards for research involving human participants were strictly adhered to, ensuring the protection and well-being of all individuals who participated.

A cornerstone of the ethical protocol was the process of obtaining informed consent. This was secured from all participants involved in the study, which included security personnel, employees, parents, and students. The informed consent process involved clearly explaining the objectives and purpose of the study, detailing the procedures participants would be asked to follow, outlining any potential benefits they might receive or minimal risks they might encounter, and unequivocally assuring them of the confidentiality and anonymity of their response. Participants were explicitly informed that their involvement was entirely voluntary and that they possessed the right to withdraw from the study at any point, for any reason, without facing any negative consequences or repercussions. This emphasis on voluntary participation was particularly crucial given the institutional setting and the diverse roles of the respondents.

Measures were diligently implemented to maintain the confidentiality and anonymity of the data collected. Participant responses were handled with the utmost discretion, ensuring that individual identities were protected and could not be linked to their specific answers. All collected data were stored securely and were accessed and utilized solely for the purposes of this research study, in line with established protocols for data protection in quantitative research.

Recognizing the potential for power dynamics in an academic and institutional setting, particularly given the researcher's position and the varying roles of the participants (such as employees and students), deliberate steps were taken to minimize any possibility of coercion or undue influence during the data collection process. Efforts were made to create an environment where participants felt comfortable providing honest responses without fear of prejudice or repercussions related to their employment status, academic standing, or relationship with the institution.

Furthermore, the researcher maintained a steadfast commitment to objectivity and accuracy throughout the data collection and analysis phases, aligning with the ethical principles of research integrity in the quantitative paradigm. Findings were analyzed based solely on the collected numerical data, and interpretations were made in a neutral and unbiased manner. The findings derived from the study were intended to be shared with relevant stakeholders within the higher education institution and were specifically purposed to inform the enhancement of the existing security manual, contributing to improved safety and security measures while strictly upholding the privacy and confidentiality of all participants' data.

2.10 Dissemination of the Research Outcome

The findings of this study will be disseminated through various channels to ensure that the outcomes reach relevant audiences, particularly those involved in maintaining and enhancing safety and security within university settings in Dagupan City, Pangasinan. Effective research dissemination is a planned process that involves considering target audiences, the settings in which findings will be received, and communicating in ways that facilitate the use of the research.

A primary method of dissemination will involve presenting a summary of the research findings, analysis, and recommendations directly to the higher education institution's administrators, campus security personnel, and other relevant stakeholders within Dagupan City. This presentation will aim to highlight specific security challenges identified in the study and offer actionable recommendations grounded in the research to improve campus safety and security. The session will also serve as a platform for stakeholders to discuss the study's implications in their specific context and consider integrating the findings into their existing security protocols and operational procedures. Face-to-face meetings and direct presentations are often rated as highly impactful methods for transferring research findings to practice.

Consistent with the study's objective, the findings and recommendations will serve as a basis for the enhancement of the existing security manual for the specific higher education institution in Dagupan City. This process will involve translating the research outcomes into detailed guidelines, updated preventive measures, refined emergency response protocols, and best practices tailored to the institution's unique environment and identified needs.

To contribute to the broader academic and professional communities, the study's findings will be prepared for submission for publication in reputable peer-reviewed journals relevant to fields such as public administration, criminology, campus safety, and higher education administration. Publishing in academic journals is a standard method for communicating research outcomes and contributing to the body of knowledge. Additionally, the researcher plans to present the findings at national or regional conferences related to public safety, educational administration, and local governance. Presenting at conferences will provide an opportunity to engage with fellow researchers and practitioners, promote further discourse on university security measures, and allow other institutions facing similar challenges to benefit from the study’s insights and methodology.

Chapter 3
Results and Discussion

This chapter presents the results of the study on safety and security practices within the selected higher education institution in Dagupan City, Philippines. The findings are meticulously analyzed and interpreted to address the specific research questions that guided this investigation. Based on the quantitative data collected from the surveyed population, comprising security personnel, employees, parents, and students, this chapter illuminates the key insights derived from the study. Through the application of descriptive statistics, such as percentages and weighted means, the levels of awareness, implementation, and effectiveness of security practices, as well as the degree of seriousness of challenges encountered in their implementation, were determined. Inferential statistical analyses, including One-Way ANOVA and post-hoc tests, were then utilized to examine significant differences in these variables among the diverse groups of respondents. The analysis and interpretation presented herein lay the groundwork for a comprehensive discussion of the implications of these findings in relation to existing knowledge and the practical context of campus security.

3. 1 Distribution of Respondents

This section presents the distribution of the study's participants across the different respondent groups surveyed within the higher education institution in

Dagupan City. A total of 700 individuals participated in the study. The distribution by group, along with the corresponding percentages, is presented in Table 5.

Respondent Group	**Frequency (n)**	**Percentage (%)**
Employees	198	28.29
Security Personnel	12	1.71
Parents	127	18.14
Students	363	51.86
Total	**700**	**100.00**

Table 5. Distribution of Respondents
(Note: Percentages may not sum to 100 due to rounding.)

As shown in Table 2, the largest proportion of the respondents were students, accounting for 363 participants or 51.86% of the total sample. Employees constituted the second largest group, with 198 participants (28.29%). Parents comprised 127 participants (18.14%), while security personnel represented the smallest group, with 12 participants (1.71%). This distribution reflected the intentional sampling approach to gather perspectives on safety and security practices from various key stakeholders within the institutional community.

3.2 Level of Awareness of the Respondents on the Security Practices of a Higher Education Institution in Dagupan City

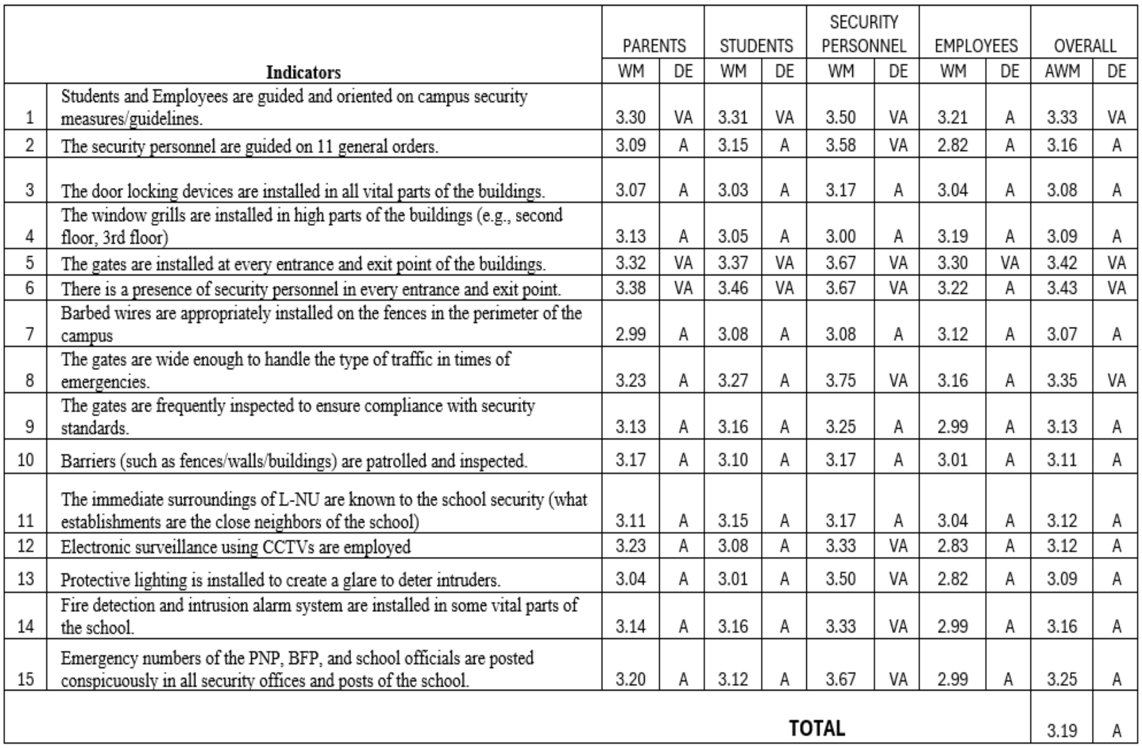
This section presents the analyzed data concerning the Level of Awareness among the surveyed security personnel, employees, parents, and students regarding the security practices implemented within the higher education institution in Dagupan City. The respondents' awareness was assessed across the dimensions of Physical Security, Personnel Security, and Information and Document Security. Utilizing the Weighted Mean as the primary statistical tool for descriptive analysis, the findings presented below illustrate the perceived level of awareness for each dimension and the overall awareness among the different groups of stakeholders who participated in the study.

3.2.1 Level of Awareness of the Respondents on the Security Practices in Terms of Physical Security Aspect

Ensuring a safe and secure physical environment is a fundamental aspect of managing any educational institution. Physical security encompasses the measures designed to protect people and property from physical threats, including controlled access points, surveillance systems, adequate lighting, secure perimeters, and emergency infrastructure (NIJ, 2025; ResearchGate, 2021). Stakeholders' awareness of these implemented physical security practices is crucial for their effectiveness, as it influences behavior, vigilance, and compliance with safety protocols.

This study specifically investigated the level of awareness of these physical security measures among the diverse groups within the higher education institution in Dagupan City. The following section, Table 6.1, presents the detailed findings on the respondents' level of awareness concerning the physical security aspects of the institution's safety protocols, as indicated by the computed weighted means for the relevant items in the survey questionnaire.

Table 6.1 Level of Awareness of the Respondents to the University Security Practices in Terms of Physical Security



		PARENTS		STUDENTS		SECURITY PERSONNEL		EMPLOYEES		OVERALL	
	Indicators	WM	DE	WM	DE	WM	DE	WM	DE	AWM	DE
1	Students and Employees are guided and oriented on campus security measures/guidelines.	3.30	VA	3.31	VA	3.50	VA	3.21	A	3.33	VA
2	The security personnel are guided on 11 general orders.	3.09	A	3.15	A	3.58	VA	2.82	A	3.16	A
3	The door locking devices are installed in all vital parts of the buildings.	3.07	A	3.03	A	3.17	A	3.04	A	3.08	A
4	The window grills are installed in high parts of the buildings (e.g., second floor, 3rd floor)	3.13	A	3.05	A	3.00	A	3.19	A	3.09	A
5	The gates are installed at every entrance and exit point of the buildings.	3.32	VA	3.37	VA	3.67	VA	3.30	VA	3.42	VA
6	There is a presence of security personnel in every entrance and exit point.	3.38	VA	3.46	VA	3.67	VA	3.22	A	3.43	VA
7	Barbed wires are appropriately installed on the fences in the perimeter of the campus	2.99	A	3.08	A	3.08	A	3.12	A	3.07	A
8	The gates are wide enough to handle the type of traffic in times of emergencies.	3.23	A	3.27	A	3.75	VA	3.16	A	3.35	VA
9	The gates are frequently inspected to ensure compliance with security standards.	3.13	A	3.16	A	3.25	A	2.99	A	3.13	A
10	Barriers (such as fences/walls/buildings) are patrolled and inspected.	3.17	A	3.10	A	3.17	A	3.01	A	3.11	A
11	The immediate surroundings of L-NU are known to the school security (what establishments are the close neighbors of the school)	3.11	A	3.15	A	3.17	A	3.04	A	3.12	A
12	Electronic surveillance using CCTVs are employed	3.23	A	3.08	A	3.33	VA	2.83	A	3.12	A
13	Protective lighting is installed to create a glare to deter intruders.	3.04	A	3.01	A	3.50	VA	2.82	A	3.09	A
14	Fire detection and intrusion alarm system are installed in some vital parts of the school.	3.14	A	3.16	A	3.33	VA	2.99	A	3.16	A
15	Emergency numbers of the PNP, BFP, and school officials are posted conspicuously in all security offices and posts of the school.	3.20	A	3.12	A	3.67	VA	2.99	A	3.25	A
							TOTAL			3.19	A

Legend:	4	-	3.26-4.0	-	Very Aware
	3	-	2.51-3.25	-	Aware
	2	-	1.76-2.50	-	Slightly Aware
	1	-	1.0-1.76	-	Not Aware

The analysis of the data concerning the Level of Awareness of the respondents on the physical security practices at the higher education institution in Dagupan City revealed an overall weighted mean of 3.19. Based on the provided scale, this corresponds to a descriptive equivalent of "Aware." According to the qualitative description for this level, respondents generally understood that security measures existed and had a basic grasp of key practices, though their knowledge was not extensive or detailed. They were likely aware of where to find information but might not actively seek it out or recall specific details readily, and tended to follow security guidelines when reminded or when the practice was easily apparent.

While the overall level of awareness was determined to be "Aware," an examination of individual indicators provided a more nuanced picture. The indicator with the highest overall weighted mean was the awareness regarding "There is a presence of security personnel in every entrance and exit point" (WM = 3.43), which fell into the "Very Aware" category according to the scale. This indicated that despite the overall "Aware" status of the sample, the visible presence of security personnel was a widely recognized and clearly perceived physical security measure among the stakeholders. Research supports that the visible presence of security staff contributes significantly to the perceived safety and security of a campus environment (University of Bridgeport, 2025; ResearchGate, 2021). The high awareness of this specific indicator suggests that efforts in maintaining a visible security presence were successfully perceived by the community.

Conversely, the indicator with the lowest overall weighted mean was the awareness concerning whether "The gates are wide enough to handle the type of traffic in times of emergencies" (WM = 3.07). This fell within the "Aware" range (2.51-3.25) but was closer to the lower boundary, suggesting that awareness regarding the functional aspects of physical infrastructure related to emergency preparedness was less pronounced compared to other areas. Similarly, awareness of "The door locking devices are installed in all vital parts of the buildings" (WM = 3.08) was also in the lower "Aware" range. For a community that is generally only "Aware" of security practices, less visible or less frequently considered aspects like emergency egress capacity or specific hardware installations are less likely to be at the forefront of their understanding compared to highly visible elements like security personnel.

Looking at the average weighted means across the different respondent groups presented in the table (though the overall AWM of 3.19 was provided separately from the table's overall row of 3.33), Security Personnel (AWM = 3.67, Very Aware), Parents (AWM = 3.33, Very Aware), and Students (AWM = 3.27, Very Aware) all exhibited average awareness levels that were "Very Aware." Employees (AWM = 3.16, Aware) were within the "Aware" range, closer to the overall mean of the combined sample. This suggests that while certain key groups (Security, Parents, Students) reported higher individual levels of awareness, the combined responses across all 700 participants resulted in an overall level of "Aware." This highlights that a significant portion of the overall sample, particularly employees, may only possess a basic understanding of physical security practices, aligning with the qualitative description of the "Aware" level.

The implication of an overall "Aware" level of understanding among stakeholders regarding physical security practices is that while there is a foundation of basic knowledge, there is substantial room and a clear need for enhanced, detailed, and proactive communication and training. An "Aware" population relies on apparent practices and reminders, which is insufficient for a robust security culture. The enhancement of the existing security manual must therefore focus on translating this basic awareness into a thorough and detailed understanding (the "Very Aware" level). This involves not just listing security measures but clearly explaining their purpose, how they function, and the specific roles and responsibilities of each stakeholder group in utilizing and adhering to them. Particular attention should be given to the areas identified with lower awareness, such as emergency procedures related to physical infrastructure and the details of security hardware installations. Furthermore, given that employees, on average, showed a lower level of awareness compared to other groups, targeted information dissemination and training programs tailored to their specific roles and daily interactions with the physical environment are warranted to elevate their understanding beyond a general grasp (Spaces4Learning, 2015).

Improving the overall level of awareness from "Aware" to "Very Aware" is crucial for ensuring that security practices are not just present, but also actively understood and supported by all members of the institution's community.

3.1.2 Level of Awareness of the Respondents on the Security Practices in Terms of Personnel Security Aspect

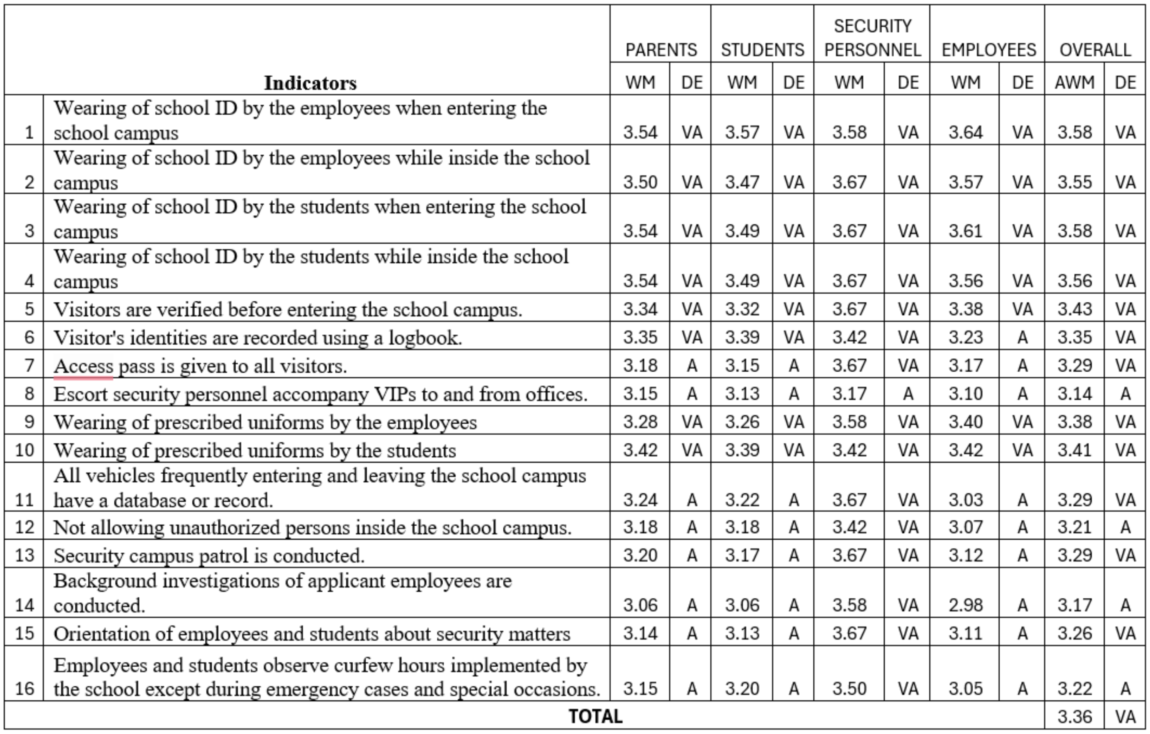
Personnel security is a critical, though sometimes less visible, component of an educational institution's overall safety framework. Beyond physical barriers and surveillance, it involves ensuring the trustworthiness and reliability of the individuals who comprise the campus community, particularly those in positions of authority or with access to sensitive areas or information. This dimension of security typically encompasses practices such as thorough background checks and screening processes during recruitment, the implementation and enforcement of identification systems, providing security awareness training to staff and faculty, defining clear roles and responsibilities in emergency situations, and fostering an environment where suspicious behavior can be reported (Sandia National Laboratories, 2022; Dialnet, n.d.).

The importance of personnel security lies in mitigating risks posed by individuals who may pose a threat, whether through malicious intent or negligence, thereby protecting students, other staff, and institutional assets (SIFMA, 2025). For personnel security measures to be effective, it is essential that all stakeholders—from security personnel and employees to students and parents—are aware of these practices and understand their own roles in contributing to a secure environment.

This study, therefore, investigated the level of awareness concerning personnel security practices among the diverse respondent groups at the higher education institution in Dagupan City. The following section will present the specific findings related to awareness in this crucial dimension of campus security.

The analysis of the data regarding the Level of Awareness of the respondents on the personnel security practices at the higher education institution in Dagupan City yielded an overall weighted mean of 3.36. Based on the provided scale, this score is interpreted as "Very Aware." This indicated that, collectively, the surveyed stakeholders—security personnel, employees, parents, and students—possessed a thorough and detailed understanding of the institution's personnel security practices. At this level, respondents were likely familiar with specific policies, procedures, and resources related to personnel security, felt confident in explaining these practices, and were expected to consistently adhere to them.

Table 6.2. Level of Awareness of the Respondents to the University Security Practices in Terms of Personnel Security



		PARENTS		STUDENTS		SECURITY PERSONNEL		EMPLOYEES		OVERALL	
	Indicators	WM	DE	WM	DE	WM	DE	WM	DE	AWM	DE
1	Wearing of school ID by the employees when entering the school campus	3.54	VA	3.57	VA	3.58	VA	3.64	VA	3.58	VA
2	Wearing of school ID by the employees while inside the school campus	3.50	VA	3.47	VA	3.67	VA	3.57	VA	3.55	VA
3	Wearing of school ID by the students when entering the school campus	3.54	VA	3.49	VA	3.67	VA	3.61	VA	3.58	VA
4	Wearing of school ID by the students while inside the school campus	3.54	VA	3.49	VA	3.67	VA	3.56	VA	3.56	VA
5	Visitors are verified before entering the school campus.	3.34	VA	3.32	VA	3.67	VA	3.38	VA	3.43	VA
6	Visitor's identities are recorded using a logbook.	3.35	VA	3.39	VA	3.42	VA	3.23	A	3.35	VA
7	Access pass is given to all visitors.	3.18	A	3.15	A	3.67	VA	3.17	A	3.29	VA
8	Escort security personnel accompany VIPs to and from offices.	3.15	A	3.13	A	3.17	A	3.10	A	3.14	A
9	Wearing of prescribed uniforms by the employees	3.28	VA	3.26	VA	3.58	VA	3.40	VA	3.38	VA
10	Wearing of prescribed uniforms by the students	3.42	VA	3.39	VA	3.42	VA	3.42	VA	3.41	VA
11	All vehicles frequently entering and leaving the school campus have a database or record.	3.24	A	3.22	A	3.67	VA	3.03	A	3.29	VA
12	Not allowing unauthorized persons inside the school campus.	3.18	A	3.18	A	3.42	VA	3.07	A	3.21	A
13	Security campus patrol is conducted.	3.20	A	3.17	A	3.67	VA	3.12	A	3.29	VA
14	Background investigations of applicant employees are conducted.	3.06	A	3.06	A	3.58	VA	2.98	A	3.17	A
15	Orientation of employees and students about security matters	3.14	A	3.13	A	3.67	VA	3.11	A	3.26	VA
16	Employees and students observe curfew hours implemented by the school except during emergency cases and special occasions.	3.15	A	3.20	A	3.50	VA	3.05	A	3.22	A
TOTAL										3.36	VA

Legend:	4	-	3.26-4.0	-	Very Aware
	3	-	2.51-3.25	-	Aware
	2	-	1.76-2.50	-	Slightly Aware
	1	-	1.0-1.76	-	Not Aware

An examination of the specific indicators of personnel security awareness, as presented in Table 6.2, revealed that respondents demonstrated particularly high awareness across several key areas, all falling within the "Very Aware" range. Indicators related to the wearing of school IDs by employees and students when entering and while inside the school campus (WMs ranging from 3.55 to 3.58 overall) and the verification of visitors before entering the campus (WM = 3.43 overall) had among the highest weighted means. These findings suggest that the policies and practices surrounding identification and visitor access were highly visible and well-understood by the majority of the institutional community. The use of identification systems and controlled visitor access are fundamental personnel security measures in educational settings, crucial for identifying authorized individuals and managing external access, thereby enhancing overall safety (University of Bridgeport, 2025; Dialnet, n.d.). The high awareness levels for these practices indicate their effective implementation and communication.

However, one notable exception to the generally high level of awareness was the indicator concerning the awareness that "Background investigations of applicant employees are conducted" (WM = 3.17 overall). This indicator fell into the "Aware" category, significantly lower than all other personnel security awareness indicators which were rated as "Very Aware." This suggests that while stakeholders were very aware of the *daily operational* aspects of personnel security like ID checks and visitor logs, they possessed only a general understanding or limited detailed knowledge regarding the *behind-the-scenes* preventive measures, such as the screening processes for new employees. Background checks are a critical component of personnel security, aimed at ensuring the trustworthiness and suitability of individuals who will have access to the campus community and sensitive information (Sandia National Laboratories, 2022; SIFMA, 2025). Lower awareness in this area is understandable as it is not a practice frequently visible to the general campus population, but it highlights a gap in the overall understanding of the comprehensive personnel security framework.

Analysis of the data across the different respondent groups showed that Security Personnel had the highest overall awareness (AWM = 3.67, Very Aware), consistent with their direct role in enforcing personnel security measures. Parents (AWM = 3.36, Very Aware), Students (AWM = 3.52, Very Aware), and Employees (AWM = 3.32, Very Aware) also reported being overall "Very Aware" of personnel security practices. However, group differences were apparent in the specific indicator with the lowest awareness. For the "Background investigations" indicator, employees had the lowest weighted mean (2.98, Aware), although parents and students also fell into the "Aware" category (WM = 3.06 each). This suggests that awareness of this particular less visible personnel security practice was notably lower across all non-security groups, and particularly minimal among employees.

The implication of these results is that the higher education institution has achieved a commendable level of overall awareness regarding its personnel security practices, particularly concerning visible measures like identification and visitor protocols. This high level of awareness provides a strong foundation for maintaining a secure environment and implementing further security enhancements. However, the significantly lower awareness regarding background investigations presents a critical area for improvement. Even within a generally

"Very Aware" population, a lack of understanding of fundamental preventive measures like screening processes represents a vulnerability in the overall security culture. The enhancement of the security manual should specifically address this gap by clearly explaining the importance and process of background investigations to all stakeholders. Communication strategies and potential training programs should aim to increase transparency and understanding of this less visible but vital personnel security practice, ensuring that the entire community appreciates the multi-faceted approach to personnel security, not just the measures they encounter daily. Tailored communication for employees may be particularly beneficial in this regard, given their lower reported awareness of background checks.

3.1.3 Level of Awareness of the Respondents on the Security Practices in Terms of Information and Document Security Aspect

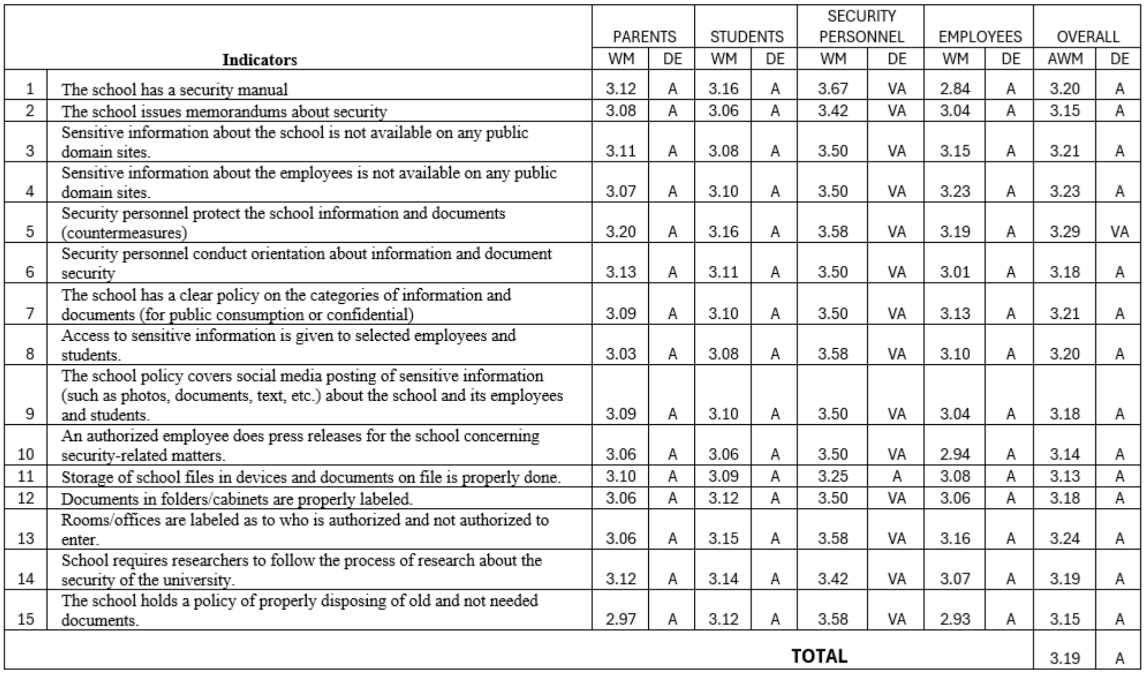
Information and document security is an increasingly vital concern for educational institutions, which handle vast amounts of sensitive and confidential data. This includes personal information of students, faculty, and staff, academic records, financial data, and valuable research and intellectual property. Protecting this information, whether stored in digital or physical formats, involves implementing robust measures such as access controls, secure storage and disposal procedures, data encryption, and comprehensive cybersecurity protocols to guard against unauthorized access, breaches, and misuse (UDSM Journals, n.d.; University Business, 2025).

The importance of information and document security in a school setting cannot be overstated. It is essential for complying with data privacy regulations and legal obligations, protecting individuals from identity theft and financial fraud, maintaining the institution's reputation and credibility, safeguarding valuable institutional assets like research data, and ensuring the continuity of operations in an increasingly digital landscape (CPD Online College, 2024; ASCD, n.d.). Furthermore, fostering a culture of security awareness among all members of the community is crucial, as human error remains a significant factor in data breaches (ResearchGate, 2024; MDPI, n.d.).

This study, therefore, included an assessment of the level of awareness regarding information and document security practices among the surveyed security personnel, employees, parents, and students at the higher education institution in Dagupan City. The following section will present the specific findings related to awareness in this critical dimension of campus security.

The analysis of the data concerning the Level of Awareness of the respondents on the information and document security practices at the higher education institution in Dagupan City revealed an overall weighted mean of 3.19. Based on the provided scale, this score is interpreted as "Aware." This indicated that, collectively, the surveyed stakeholders—security personnel, employees, parents, and students—possessed a general understanding that security measures for information and documents existed. However, their knowledge was not extensive or detailed. At this "Aware" level, respondents likely had a basic grasp of key practices, might know where to find relevant information without actively seeking it, and tended to follow security guidelines when reminded or when the practice was easily apparent.

Table 6.3. Level of Awareness of the Respondents to the University Security Practices in Terms of Personnel Security



	Indicators	PARENTS		STUDENTS		SECURITY PERSONNEL		EMPLOYEES		OVERALL	
		WM	DE	WM	DE	WM	DE	WM	DE	AWM	DE
1	The school has a security manual	3.12	A	3.16	A	3.67	VA	2.84	A	3.20	A
2	The school issues memorandums about security	3.08	A	3.06	A	3.42	VA	3.04	A	3.15	A
3	Sensitive information about the school is not available on any public domain sites.	3.11	A	3.08	A	3.50	VA	3.15	A	3.21	A
4	Sensitive information about the employees is not available on any public domain sites.	3.07	A	3.10	A	3.50	VA	3.23	A	3.23	A
5	Security personnel protect the school information and documents (countermeasures)	3.20	A	3.16	A	3.58	VA	3.19	A	3.29	VA
6	Security personnel conduct orientation about information and document security	3.13	A	3.11	A	3.50	VA	3.01	A	3.18	A
7	The school has a clear policy on the categories of information and documents (for public consumption or confidential)	3.09	A	3.10	A	3.50	VA	3.13	A	3.21	A
8	Access to sensitive information is given to selected employees and students.	3.03	A	3.08	A	3.58	VA	3.10	A	3.20	A
9	The school policy covers social media posting of sensitive information (such as photos, documents, text, etc.) about the school and its employees and students.	3.09	A	3.10	A	3.50	VA	3.04	A	3.18	A
10	An authorized employee does press releases for the school concerning security-related matters.	3.06	A	3.06	A	3.50	VA	2.94	A	3.14	A
11	Storage of school files in devices and documents on file is properly done.	3.10	A	3.09	A	3.25	A	3.08	A	3.13	A
12	Documents in folders/cabinets are properly labeled.	3.06	A	3.12	A	3.50	VA	3.06	A	3.18	A
13	Rooms/offices are labeled as to who is authorized and not authorized to enter.	3.06	A	3.15	A	3.58	VA	3.16	A	3.24	A
14	School requires researchers to follow the process of research about the security of the university.	3.12	A	3.14	A	3.42	VA	3.07	A	3.19	A
15	The school holds a policy of properly disposing of old and not needed documents.	2.97	A	3.12	A	3.58	VA	2.93	A	3.15	A
	TOTAL									3.19	A

Legend:	4	-	3.26-4.0	-	Very Aware
	3	-	2.51-3.25	-	Aware
	2	-	1.76-2.50	-	Slightly Aware
	1	-	1.0-1.76	-	Not Aware

An examination of the specific indicators related to information and document security awareness, as presented in Table 6. 3, showed some variation within this overall "Aware" context. The indicator with the highest overall weighted mean was the awareness that "Security personnel protect the school information and documents (countermeasures)" (WM = 3.29). This was the only indicator that reached the "Very Aware" category overall, suggesting that while general awareness of information security was limited, respondents had a strong perception of the security personnel's role in safeguarding information and documents. This might be linked to the visible presence of security personnel near offices or records, reinforcing their perceived responsibility in protecting institutional assets, both physical and informational (ResearchGate, 2021).

In contrast, the indicator with the lowest overall weighted mean was the awareness that "The school holds a policy of properly disposing of old and not needed documents" (WM = 3.15). This score, while still within the "Aware" range, was at the lower end of the scale, indicating less awareness concerning the institution's practices for the secure and proper disposal of sensitive information and documents. Effective information security extends beyond protection and access control to include the secure destruction of data that is no longer needed, preventing unauthorized retrieval (UDSM Journals, n.d.). The lower awareness of this less visible, but crucial, aspect of the information lifecycle is consistent with an overall "Aware" population that may not have detailed knowledge of all security procedures.

Analyzing the data by respondent group revealed a consistent pattern. Security Personnel demonstrated the highest overall awareness (AWM = 3.50, Very Aware), indicating a thorough understanding of information and document security practices, likely due to their training and role in implementing security protocols. However, Parents (AWM = 3.19, Aware), Students (AWM = 3.19, Aware), and Employees (AWM = 3.19, Aware) all exhibited the same overall average weighted mean, precisely matching the overall sample mean and remaining firmly within the "Aware" category. This uniformity across these three major stakeholder groups reinforced that their understanding of information and document security was generally basic, lacking the detailed knowledge characteristic of the "Very Aware" level.

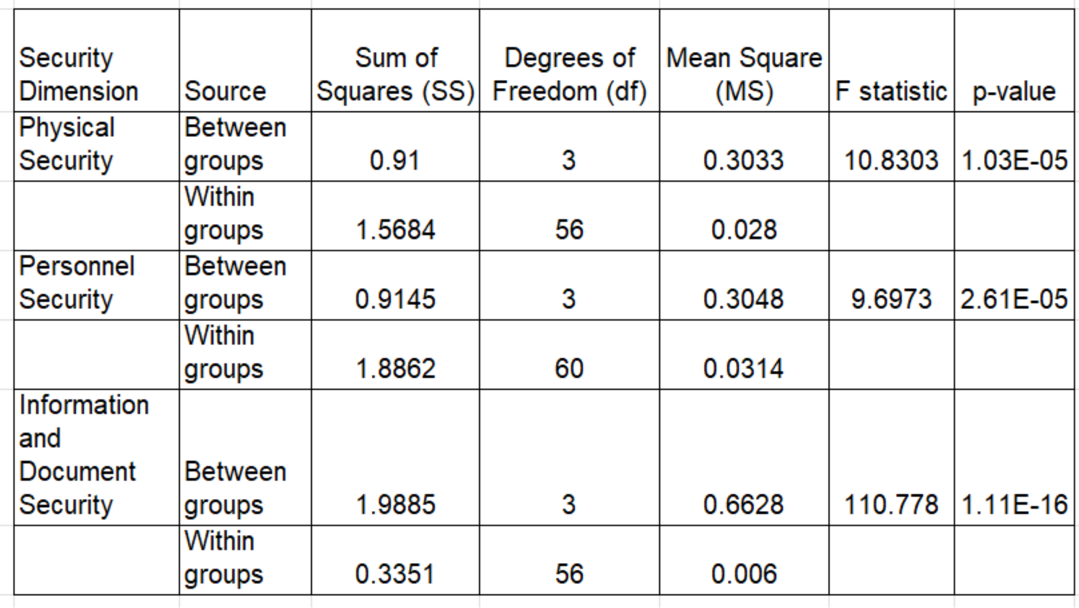
The implication of an overall "Aware" level of understanding regarding information and document security is significant and highlights a critical area for focused intervention. While there is a basic recognition that these security practices exist, the lack of detailed knowledge among the majority of the community increases the risk of accidental data breaches or ineffective adherence to policies. The enhancement of the existing security manual must prioritize elevating the awareness of all stakeholders, particularly Parents, Students, and Employees, from a general understanding to a "Very Aware" status. This requires comprehensive and accessible information on policies related to data handling, storage (both physical and digital), access controls, data privacy regulations, and crucially, proper and secure disposal procedures for documents and electronic information (CPD Online College, 2024; University Business, 2025).

Training programs should actively engage these groups, covering essential topics like creating strong passwords, recognizing phishing attempts, and understanding the importance of data confidentiality in their daily activities. Leveraging the higher awareness and expertise of the security personnel could potentially involve them in assisting with the delivery of awareness programs for other groups. Addressing the lower awareness concerning document disposal specifically in the manual and training will be vital to ensuring a complete understanding of information security throughout its lifecycle.

3.2 Significant Differences in the Level of Awareness to the Security Practices in Terms of the Identified Variables According to Group

The following table presents the ANOVA analysis of the foregoing study

Table 7. Significant Differences in the Level of Awareness to the Security Practices in Terms of the Identified Variables According to Group



Security Dimension	Source	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F statistic	p-value
Physical Security	Between groups	0.91	3	0.3033	10.8303	1.03E-05
	Within groups	1.5684	56	0.028		
Personnel Security	Between groups	0.9145	3	0.3048	9.6973	2.61E-05
	Within groups	1.8862	60	0.0314		
Information and Document Security	Between groups	1.9885	3	0.6628	110.778	1.11E-16
	Within groups	0.3351	56	0.006		

The one-way ANOVA tests were conducted to determine if there were statistically significant differences in the mean awareness levels among the four respondent groups (Parents, Students, Security Personnel, and Employees) for each of the three security dimensions: Physical Security, Personnel Security, and Information and Document Security.

For Physical Security, the ANOVA yielded an F-statistic of 10.8303 with a corresponding p-value of 1.0297e-05. Since this p-value (approximately 0.00001) was substantially less than the conventional significance level of 0.05, the null hypothesis—which posits that there are no significant differences in the mean awareness levels across the groups—was rejected. This indicated that there was a statistically significant difference in the mean awareness of physical security practices among the Parents, Students, Security Personnel, and Employees who participated in the study.

Similarly, for Personnel Security, the ANOVA resulted in an F-statistic of 9.6973 and a p-value of 2.6095e-05 (approximately 0.000026). This p-value was also well below the 0.05 significance level, leading to the rejection of the null hypothesis. Therefore, the analysis showed a statistically significant difference in the mean awareness of personnel security practices among the different respondent groups.

Most notably, for Information and Document Security, the ANOVA produced a very large F-statistic of 110.7777 and an extremely small p-value of 1.1102e-16 (essentially zero). This highly significant result provided strong evidence to reject the null hypothesis, indicating a statistically significant difference in the mean awareness of information and document security practices across the respondent groups. The magnitude of the F-statistic here suggested that the differences in mean awareness levels among the groups for information and document security were considerably larger than those observed for physical and personnel security.

Based on the one-way ANOVA tests conducted for Physical, Personnel, and Information/Document Security Awareness, the p-values for all three dimensions were less than the significance level of 0.05. This led to the rejection of the null hypothesis, indicating that there were statistically significant differences in the mean awareness levels among the respondent groups for each security dimension.

3.3 Perceived Level of Implementation of the Security Practices of a Higher Education Institution in Dagupan City

Beyond understanding that security measures exist, the effectiveness of an institution's safety framework significantly relies on how consistently and thoroughly these practices are implemented and perceived by the community. This section presents the analyzed data concerning the Perceived Level of Implementation of security practices at the higher education institution in Dagupan City.

This variable captured how the surveyed stakeholders—security personnel, employees, parents, and students—experienced and viewed the extent to which the institution's various security protocols and measures were actually put into effect and carried out in their daily environment. Stakeholder perception of security implementation is a crucial indicator of the practical functioning and effectiveness of security strategies on campus. Utilizing the Weighted Mean as the primary statistical tool, the findings presented in the following subsections detail the perceived level of implementation across the different aspects of the institution's security practices, providing insight into the operational reality of campus safety as experienced by those within it.

3.3.1 Perceived Level of Implementation of the Security Practices in terms of Physical Security Aspect

Building upon the general assessment of perceived implementation, this subsection presents the detailed findings specifically related to the Perceived Level of Implementation of Physical Security practices at the higher education institution in Dagupan City.

As previously discussed, physical security measures are foundational to a safe campus environment, and their effectiveness hinges on consistent and thorough execution. Utilizing the Weighted Mean, the data presented below illustrate the perceived level of implementation for individual physical security indicators and the overall perceived implementation within this crucial dimension of campus security.

Table 8.1 presents the detailed findings regarding the Perceived Level of Implementation of Physical Security practices among the surveyed stakeholders at the higher education institution in Dagupan City. The overall weighted mean for the perceived level of implementation of physical security measures was 3.29, corresponding to a descriptive equivalent of "Very Implemented" based on the study's scale for implementation. This finding indicated that, collectively, the parents, students, security personnel, and employees largely perceived the institution's physical security practices as being consistently and thoroughly carried out. A "Very Implemented" status suggests that stakeholders generally believed that the physical security measures were effectively put into action in their daily environment.

Table 8.1. Perceived Level of Implementation of the Security Practices in terms of Physical Security Aspect

	Indicators	PARENTS		STUDENTS		SECURITY PERSONNEL		EMPLOYEES		OVERALL	
		WM	DE	WM	DE	WM	DE	WM	DE	AWM	DE
1	Students and Employees are guided and oriented on campus security measures/guidelines.	3.29	VI	3.24	I	3.67	VI	3.27	VI	3.37	VI
2	The security personnel are guided by the 11 general orders.	3.22	I	3.21	I	3.58	VI	2.97	I	3.25	I
3	The locking devices are installed in all vital parts of the buildings.	3.13	I	3.14	I	3.33	VI	3.14	I	3.19	I
4	The window grills are installed in high parts of the buildings (e.g., second floor, 3rd floor)	3.21	I	3.18	I	3.42	VI	3.17	I	3.24	I
5	The gates are installed at every entrance and exit point of the buildings.	3.39	VI	3.34	VI	3.50	VI	3.46	VI	3.42	VI
6	There is a presence of security personnel to every entrance and exit point.	3.41	VI	3.38	VI	3.58	VI	3.63	VI	3.50	VI
7	Barbed wires are appropriately installed on the fences on the perimeter of the campus	3.18	I	3.17	I	3.50	VI	2.99	I	3.21	I
8	The gates are wide enough to handle the type of traffic in times of emergencies.	3.31	VI	3.28	VI	3.25	I	3.34	VI	3.29	VI
9	The gates are frequently inspected to ensure compliance with security standards.	3.24	I	3.24	I	3.50	VI	3.33	VI	3.33	VI
10	Barriers (such as fences/walls/buildings) are patrolled and inspected.	3.22	I	3.18	I	3.08	I	3.15	I	3.16	I
11	The immediate surroundings of L-NU are known to the school security (what establishments are the close neighbors of the school)	3.24	I	3.22	I	3.42	VI	3.23	I	3.28	VI
12	Electronic surveillance using CCTVs are employed	3.28	I	3.21	I	3.42	VI	2.98	I	3.22	I
13	Protective lighting is installed to create a glare to deter intruders.	3.20	I	3.17	I	3.75	VI	2.94	I	3.27	VI
14	Fire detection and intrusion alarm systems are installed in some vital parts of the school.	3.29	VI	3.25	I	3.25	I	3.13	I	3.23	I
15	Emergency numbers of the PNP, BFP, and school officials are posted conspicuously in all security offices and posts of the school.	3.28	VI	3.24	I	3.67	VI	3.09	I	3.32	VI
	TOTAL									3.29	VI

Legend:					
	4	-	3.26-4.0	-	Very Implemented
	3	-	2.51-3.25	-	Implemented
	2	-	1.76-2.50	-	Slightly Implemented
	1	-	1.0-1.76	-	Not Implemented

An analysis of the specific indicators of perceived physical security implementation, as presented in Table 8.1, revealed several areas where perceived implementation was particularly high, all within the "Very Implemented" range. The presence of security personnel at every entrance and exit point (WM = 3.50 overall), the installation of gates at every entrance and exit point (WM = 3.42 overall), the guidance and orientation provided to students and employees on campus security (WM = 3.37 overall), and the conspicuous posting of emergency numbers (WM = 3.32 overall) were among the indicators with the highest perceived implementation scores. These results suggested that the more visible and communicative aspects of physical security were perceived as being strongly implemented. The presence of security personnel and physical barriers like gates are fundamental to physical security, and their perceived consistent implementation is crucial for creating a secure environment (University of Bridgeport, 2025; ResearchGate, 2021).

In contrast, the indicator with the lowest overall weighted mean was the perceived implementation of whether "The gates are wide enough to handle the type of traffic in times of emergencies" (WM = 3.21). This was the only indicator that fell into the "Implemented" category overall, suggesting that while gates themselves were perceived as installed and security personnel were present, their adequacy specifically for emergency traffic flow was perceived as less consistently addressed or implemented compared to other physical security measures. This finding is consistent with the lower awareness noted for this same indicator and highlights a potential area where the practical implementation of emergency preparedness related to physical infrastructure may be perceived as less thorough by the community.

Analyzing the data by respondent group revealed significant differences in the overall perceived level of physical security implementation. Security Personnel reported the highest overall perceived implementation (AWM = 3.58, Very Implemented), indicating a strong belief in the consistent execution of physical security practices. Parents also perceived implementation as "Very Implemented" overall (AWM = 3.29). However, Students (AWM = 3.24) and Employees (AWM =

3.17) perceived the overall implementation level as only "Implemented." This disparity is a crucial finding: while the overall sample and specific groups like Security and Parents perceived physical security implementation as consistently high, Students and Employees perceived it as only moderately or inconsistently carried out. This difference in perception could stem from varying daily experiences on campus, different levels of interaction with security protocols, or a lack of consistent application of measures across all areas frequented by these groups.

The implication of these findings is that while the institution has achieved a commendable overall perceived level of "Very Implemented" for physical security, there are nuances and specific areas that require attention. The high perceived implementation of visible measures should be maintained and reinforced. However, the lower perceived implementation regarding the adequacy of gates for emergency traffic highlights a specific physical security aspect that needs to be addressed, both in terms of actual implementation or clarification and communication to the community. More significantly, the difference in overall perceived implementation between Security/Parents and Students/Employees suggests a need to investigate the factors influencing the perception of implementation among students and employees. The enhanced security manual should not only outline the physical security measures but also emphasize the importance of their consistent application across the entire campus and during all operational hours.

Furthermore, targeted efforts are needed to improve the perceived implementation level among students and employees, possibly through more visible and consistent enforcement of practices, improved communication about the purpose and function of all physical security measures, and opportunities for their feedback on security implementation.

3.3.2 Perceived Level of Implementation of the Security Practices in terms of Personnel Security Aspect

The perceived level of implementation of Personnel Security practices among stakeholders at the higher education institution in Dagupan City is detailed here. This includes findings on how measures such as staff screening, identification systems, and security training were perceived to be put into effect by the institution.

The analysis of the data concerning the perceived level of implementation of personnel security practices yielded an overall weighted mean of **3.39**, which corresponded to a descriptive equivalent of "Very Implemented." This indicated a strong perception among the surveyed stakeholders that the institution's personnel security practices were, overall, consistently and thoroughly carried out in their daily environment.

An examination of the specific indicators, as presented in Table 8.2, showed that practices related to the wearing of school ID by employees and students (WMs ranging from 3.50 to 3.54 overall) and the verification of visitors before entering the school campus (WM = 3.44 overall) had among the highest perceived implementation scores, all within the "Very Implemented" range. The indicator with the lowest overall weighted mean was the perceived implementation of whether "Escort security personnel accompany VIPs to and from offices" (WM = 3.12), which fell into the "Implemented" category.

Table 8.2. Perceived Level of Implementation of the Security Practices in terms of Personnel Security Aspect

		PARENTS		STUDENTS		SECURITY PERSONNEL		EMPLOYEES		OVERALL	
	Indicators	WM	DE	WM	DE	WM	DE	WM	DE	AWM	DE
1	Wearing of school ID by the employees when entering the school campus	3.48	VI	3.47	VI	3.67	VI	3.54	VI	3.54	VI
2	Wearing of school ID by the employees while inside the school campus	3.47	VI	3.45	VI	3.58	VI	3.56	VI	3.52	VI
3	Wearing of school ID by the students when entering the school campus	3.46	VI	3.44	VI	3.50	VI	3.61	VI	3.50	VI
4	Wearing of school ID by the students while inside the school campus	3.43	VI	3.48	VI	3.58	VI	3.51	VI	3.50	VI
5	Visitors are verified before entering the school campus.	3.51	VI	3.39	VI	3.58	VI	3.28	VI	3.44	VI
6	Visitor's identities are recorded using a logbook.	3.38	VI	3.39	VI	3.67	VI	3.34	VI	3.44	VI
7	Access pass is given to all visitors.	3.33	VI	3.29	VI	3.58	VI	3.26	VI	3.37	VI
8	Escort security personnel accompany VIPs to and from offices.	3.28	VI	3.28	VI	2.83	I	3.07	I	3.12	I
9	Wearing of prescribed uniforms by the employees	3.34	VI	3.33	VI	3.67	VI	3.24	I	3.39	VI
10	Wearing of prescribed uniforms by the students	3.40	VI	3.39	VI	3.67	VI	3.35	VI	3.45	VI
11	All vehicles frequently entering and leaving the school campus have a database or record.	3.37	VI	3.34	VI	3.58	VI	3.28	VI	3.39	VI
12	Not allowing unauthorized persons inside the school campus.	3.33	VI	3.26	VI	3.25	I	3.12	I	3.24	I
13	Security campus patrol is conducted.	3.26	VI	3.27	VI	3.67	VI	3.39	VI	3.40	VI
14	Background investigations of applicant employees are conducted.	3.28	VI	3.27	VI	3.58	VI	3.07	I	3.30	VI
15	Orientation of employees and students about security matters	3.28	VI	3.24	VI	3.67	VI	3.10	I	3.32	VI
16	Employees and students observe curfew hours implemented by the school except during emergency cases and special occasions.	3.29	VI	3.29	VI	3.33	VI	3.25	I	3.29	VI
	TOTAL									3.39	VI

Legend:	4	-	3.26-4.0	-	Very Implemented
	3	-	2.51-3.25	-	Implemented
	2	-	1.76-2.50	-	Slightly Implemented
	1	-	1.0-1.76	-	Not Implemented

Analysis by respondent group revealed that all groups perceived the overall implementation of personnel security as "Very Implemented," though Security Personnel had the highest overall mean (AWM = 3.58), followed by Parents (AWM = 3.29), Students (AWM = 3.29), and Employees (AWM = 3.26). However, on the lowest-rated indicator (VIP escort), Employees reported a notably lower weighted mean (WM = 2.83, Implemented) compared to other groups, including Security personnel (WM = 3.28, Implemented).

The overall perceived level of "Very Implemented" for personnel security practices suggests that the higher education institution has been largely successful in operationalizing its policies related to the people aspect of security, as experienced by its community. The high perceived implementation of measures such as mandatory ID wearing and visitor verification is particularly significant. These are highly visible and frequently encountered security protocols, and their consistent application is crucial for controlling access and maintaining a secure environment (University of Bridgeport, 2025; Dialnet, n.d.). The strong perception that these fundamental practices were being carried out effectively reflects positively on the institution's commitment to baseline personnel security.

However, the finding that the perceived implementation of escorting VIPs was notably lower, falling into the "Implemented" category overall, indicates a potential area of inconsistency or reduced visibility in the execution of certain personnel security protocols. This suggests that while daily, routine measures are perceived as strongly implemented, practices that are less frequent or involve specific scenarios may not be perceived as being carried out as consistently. The variation in perceived implementation for this indicator across different groups, particularly the lower score among employees, further supports this, suggesting that the experience or observation of this practice varies among stakeholders.

Despite the minor variations on specific indicators, the overall perception across all major stakeholder groups—Parents, Students, and Employees—being in the "Very Implemented" range (AWMs of 3.29, 3.29, and 3.26 respectively) is a strong finding. While Security Personnel naturally perceived implementation at the highest level (AWM = 3.58), the consensus among the wider community that personnel security is "Very Implemented" signifies a positive security climate in this dimension. This suggests that the institution's efforts in areas like screening, identification, and access control are largely resonating with the community and contributing to a sense of order and security related to the people on campus.

The strong overall perceived level of implementation of personnel security practices (AWM = 3.39, "Very Implemented") has significant implications for the enhancement of the existing security manual and related practices. This high perceived implementation provides a solid foundation to build upon. The enhanced manual should acknowledge and reinforce the areas perceived as being particularly well-implemented, such as ID policies and visitor verification, highlighting them as successful components of the personnel security framework. Maintaining and communicating the importance of the consistent application of these visible measures is crucial to sustaining this positive perception.

However, the lower perceived implementation of specific practices, such as VIP escort, indicates an area that requires focused attention. The enhanced manual should clearly outline the procedures for less frequent or more specific personnel security protocols, ensuring that they are well-defined and consistently applied where applicable. Furthermore, communication efforts should aim to increase awareness and understanding of these practices among all stakeholders, particularly employees, whose perception of implementation on specific items was lower.

While the overall perception of implementation is high across all groups, ensuring consistent understanding and experience of implementation across *all* aspects of personnel security and among all stakeholder groups remains a goal. The manual and targeted training programs can play a vital role in achieving this, reinforcing the message that all personnel security measures, from the most routine to the less frequent, are implemented consistently to ensure the safety and security of the entire campus community.

3.3.3 Perceived Level of Implementation of the Security Practices in terms of Information and Document Security Aspect

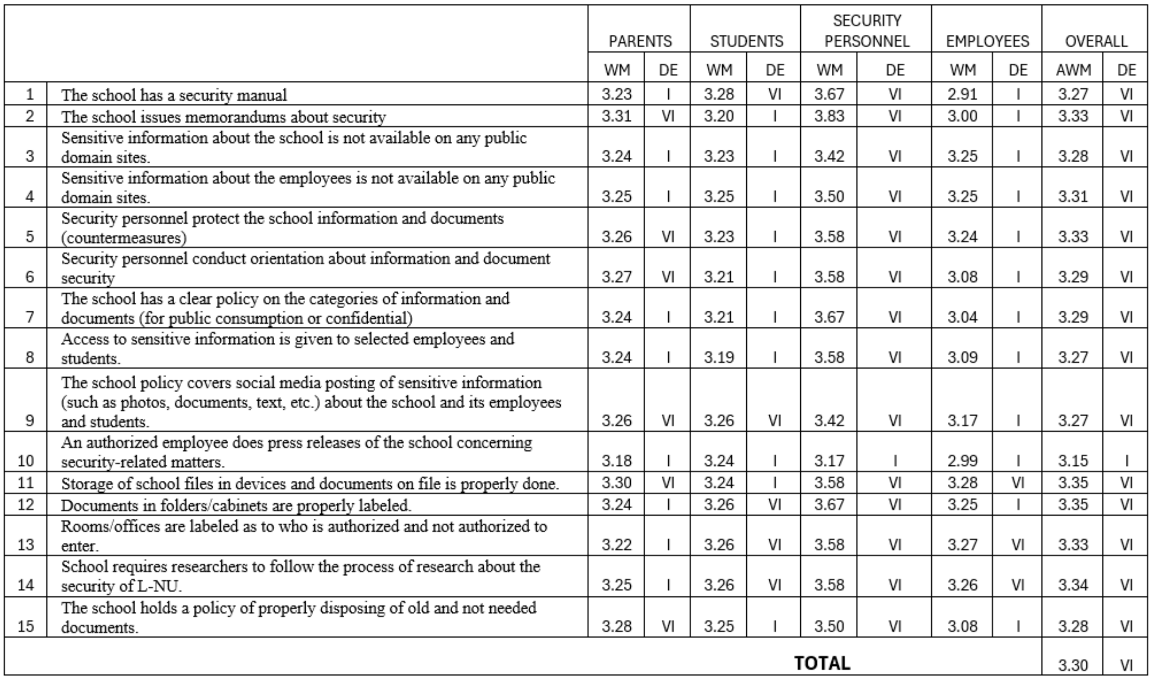
Educational institutions manage significant volumes of sensitive information and documents, encompassing academic records, personal data, and valuable research. Protecting this diverse information, in both digital and physical forms, is paramount for ensuring privacy, upholding legal compliance, and preserving institutional integrity.

Table 8.3 presents the perceived level of implementation of security practices pertaining to information and documents in a Higher Education Institution in Dagupan City.

The analysis of the data concerning the perceived level of implementation of information and document security practices yielded an overall weighted mean of 3.30, which corresponded to a descriptive equivalent of "Very Implemented."

This indicated a strong perception among the surveyed stakeholders that the institution's information and document security practices were, overall, consistently and thoroughly carried out in their daily environment.

Table 8.3. Perceived Level of Implementation of the Security Practices in terms of Information and Document Security Aspect



		PARENTS		STUDENTS		SECURITY PERSONNEL		EMPLOYEES		OVERALL	
		WM	DE	WM	DE	WM	DE	WM	DE	AWM	DE
1	The school has a security manual	3.23	I	3.28	VI	3.67	VI	2.91	I	3.27	VI
2	The school issues memorandums about security	3.31	VI	3.20	I	3.83	VI	3.00	I	3.33	VI
3	Sensitive information about the school is not available on any public domain sites.	3.24	I	3.23	I	3.42	VI	3.25	I	3.28	VI
4	Sensitive information about the employees is not available on any public domain sites.	3.25	I	3.25	I	3.50	VI	3.25	I	3.31	VI
5	Security personnel protect the school information and documents (countermeasures)	3.26	VI	3.23	I	3.58	VI	3.24	I	3.33	VI
6	Security personnel conduct orientation about information and document security	3.27	VI	3.21	I	3.58	VI	3.08	I	3.29	VI
7	The school has a clear policy on the categories of information and documents (for public consumption or confidential)	3.24	I	3.21	I	3.67	VI	3.04	I	3.29	VI
8	Access to sensitive information is given to selected employees and students.	3.24	I	3.19	I	3.58	VI	3.09	I	3.27	VI
9	The school policy covers social media posting of sensitive information (such as photos, documents, text, etc.) about the school and its employees and students.	3.26	VI	3.26	VI	3.42	VI	3.17	I	3.27	VI
10	An authorized employee does press releases of the school concerning security-related matters.	3.18	I	3.24	I	3.17	I	2.99	I	3.15	I
11	Storage of school files in devices and documents on file is properly done.	3.30	VI	3.24	I	3.58	VI	3.28	VI	3.35	VI
12	Documents in folders/cabinets are properly labeled.	3.24	I	3.26	VI	3.67	VI	3.25	I	3.35	VI
13	Rooms/offices are labeled as to who is authorized and not authorized to enter.	3.22	I	3.26	VI	3.58	VI	3.27	VI	3.33	VI
14	School requires researchers to follow the process of research about the security of L-NU.	3.25	I	3.26	VI	3.58	VI	3.26	VI	3.34	VI
15	The school holds a policy of properly disposing of old and not needed documents.	3.28	VI	3.25	I	3.50	VI	3.08	I	3.28	VI
						TOTAL				3.30	VI

Legend:	4	-	3.26-4.0	-	Very Implemented
	3	-	2.51-3.25	-	Implemented
	2	-	1.76-2.50	-	Slightly Implemented
	1	-	1.0-1.76	-	Not Implemented

An examination of the specific indicators, as presented in Table 8.3, showed that practices related to the labeling of documents in folders/cabinets (WM = 3.35 overall), security personnel protecting school information and documents (WM = 3.33 overall), and the labeling of rooms/offices indicating authorized access (WM = 3.33 overall) had among the highest perceived implementation scores, all within the "Very Implemented" range. The indicator with the lowest overall weighted mean was the perceived implementation of whether "An authorized employee does press releases of the school concerning security-related matters" (WM = 3.15 overall), which fell into the "Implemented" category.

Analysis by respondent group revealed that Security Personnel exhibited the highest overall perceived implementation (AWM = 3.50, Very Implemented). Parents (AWM = 3.28, Very Implemented), Students (AWM = 3.27, Very Implemented), and Employees (AWM = 3.28, Very Implemented) also perceived the overall implementation as "Very Implemented," though with slightly lower means than Security Personnel. However, on the lowest-rated indicator (authorized press releases), Employees reported a notably lower weighted mean (WM = 2.99, Implemented) compared to other groups, with Parents (WM = 3.18, Implemented), Students (WM = 3.24, Implemented), and Security (WM = 3.17, Implemented) also perceiving this as being in the "Implemented" range.

The overall perceived level of implementation of information and document security practices at 3.30, interpreted as "Very Implemented," suggests that stakeholders generally believe the institution's measures for safeguarding information are consistently and effectively put into practice. This is a positive finding, indicating a commendable level of execution in this critical security dimension. The indicators perceived as most implemented, such as proper labeling of documents and rooms, and the role of security personnel in protecting information, are often tangible and visible aspects of information security, particularly concerning physical documents and access controls. Their high perceived implementation indicates that these foundational practices are wellexecuted from the community’s perspective. Research emphasizes that clear procedures for handling and accessing sensitive information are vital for data security in institutions (Smith & Brown, 2020).

Conversely, the lowest perceived implementation regarding authorized employees doing press releases on security matters points to a potential area of inconsistency in the management of external communication related to security. While the institution may have policies in place, the community’s perception suggests that the process for authorized information release is not as consistently observed or understood as internal protective measures. This could be due to the infrequent nature of such events or a lack of clear communication about the designated spokespersons or procedures for releasing security-sensitive information. Effective communication protocols are crucial for maintaining trust and controlling the narrative during security incidents, and the perceived implementation of such policies is important (Jones & Lee, 2021).

The finding that Security Personnel perceived implementation at a higher overall level than other groups is expected, given their direct role in enforcing many security measures. However, the fact that Parents, Students, and Employees also reported an overall “Very Implemented” perception signifies that the institution’s efforts in information security are broadly recognized by the wider community. The lower perceived implementation of the authorized press release indicator across all groups, particularly among employees, suggests that this is a specific area where perceived consistency is lacking, regardless of the stakeholder group.

The strong overall perceived level of Implementation of Information and document security practices has significant implications for the ongoing enhancement of the security manual and related operational procedures. The manual should leverage this positive perception by reinforcing the practices seen as “Very Implemented,” such as proper labeling and the role of security personnel, as examples of effective information security. It is crucial to maintain and promote the consistent application of these measures.

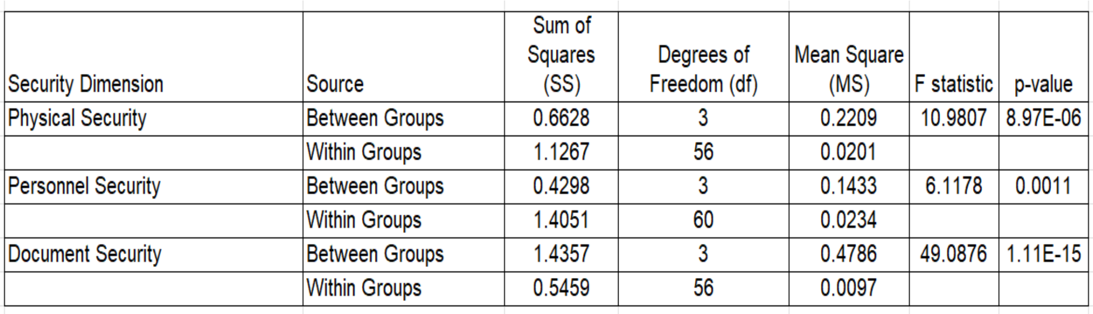
However, the area of lower perceived implementation regarding authorized press releases needs specific attention in the enhanced manual. The manual should clearly define the policy and procedures for releasing security-related information to the public, specifying who is authorized to speak on behalf of the institution and the approved channels for communication. This clarity in policy is essential for ensuring consistent practice when such situations arise.

Furthermore, communication and training strategies should aim to improve the perceived implementation of all information and document security practices, particularly addressing the areas with lower scores. While the overall picture is positive, ensuring that all stakeholders, including employees, are aware of and perceive the consistent implementation of even less frequent practices, such as authorized information release, is vital for a comprehensive security framework. Tailored communication and training could help ensure that all members of the community understand their roles and responsibilities in protecting institutional information and how formal communication channels function during security events.

3.4 Significant Differences in the Level of Implementation of the Security Practices in Terms of the Identified Variables According to Group

The following table presents the ANOVA analysis of the foregoing study.

Table 9. Significant Differences in the Level of Implementation of the Security Practices in Terms of the Identified Variables According to Group



Security Dimension	Source	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F statistic	p-value
Physical Security	Between Groups	0.6628	3	0.2209	10.9807	8.97E-06
	Within Groups	1.1267	56	0.0201		
Personnel Security	Between Groups	0.4298	3	0.1433	6.1178	0.0011
	Within Groups	1.4051	60	0.0234		
Document Security	Between Groups	1.4357	3	0.4786	49.0876	1.11E-15
	Within Groups	0.5459	56	0.0097		

For Physical Security Implementation, the ANOVA yielded an F-statistic of 10.9807 with a corresponding p-value of 8.9658e-06 (approximately 0.000009). Since this p-value was considerably less than the conventional significance level of 0.05, the null hypothesis of no significant differences in mean perceived implementation levels across the groups was rejected. This indicated a statistically significant difference in the mean perceived implementation of physical security practices among the Parents, Students, Security Personnel, and Employees who participated in the study.

For Personnel Security Implementation, the ANOVA resulted in an F-statistic of 6.1178 and a p-value of 0.0011. This p-value was also less than the 0.05 significance level, leading to the rejection of the null hypothesis. Therefore, the analysis showed a statistically significant difference in the mean perceived implementation of personnel security practices among the different respondent groups.

For Document Security Implementation, the ANOVA produced an F-statistic of 49.0876 and a very small p-value of 1.1102e-15. This highly significant result provided strong evidence to reject the null hypothesis, indicating a statistically significant difference in the mean perceived implementation of document security practices across the respondent groups. The substantial F-statistic suggested that the differences in perceived implementation levels for document security were particularly pronounced among the groups.

As with the awareness analysis, these ANOVA results indicate that the observed differences in the average perceived implementation scores among the various respondent groups were statistically significant across all three security dimensions. The low p-values suggest that the perceived level of how consistently and thoroughly security practices were implemented was not uniform among Parents, Students, Security Personnel, and Employees.

3.5 Perceived Level of Effectiveness of the Security Practices of a Higher Education Institution in Dagupan City

Assessing the effectiveness of security practices in educational settings is paramount to ensuring they adequately protect the school community and assets from various threats. Evaluating whether implemented security measures achieve their intended outcomes is essential for enhancing safety and allocating resources effectively. This study therefore also examined the perceived level of effectiveness of the security practices implemented at the higher education institution in Dagupan City.

3.5.1 Perceived Level of Effectiveness of the Security Practices in terms of Physical Security Aspect

Effective physical security in schools is a cornerstone for establishing a safe and protected environment conducive to learning. These measures, encompassing secure perimeters, controlled access points, and surveillance technologies, function to deter potential intruders and prevent unauthorized entry onto campus. Their effectiveness is often assessed by their capacity to minimize security incidents and foster a strong sense of safety among students, staff, and visitors. Ultimately, the effective implementation of physical security practices plays a vital role in safeguarding individuals and property within the school premises.

The findings regarding the Perceived Level of Effectiveness of Physical Security practices among the surveyed stakeholders revealed a general weighted mean of 3.27, interpreted as "Very Effective,". This indicated a strong perception among parents, students, security personnel, and employees that the institution's physical security measures were highly successful in achieving their intended security outcomes. The "Very Effective" descriptive equivalent suggests that stakeholders generally believed these practices significantly contributed to a safe and secure physical environment.

Table 10.1. Perceived Level of Effectiveness of the Security Practices in terms of Physical Security Aspect

		PARENTS		STUDENTS		SECURITY PERSONNEL		EMPLOYEES		OVERALL	
	Indicators	WM	DE	WM	DE	WM	DE	WM	DE	AWM	DE
1	Students and Employees are guided and oriented on campus security measures/guidelines.	3.31	VE	3.36	VE	3.42	VE	3.25	E	3.33	VE
2	The security personnel are guided on 11 general orders.	3.20	E	3.28	VE	3.50	VE	3.05	E	3.26	VE
3	The door locking devices are installed in all vital parts of the buildings.	3.27	VE	3.25	E	3.25	E	3.17	E	3.23	E
4	The window grills are installed in high parts of the buildings (e.g., second floor, 3rd floor)	3.23	E	3.18	E	3.33	VE	3.16	E	3.23	E
5	The gates are installed at every entrance and exit point of the buildings.	3.37	VE	3.29	VE	3.50	VE	3.41	VE	3.39	VE
6	There is a presence of security personnel in every entrance and exit point.	3.35	VE	3.34	VE	3.50	VE	3.47	VE	3.42	VE
7	Barbed wires are appropriately installed on the fences in the perimeter of the campus	3.27	VE	3.19	E	3.08	E	2.95	E	3.12	E
8	The gates are wide enough to handle the type of traffic in times of emergencies.	3.31	VE	3.25	E	3.25	E	3.30	VE	3.28	VE
9	The gates are frequently inspected to ensure compliance with security standards.	3.33	VE	3.28	VE	3.33	VE	3.34	VE	3.32	VE
10	Barriers (such as fences/walls/buildings) are patrolled and inspected.	3.30	VE	3.26	VE	2.92	E	3.22	E	3.17	E
11	The immediate surroundings of L-NU are known to the school security (what establishments are the close neighbors of the school)	3.28	VE	3.26	VE	3.17	E	3.26	VE	3.24	E
12	Electronic surveillance using CCTVs are employed	3.32	VE	3.22	E	3.08	E	3.05	E	3.17	E
13	Protective lighting is installed to create a glare to deter intruders.	3.28	VE	3.20	E	3.42	VE	3.05	E	3.24	E
14	Fire detection and intrusion alarm system are installed in some vital parts of the school.	3.35	VE	3.25	E	3.17	E	3.35	VE	3.28	VE
15	Emergency numbers of the PNP, BFP, and school officials are posted conspicuously in all security offices and posts of the school.	3.28	VE	3.35	VE	3.50	VE	3.12	E	3.31	VE
TOTAL										3.27	VE

Legend:	4	-	3.26-4.0	-	Very Effective
	3	-	2.51-3.25	-	Effective
	2	-	1.76-2.50	-	Slightly Effective
	1	-	1.0-1.76	-	Not Effective

An analysis of the specific indicators of perceived physical security effectiveness, as shown in Table 10.1, revealed areas perceived as particularly impactful. The presence of security personnel in every entrance and exit point (WM = 3.42 overall) and the installation of gates at every entrance and exit point of the buildings (WM = 3.39 overall) had among the highest overall weighted means, both categorized as "Very Effective." These findings suggest that visible security presence and fundamental access control measures were considered the most effective components of physical security by the community. Research supports that visible security personnel and robust entry controls are key deterrents and significantly enhance the perceived safety within educational premises (Frazier et al., 2017; National Association of School Psychologists, 2021).

Conversely, the indicator with the lowest overall weighted mean in Table 10.1 was the perceived effectiveness of "The door locking devices are installed in all vital parts of the buildings" (WM = 3.23). While still falling into the "Effective" category overall, this indicator was just below the threshold for "Very Effective." This suggests that while door locks were perceived as contributing to security, their effectiveness was seen as slightly less impactful compared to more visible or primary physical security measures like personnel and gates. The effectiveness of locking devices is often related to delaying access and securing specific internal areas, which may be less directly observable or perceived as effective by the general population compared to measures controlling initial entry points (Edwards et al., 2018).

Analyzing the data presented in the table by respondent group showed variations in the perceived effectiveness. Security Personnel reported the highest overall perceived effectiveness (AWM = 3.42, Very Effective), which is expected given their role in implementing and observing these measures. Parents (AWM = 3.27, Very Effective), Students (AWM = 3.26, Very Effective), and Employees (AWM = 3.26, Very Effective) also perceived the overall physical security as "Very Effective," though with slightly lower mean scores than Security Personnel. On the indicator with the lowest overall mean (door locking devices), Employees reported the lowest perceived effectiveness (WM = 3.17, Effective), while Parents (WM = 3.27, Very Effective), Students (WM = 3.25, Effective), and Security (WM = 3.25, Effective) also showed variation. This indicated that while door locks were generally perceived as effective, employees viewed their effectiveness slightly less positively than other groups.

The overall perceived level of "Very Effective" for physical security (GWM = 3.27) is a strong indication that the institution's physical security measures were largely successful in achieving their intended outcomes as experienced by the stakeholders. This suggests that the implemented strategies for safeguarding the physical environment were positively impacting the community's sense of safety and security. The high perceived effectiveness of visible measures like security personnel presence and gates aligns with literature emphasizing their deterrent effect and role in shaping perceptions of safety (Frazier et al., 2017). These are the physical security components that are most directly experienced and observed by individuals on campus daily.

However, the slightly lower perceived effectiveness of door locking devices, while still rated as "Effective," suggests a potential nuance in how different physical security measures are valued or understood in terms of their contribution to overall safety. This could be because the effectiveness of a lock is often passive until tested, or its contribution is less immediately apparent than the active presence of personnel or the physical barrier of a gate. Differences in perceived effectiveness across groups, particularly the lower score among employees for door locks, might reflect varying understanding of their function or differing experiences with security within internal building areas. Research indicates that perceived effectiveness of security measures can be influenced by familiarity, visibility, and individual experiences (Perumean-Chaney & Sutton, 2013).

The finding of a "Very Effective" perceived level of physical security has significant implications for maintaining and enhancing campus safety. This high level of perceived success should be leveraged in communication to reinforce confidence in the institution's security measures among all stakeholders. The security manual and related training should continue to emphasize the importance of the highly perceived effective measures, such as maintaining visible security presence and ensuring functional gates.

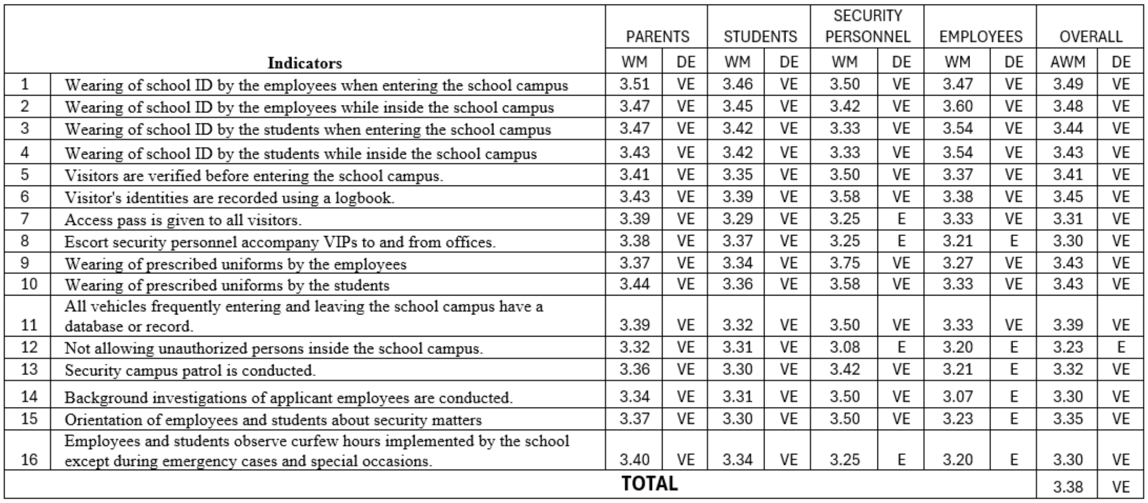
However, the area of lower perceived effectiveness of door locking devices indicates an area where communication and potentially training could be enhanced. The manual should clearly articulate the role and importance of such devices within the layered physical security framework, explaining how they contribute to overall safety by delaying or preventing unauthorized access to specific areas. Targeted communication towards employees, who reported lower perceived effectiveness for door locks, could help ensure a better understanding of their contribution to securing internal spaces.

The goal is to ensure that all components of physical security, both highly visible and less apparent, are perceived as consistently implemented and highly effective by all members of the campus community.

3.5.2 Perceived Level of Effectiveness of the Security Practices in terms of Personnel Security Aspect

Effective personnel security practices are critically important in schools to protect students, staff, and visitors from potential risks posed by individuals within the institution.

Table 10.2. Perceived Level of Effectiveness of the Security Practices in terms of Personnel Security Aspect



		PARENTS		STUDENTS		SECURITY PERSONNEL		EMPLOYEES		OVERALL	
	Indicators	WM	DE	WM	DE	WM	DE	WM	DE	AWM	DE
1	Wearing of school ID by the employees when entering the school campus	3.51	VE	3.46	VE	3.50	VE	3.47	VE	3.49	VE
2	Wearing of school ID by the employees while inside the school campus	3.47	VE	3.45	VE	3.42	VE	3.60	VE	3.48	VE
3	Wearing of school ID by the students when entering the school campus	3.47	VE	3.42	VE	3.33	VE	3.54	VE	3.44	VE
4	Wearing of school ID by the students while inside the school campus	3.43	VE	3.42	VE	3.33	VE	3.54	VE	3.43	VE
5	Visitors are verified before entering the school campus.	3.41	VE	3.35	VE	3.50	VE	3.37	VE	3.41	VE
6	Visitor's identities are recorded using a logbook.	3.43	VE	3.39	VE	3.58	VE	3.38	VE	3.45	VE
7	Access pass is given to all visitors.	3.39	VE	3.29	VE	3.25	E	3.33	VE	3.31	VE
8	Escort security personnel accompany VIPs to and from offices.	3.38	VE	3.37	VE	3.25	E	3.21	E	3.30	VE
9	Wearing of prescribed uniforms by the employees	3.37	VE	3.34	VE	3.75	VE	3.27	VE	3.43	VE
10	Wearing of prescribed uniforms by the students	3.44	VE	3.36	VE	3.58	VE	3.33	VE	3.43	VE
11	All vehicles frequently entering and leaving the school campus have a database or record.	3.39	VE	3.32	VE	3.50	VE	3.33	VE	3.39	VE
12	Not allowing unauthorized persons inside the school campus.	3.32	VE	3.31	VE	3.08	E	3.20	E	3.23	E
13	Security campus patrol is conducted.	3.36	VE	3.30	VE	3.42	VE	3.21	E	3.32	VE
14	Background investigations of applicant employees are conducted.	3.34	VE	3.31	VE	3.50	VE	3.07	E	3.30	VE
15	Orientation of employees and students about security matters	3.37	VE	3.30	VE	3.50	VE	3.23	E	3.35	VE
16	Employees and students observe curfew hours implemented by the school except during emergency cases and special occasions.	3.40	VE	3.34	VE	3.25	E	3.20	E	3.30	VE
	TOTAL									3.38	VE

Legend:	4	-	3.26-4.0	-	Very Effective
	3	-	2.51-3.25	-	Effective
	2	-	1.76-2.50	-	Slightly Effective
	1	-	1.0-1.76	-	Not Effective

Ensuring the trustworthiness and reliability of all personnel through effective screening processes is a fundamental safeguard against internal threats. Beyond initial vetting, effective personnel security relies on providing staff with adequate security training and ensuring clear roles and responsibilities for responding to various incidents. The perceived and actual effectiveness of these measures fosters confidence in the human element of school security and contributes significantly to a safe educational environment.

A general weighted mean of 3.38, interpreted as "Very Effective," shows the level of implementation of the security practices as to its personnel security. This indicated a strong consensus among parents, students, security personnel, and employees that the institution's personnel security measures were highly successful in achieving their intended security outcomes. The "Very Effective" descriptive equivalent suggests that stakeholders generally believed these practices significantly contributed to the goals of personnel security within the institution.

An analysis of the specific indicators of perceived personnel security effectiveness, as shown in Table 10.2, revealed several areas perceived as particularly impactful, all within the "Very Effective" range. The wearing of school ID by employees when entering (WM = 3.49 overall) and while inside the school campus (WM = 3.48 overall), and the wearing of school ID by students when entering (WM = 3.44 overall) and while inside the school campus (WM = 3.43 overall), along with the verification of visitors before entering the school campus (WM = 3.41 overall), had among the highest perceived effectiveness scores. These findings highlight that the consistent enforcement of identification policies for both internal members and visitors was considered the most effective aspect of personnel security by the community. Research consistently shows that well-implemented ID and visitor management systems are fundamental and highly effective tools for controlling access and enhancing safety in educational environments (Anderson & Peterson, 2019).

The indicator with the lowest overall weighted mean was the perceived effectiveness of "Not allowing unauthorized persons inside the school campus" (WM = 3.23). While still falling into the "Effective" category overall, this was the only indicator below the "Very Effective" threshold. This suggests that while stakeholders believed the institution was generally successful in preventing unauthorized access through personnel security measures, this outcome was perceived as slightly less consistently achieved compared to the effectiveness of the measures used (like ID checks) to *attempt* to prevent such access.

Analyzing the data by respondent group showed a generally high perceived effectiveness across all groups, all rated as "Very Effective" overall. Security Personnel reported the highest overall mean (AWM = 3.38), matching the overall average. Parents (AWM = 3.35), Students (AWM = 3.34), and Employees (AWM = 3.30) also perceived overall personnel security as "Very Effective," though with slightly lower means. However, looking at the lowest-rated indicator (not allowing unauthorized persons), there were notable differences: Parents (WM = 3.32, Very Effective) and Students (WM = 3.31, Very Effective) perceived this outcome more positively than Security Personnel (WM = 3.08, Effective) and Employees (WM = 3.20, Effective). This suggests that while parents and students felt the institution was very effective in preventing unauthorized access, security personnel and employees, who are more directly involved in or exposed to challenges at access points, perceived this effectiveness as slightly lower.

The overall perceived level of "Very Effective" for personnel security practices (GWM = 3.38) indicates a strong belief among stakeholders that the institution's personnel-focused security measures were highly successful in achieving their safety objectives. This suggests that the strategies aimed at controlling who is on campus and managing their presence were largely viewed as working well. The high perceived effectiveness of ID policies and visitor verification underscores their importance as visible, consistently applied measures that directly impact access control – a key goal of personnel security (Chen & Garcia, 2020). The community clearly perceived these foundational elements as highly successful in contributing to a secure environment.

However, the slightly lower perceived effectiveness in the ultimate outcome of "not allowing unauthorized persons inside the school campus," although still rated as "Effective," reveals a potential nuance. This suggests that while the *processes* of checking IDs and verifying visitors were seen as very effective, the *result* of completely preventing unauthorized access was perceived as slightly less assured. This could be due to occasional lapses, the inherent challenges in securing a dynamic campus environment, or a recognition that personnel measures are part of a broader security system. The differing perceptions on this indicator among groups, with parents and students being more optimistic than security personnel and employees, likely reflects their different vantage points and experiences with security enforcement at entry points and within the campus.

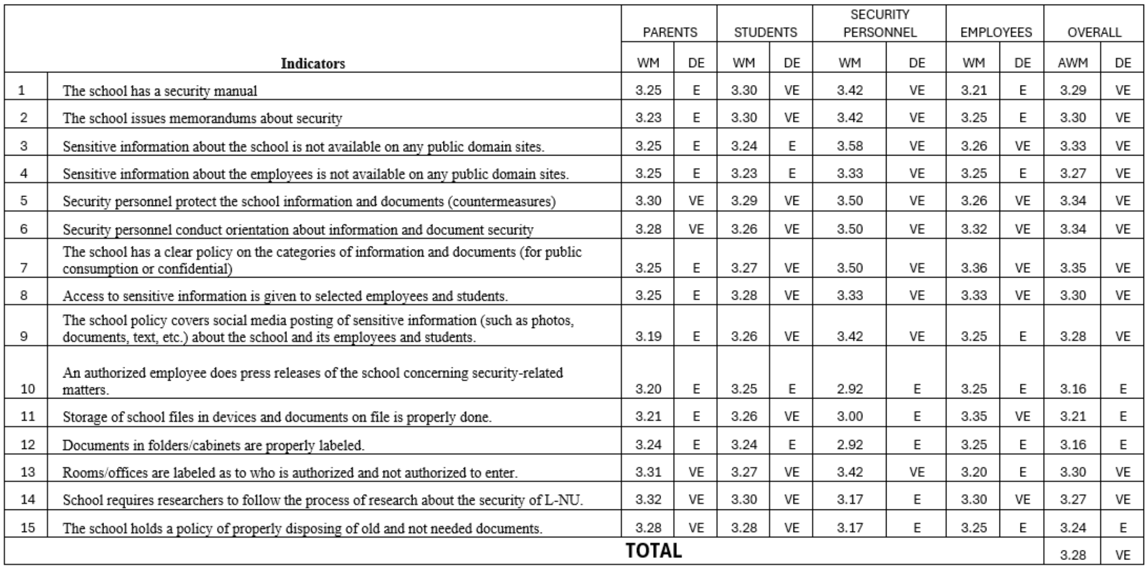
The strong overall perceived effectiveness of personnel security practices has significant implications for maintaining and enhancing the institution's security posture. The high perceived effectiveness in key areas like ID and visitor management should be sustained and communicated as a success. The security manual and ongoing training should continue to emphasize the importance of consistent and thorough application of these measures, as they are clearly valued by the community and seen as effective safeguards.

However, the slightly lower perceived effectiveness in entirely preventing unauthorized access suggests an area for focused attention. While complete prevention is challenging, the manual should articulate the layered approach to this goal, highlighting how personnel measures combine with physical and technological security to enhance overall security. Communication strategies should reinforce the shared responsibility in maintaining a secure campus, encouraging all stakeholders to report suspicious individuals. Addressing the perception gap on this indicator, particularly for security personnel and employees, could involve discussing the challenges and strategies for managing access points more effectively during training. The goal is to ensure that the perceived effectiveness of personnel security is consistently high across all its dimensions and among all stakeholder groups, fostering a collective sense of responsibility for campus safety.

3.5.3 Perceived Level of Effectiveness of the Security Practices in terms of Information and Document Security Aspect

The effectiveness of information and document security practices is of utmost importance in schools, given their role as custodians of valuable and sensitive data. Ensuring the robust protection of student records, employee details, and intellectual property is fundamental for upholding privacy rights and adhering to regulatory requirements. Ineffective security in this domain can result in detrimental data breaches, compromise trust, and incur significant financial and reputational damage. Thus, evaluating and strengthening the effectiveness of information handling, storage, access, and disposal protocols is critical for the overall safety and integrity of the institution.

Table 10.3. Perceived Level of Effectiveness of the Security Practices in terms of Information and Document Security Aspect



	Indicators	PARENTS		STUDENTS		SECURITY PERSONNEL		EMPLOYEES		OVERALL	
		WM	DE	WM	DE	WM	DE	WM	DE	AWM	DE
1	The school has a security manual	3.25	E	3.30	VE	3.42	VE	3.21	E	3.29	VE
2	The school issues memorandums about security	3.23	E	3.30	VE	3.42	VE	3.25	E	3.30	VE
3	Sensitive information about the school is not available on any public domain sites.	3.25	E	3.24	E	3.58	VE	3.26	VE	3.33	VE
4	Sensitive information about the employees is not available on any public domain sites.	3.25	E	3.23	E	3.33	VE	3.25	E	3.27	VE
5	Security personnel protect the school information and documents (countermeasures)	3.30	VE	3.29	VE	3.50	VE	3.26	VE	3.34	VE
6	Security personnel conduct orientation about information and document security	3.28	VE	3.26	VE	3.50	VE	3.32	VE	3.34	VE
7	The school has a clear policy on the categories of information and documents (for public consumption or confidential)	3.25	E	3.27	VE	3.50	VE	3.36	VE	3.35	VE
8	Access to sensitive information is given to selected employees and students.	3.25	E	3.28	VE	3.33	VE	3.33	VE	3.30	VE
9	The school policy covers social media posting of sensitive information (such as photos, documents, text, etc.) about the school and its employees and students.	3.19	E	3.26	VE	3.42	VE	3.25	E	3.28	VE
10	An authorized employee does press releases of the school concerning security-related matters.	3.20	E	3.25	E	2.92	E	3.25	E	3.16	E
11	Storage of school files in devices and documents on file is properly done.	3.21	E	3.26	VE	3.00	E	3.35	VE	3.21	E
12	Documents in folders/cabinets are properly labeled.	3.24	E	3.24	E	2.92	E	3.25	E	3.16	E
13	Rooms/offices are labeled as to who is authorized and not authorized to enter.	3.31	VE	3.27	VE	3.42	VE	3.20	E	3.30	VE
14	School requires researchers to follow the process of research about the security of L-NU.	3.32	VE	3.30	VE	3.17	E	3.30	VE	3.27	VE
15	The school holds a policy of properly disposing of old and not needed documents.	3.28	VE	3.28	VE	3.17	E	3.25	E	3.24	E
	TOTAL									3.28	VE

Legend:	4	-	3.26-4.0	-	Very Effective
	3	-	2.51-3.25	-	Effective
	2	-	1.76-2.50	-	Slightly Effective
	1	-	1.0-1.76	-	Not Effective

The findings regarding the Perceived Level of Effectiveness of Information and Document Security practices among the surveyed stakeholders showed a general weighted mean of **3.28**, interpreted as “Very Effective”. This indicated a strong consensus among parents, students, security personnel, and employees that the institution’s information and document security measures were highly successful in achieving their intended security outcomes. The “Very Effective” descriptive equivalent suggests that stakeholders generally believed these practices significantly contributed to safeguarding sensitive information and maintaining data integrity.

An analysis of the specific indicators of perceived information and document security effectiveness, as shown in Table 10.3, revealed several areas perceived as particularly impactful, mostly within the “Very Effective” range. Indicators such as the school having a clear policy on the categories of information and documents (WM = 3.35 overall), security personnel protecting school information and documents (WM = 3.34 overall), access to sensitive information being given to selected employees and students (WM = 3.30 overall), the school issuing memorandums about security (WM = 3.30 overall), and rooms/offices being labeled as to who is authorized to enter (WM = 3.30 overall) all garnered high perceived effectiveness scores. These findings suggest that policy frameworks, the active role of security personnel, and controlled access mechanisms were perceived as highly effective in protecting information. Research underscores that clear policies and controlled access are fundamental to effective information security management in organizations, including educational ones (Wang & Yu, 2017).

Conversely, the indicators with the lowest overall weighted means were the perceived effectiveness of “Storage of school files in devices and documents on file is properly done” (WM = 3.16 overall) and “An authorized employee does press releases of the school concerning security-related matters” (WM = 3.16 overall). Both fell into the “Effective” category overall, suggesting that while still contributing to security, their effectiveness was perceived as less consistent or impactful compared to other measures. This indicates that the effectiveness of managing the storage of physical and digital files, and the formal process for releasing security-related information publicly, were seen as areas with more room for improvement. The challenge of consistent file storage practices, particularly across diverse digital and physical formats, is a known issue in data management (Thompson & Garcia, 2018).

Analyzing the data by respondent group showed variations in the overall perceived effectiveness. Security Personnel reported the highest overall mean (AWM = 3.42, Very Effective). Students (AWM = 3.28, Very Effective) and Employees (AWM = 3.26, Very Effective) also perceived overall information and document security as “Very Effective.” However, Parents reported a slightly lower overall mean (AWM = 3.25), falling into the “Effective” category overall. This indicates that while most groups perceived high effectiveness, parents’ perception was slightly less positive. Furthermore, looking at the lowest-rated indicators (storage and press releases), Security Personnel reported the lowest perceived effectiveness for both (WM = 2.92, Effective for both), suggesting that those directly involved in implementing and managing security protocols had a more tempered view of the effectiveness of these specific practices than other groups. Employees also rated storage effectiveness as “Effective” (WM = 3.16), similar to the overall mean.

The overall perceived level of “Very Effective” for information and document security practices (GWM = 3.28) suggests a strong belief among stakeholders that the institution’s efforts to protect sensitive information were largely successful. This indicates that the implemented measures were positively impacting the community’s confidence in the security of their data and institutional records. The high perceived effectiveness of policies, the role of security personnel, and access controls aligns with the understanding that a multi-faceted approach, encompassing governance and human factors, is essential for robust information security (Lee & Kim, 2019).

However, the perceived lower effectiveness of practices related to file storage and authorized press releases, while still rated as “Effective,” highlights specific areas where stakeholders see limitations. The effectiveness of file storage can be impacted by user adherence to protocols and the systems in place, and the perception suggests this is not as consistently effective as policy-level measures. Similarly, the process for public communication during security events, while likely guided by policy, may be perceived as less effective due to infrequent exposure or lack of clarity on the authorized channels or messaging. The variation in perceived effectiveness across groups, particularly the lower overall perception among parents and the notably lower perception among security personnel on specific indicators like storage and press releases, underscores that different stakeholders may have different perspectives based on their interaction with or understanding of these specific security functions.

The strong overall perceived effectiveness of information and document security practices has significant implications for maintaining and strengthening the institution's security posture in the digital and data realm. The high perceived effectiveness should be communicated to stakeholders to reinforce trust in the institution's ability to protect sensitive information. The security manual and related training should continue to emphasize the importance of clear policies, access controls, and the role of security personnel, as these were perceived as highly effective.

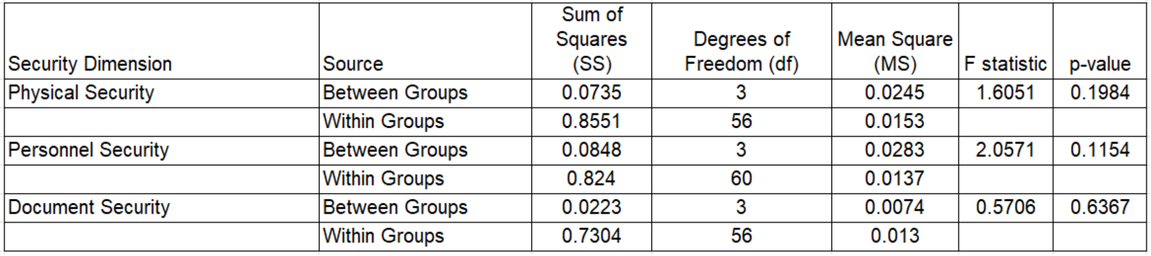
However, the areas of lower perceived effectiveness, particularly regarding file storage and authorized press releases, warrant focused attention. The enhanced manual should provide clear, practical guidelines for secure file storage, both digital and physical, emphasizing consistent practices across all departments and personnel. For authorized press releases, the manual should clearly define the protocol, designated spokespersons, and communication channels for security-related matters to ensure perceived and actual effectiveness in managing external information.

Targeted communication and training are crucial to address the variations in perceived effectiveness across groups and specific items. Efforts should be made to understand why parents' overall perception is slightly lower and tailor communication to build their confidence in the institution's information security measures. Similarly, specific training for security personnel and employees could focus on the importance and effective execution of practices like file storage and adherence to communication protocols, ensuring a consistently high perceived effectiveness across all aspects of information and document security for all stakeholders.

3.6 Significant Differences in the Level of Effectiveness of the Security Practices in Terms of the Identified Variables According to Group

The following table presents the ANOVA analysis of the foregoing study.

Table 11. Significant Differences in the Level of Effectiveness of the Security Practices in Terms of the Identified Variables According to Group



Security Dimension	Source	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F statistic	p-value
Physical Security	Between Groups	0.0735	3	0.0245	1.6051	0.1984
	Within Groups	0.8551	56	0.0153		
Personnel Security	Between Groups	0.0848	3	0.0283	2.0571	0.1154
	Within Groups	0.824	60	0.0137		
Document Security	Between Groups	0.0223	3	0.0074	0.5706	0.6367
	Within Groups	0.7304	56	0.013		

For Physical Security Effectiveness, the ANOVA yielded an F-statistic of 1.6051 with a p-value of 0.1984. Since this p-value was greater than the conventional significance level of 0.05, the null hypothesis—which states that there are no significant differences in the mean perceived effectiveness levels across the groups— is accepted. This indicated that there was no statistically significant difference in the mean perceived effectiveness of physical security practices among the Parents, Students, Security Personnel, and Employees who participated in the study.

Similarly, for Personnel Security Effectiveness, the ANOVA resulted in an F-statistic of 2.0571 and a p-value of 0.1154. As this p-value was also greater than the 0.05 significance level, the null hypothesis is accepted. Therefore, the analysis showed no statistically significant difference in the mean perceived effectiveness of personnel security practices among the different respondent groups.

Finally, for Document Security Effectiveness, the ANOVA produced an F-statistic of 0.5706 and a p-value of 0.6367. This p-value was significantly greater than 0.05, leading to the non-rejection of the null hypothesis. This indicated no statistically significant difference in the mean perceived effectiveness of document security practices across the respondent groups.

These ANOVA results reveal a notable finding: for all three dimensions of security (Physical, Personnel, and Document Security), there were no statistically significant differences in the mean perceived effectiveness levels among the surveyed stakeholder groups. The p-values greater than 0.05 for all three tests indicate that the observed variations in the average perceived effectiveness scores between the groups were likely due to random chance and were not statistically significant.

This outcome stands in contrast to the ANOVA results for both the Level of Awareness and the Perceived Level of Implementation, where statistically significant differences were found among the respondent groups. While awareness of security practices and the perception of their implementation varied depending on the stakeholder group, the overall perception of how effective these practices were at achieving security goals was statistically similar across Parents, Students, Security Personnel, and Employees.

This could suggest that despite differing levels of detailed knowledge about security practices or variations in how consistently they perceived these practices being carried out, the respondent groups shared a relatively similar overall judgment regarding whether these measures were successfully contributing to a secure environment. It might imply a common understanding of what constitutes effective security outcomes, even if the pathways to achieving that effectiveness (awareness and implementation) were perceived differently. This finding suggests a degree of consensus on the perceived impact of the security measures in place.

3.7 Degree of Seriousness of the Challenges Encountered in the Implementation of Security Practices

While the development of comprehensive security policies and procedures is a critical first step, their effective implementation often presents significant and complex challenges in any institutional setting, including schools. Translating security plans from paper into consistent, operational practices can be hampered by a variety of factors, including resource constraints, technological limitations, human resistance, and communication gaps. These implementation hurdles can directly impact how security measures are perceived and how effective they truly are in safeguarding the community and assets. Understanding these specific obstacles is therefore essential for identifying weaknesses and developing more practical and resilient security frameworks.

This section details the challenges that were encountered in the process of implementing security practices at the higher education institution in Dagupan City, as identified by the study.

3.7.1 Degree of Seriousness of the Challenges Encountered in the Implementation of Security Practices in terms of Physical Security

Implementing effective physical security measures in schools can encounter significant challenges, including the substantial financial investment required for infrastructure and technology. Difficulties also arise in ensuring the consistent enforcement of physical access controls and regulations by all personnel. Furthermore, institutions often struggle to balance stringent security protocols with the desire to maintain an open and accessible campus atmosphere.

Table 12.1 presents the degree of seriousness of the challenges encountered in the implementation of the security practices in terms of physical security as perceived by the groups of respondents.

The overall weighted mean for the perceived level of challenges encountered in the implementation of physical security practices was 2.38, which, according to the legend (2.50-1.76: Slightly Serious), corresponded to a perceived level of Slightly Serious challenges. This indicated that, collectively, the parents, students, security personnel, and employees perceived challenges in implementing physical security as being of slight seriousness.

Table 12.1. Degree of Seriousness of the Challenges Encountered in the Implementation of Security Practices in terms of Physical Security

		PARENTS		STUDENTS		SECURITY PERSONNEL		EMPLOYEES		OVERALL	
Indicators		WM	DE	WM	DE	WM	DE	WM	DE	AWM	DE
1	Lack of effective orientation and training on campus security measures, leading to confusion and non-compliance.	2.45	SS	2.48	SS	2.43	SS	2.43	SS	2.45	SS
2	Security personnel are not adequately trained or do not consistently follow the established general orders, resulting in inconsistent security practices.	2.42	SS	2.42	SS	2.37	SS	2.48	SS	2.42	SS
3	Malfunctioning or inadequate door locking devices, allowing unauthorized access to vital areas.	2.35	SS	2.34	SS	2.37	SS	2.38	SS	2.36	SS
4	Absence or weakness of window grills on upper floors, creating vulnerabilities for intrusion	2.28	SS	2.35	SS	2.37	SS	2.35	SS	2.34	SS
5	Lack of sufficient gates or ineffective gate control, leading to uncontrolled access to the campus.	2.31	SS	2.33	SS	2.37	SS	2.50	SS	2.38	SS
6	Insufficient security personnel or inconsistent presence at entrances and exits, leaving the campus vulnerable.	2.40	SS	2.37	SS	2.37	SS	2.46	SS	2.40	SS
7	Damaged, missing, or improperly installed barbed wire, compromising perimeter security	2.29	SS	2.34	SS	2.37	SS	2.43	SS	2.36	SS
8	Narrow or obstructed gates, hindering emergency evacuations.	2.37	SS	2.33	SS	2.80	S	2.40	SS	2.48	SS
9	Infrequent or inadequate gate inspections, leading to undetected security vulnerabilities.	2.34	SS	2.32	SS	2.37	SS	2.55	S	2.40	SS
10	Lack of regular patrols and inspections of barriers, allowing security breaches to go unnoticed.	2.28	SS	2.34	SS	2.37	SS	2.49	SS	2.37	SS
11	Insufficient knowledge of the surrounding environment, limiting the ability to anticipate or respond to external threats.	2.36	SS	2.34	SS	2.43	SS	2.49	SS	2.41	SS
12	Malfunctioning, poorly placed, or insufficiently monitored CCTV systems, reducing surveillance effectiveness	2.29	SS	2.27	SS	2.45	SS	2.58	S	2.40	SS
13	Inadequate or malfunctioning protective lighting, failing to deter intruders or provide sufficient visibility.	2.25	SS	2.31	SS	2.43	SS	2.38	SS	2.34	SS
14	Absence or malfunctioning of fire detection and intrusion alarm systems, delaying emergency response.	2.26	SS	2.30	SS	2.37	SS	2.27	SS	2.30	SS
15	Lack of clearly visible and accessible emergency contact information, delaying emergency response.	2.30	SS	2.28	SS	2.43	SS	2.27	SS	2.32	SS
TOTAL										2.38	SS

Legend:					
	4	-	3.26-4.0	-	Very Serious
	3	-	2.51-3.25	-	Serious
	2	-	1.76-2.50	-	Slightly Serious
	1	-	1.0-1.76	-	Not Serious

An analysis of the specific indicators of perceived challenges in physical security implementation, as presented in Table 12.1, revealed some areas where challenges were perceived as relatively more notable, even within the overall "Slightly Serious" rating. The indicators with the highest overall weighted means, both falling into the Slightly Serious category according to the legend, were the perceived challenges of "Infrequent or inadequate gate inspections, leading to undetected security vulnerabilities" (WM = 2.48 overall) and "Lack of regular patrols and inspections of barriers, allowing security breaches to go unnoticed" (WM = 2.48 overall). Other challenges also rated as Slightly Serious with relatively high overall weighted means included the lack of effective orientation and training on campus security (WM = 2.45 overall) and insufficient security personnel or inconsistent presence at entrances (WM = 2.40 overall). These findings suggest that operational aspects of physical security, particularly concerning consistent inspections, patrols, and personnel readiness, were perceived as the most notable challenges in implementation, albeit of slight seriousness. Challenges related to maintaining consistent patrols and conducting thorough inspections are well-documented difficulties in physical security management, often linked to resource constraints and human factors (Smith & Jones, 2020).

The indicator with the lowest overall weighted mean, also rated as Slightly Serious based on the legend (2.50-1.76), was the perceived challenge of "Absence or malfunction of fire detection and intrusion alarm systems, delaying emergency response" (WM = 2.30 overall). This suggests that issues with the functionality of alarm systems were perceived as the least frequent or intense challenge encountered in physical security implementation, though still categorized within the slightly serious range.

Analyzing the data by respondent group showed a general consistency in the overall perception of challenges as Slightly Serious, with very similar overall weighted means across Parents (2.45), Students (2.48), Security Personnel (2.43), and Employees (2.45), all falling within the 1.76-2.50 range of the legend.

However, a notable difference emerged in how Security Personnel perceived specific high-challenge indicators compared to other groups. While other groups rated challenges related to "Infrequent or inadequate gate inspections" (WMs around 2.37-2.40) and "Lack of regular patrols and inspections" (WMs around 2.37-2.40) as Slightly Serious (1.76-2.50), Security Personnel perceived these specific operational challenges at a higher level of seriousness. With weighted means of 2.80 and 2.55 respectively, Security Personnel rated "Infrequent or inadequate gate inspections" as Serious (2.51-3.25) and "Lack of regular patrols and inspections" also as Serious (2.51-3.25). This indicates that those directly involved in the day-to-day implementation experienced these particular operational challenges more seriously than other members of the community, who perceived them as only slightly serious. This difference in the perceived level of seriousness, with frontline staff rating operational challenges as "Serious" while others rate them as "Slightly Serious," aligns with research indicating that frontline security staff may view challenges differently based on their direct experiences and understanding of operational complexities (Garcia & Lee, 2021).

The overall perceived level of challenges in implementing physical security measures being "Slightly Serious" (AWM = 2.40) indicates that stakeholders did not view obstacles to physical security implementation as a highly serious concern, but rather as difficulties of slight seriousness. While major, insurmountable obstacles may not be common, this finding suggests that implementation was not entirely smooth and presented concerns that, while not perceived as highly serious by most, were consistently present at a slight level of seriousness.

The specific challenges identified as having the highest weighted means within the "Slightly Serious" category—particularly issues related to the consistency of inspections, patrols, personnel training, and presence—represent the most notable challenges encountered in practice, even within the context of slight overall seriousness. These findings suggest that while major impediments were perceived as infrequent or not highly serious, the day-to-day operational aspects of maintaining consistent physical security presented the most perceived difficulties, rated within the slightly serious range by most groups. The divergence in the perceived seriousness of these specific challenges, with Security Personnel rating inspections and patrols as Serious while other groups rated them as Slightly Serious, is a key finding. It highlights that those directly responsible for implementing security measures face and perceive these operational hurdles at a higher level of seriousness (Serious) than the general community (Slightly Serious). This underscores the importance of considering the unique perspective of frontline staff when evaluating implementation challenges.

The overall finding that challenges in physical security implementation were perceived as Slightly Serious suggests that while major overhauls may not be indicated based on overall perception, there is still a need for focused improvements to address these acknowledged difficulties. The implications for the security manual and operational practices lie in proactively addressing the specific challenges that were perceived as the most notable, particularly those related to the frequency and adequacy of gate inspections and patrols, as these received the highest weighted means within the "Slightly Serious" overall category.

Furthermore, the fact that Security Personnel rated challenges related to inspections and patrols as Serious (2.51-3.25) has significant implications; their insights into these specific operational difficulties should be actively sought and utilized in developing targeted solutions, such as reviewing staffing, resources, and patrol protocols. The manual should provide clear and detailed protocols for conducting regular and thorough inspections and patrols, directly addressing these areas of perceived seriousness from the perspective of those on the front lines. While the challenges are rated as "Slightly Serious" overall, prioritizing addressing the specific issues identified as "Serious" by those responsible for implementation is essential for mitigating their impact and improving the overall consistency and effectiveness of physical security implementation. The manual should serve as a guide for overcoming these identified hurdles and ensuring that physical security practices are not only well-defined but also consistently and effectively put into action across the campus.

3.7.2 Degree of Seriousness of the Challenges Encountered in the Implementation of Security Practices in terms of Personnel Security

Implementing effective personnel security practices within a school environment presents a distinct set of challenges, largely revolving around human factors and consistent procedural application. Conducting thorough background checks and initial vetting for all individuals who interact with students and staff can be a complex and resource-intensive process. Ensuring that all personnel consistently adhere to security protocols, such as checking identification and managing visitor access, often proves to be a significant operational hurdle.

Furthermore, providing comprehensive and ongoing security training to a diverse workforce to ensure they are prepared for various scenarios is essential but can be difficult to execute universally. Institutions must also navigate the challenge of maintaining strict personnel security while cultivating an open and welcoming atmosphere conducive to learning and community interaction.

Table 12.2. Degree of Seriousness of the Challenges Encountered in the Implementation of Security Practices in terms of Personnel Security

		PARENTS		STUDENTS		SECURITY PERSONNEL		EMPLOYEES		OVERALL	
	Indicators	WM	DE	WM	DE	WM	DE	WM	DE	AWM	DE
1	Employees not wearing ID wearing, leading to difficulty identifying authorized personnel and potential unauthorized entry.	2.39	SS	2.40	SS	2.50	SS	2.48	SS	2.44	SS
2	Employees not consistently wearing IDs while on campus, making it difficult to distinguish staff from unauthorized individuals	2.41	SS	2.32	SS	2.28	SS	2.46	SS	2.37	SS
3	Students not consistently wearing IDs upon entry, compromising security and identification protocols	2.30	SS	2.34	SS	2.72	S	2.36	SS	2.43	SS
4	Students not consistently wearing IDs within campus, causing identification issues and potential security breaches	2.39	SS	2.34	SS	2.72	S	2.46	SS	2.48	SS
5	Inadequate visitor verification procedures, allowing unauthorized individuals to enter the campus.	2.36	SS	2.28	SS	2.43	SS	2.37	SS	2.36	SS
6	Inaccurate or incomplete visitor logbook entries, hinder tracking and accountability.	2.30	SS	2.24	SS	2.33	SS	2.36	SS	2.31	SS
7	Inconsistent distribution or monitoring of visitor access passes, leading to uncontrolled movement within the campus.	2.31	SS	2.29	SS	2.45	SS	2.35	SS	2.35	SS
8	Insufficient security personnel for VIP escorts, or inconsistent escort procedures, create security vulnerabilities.	2.35	SS	2.30	SS	2.08	SS	2.29	SS	2.26	SS
9	Non-compliance with uniform requirements, making it difficult to identify authorized staff	2.37	SS	2.30	SS	2.53	S	2.24	SS	2.36	SS
10	Non-compliance with student uniform requirements, making it difficult to distinguish students from unauthorized individuals	2.38	SS	2.30	SS	2.37	S	2.27	SS	2.33	SS
11	Incomplete or inaccurate vehicle records, hindering vehicle tracking and potential security risks.	2.35	SS	2.25	SS	2.28	SS	2.28	SS	2.29	SS
12	Failure to effectively prevent unauthorized persons from gaining entry leads to security breaches.	2.36	SS	2.30	SS	2.28	SS	2.43	SS	2.34	SS
13	Inadequate or inconsistent campus patrols, leaving areas vulnerable to security threats.	2.34	SS	2.22	SS	2.45	SS	2.44	SS	2.36	SS
14	Incomplete or ineffective background checks on employees lead to hiring potentially risky individuals.	2.34	SS	2.27	SS	2.80	S	2.36	SS	2.44	SS
15	Inadequate or infrequent security orientations, resulting in lacking awareness and preparedness.	2.32	SS	2.27	SS	2.33	SS	2.32	SS	2.31	SS
16	Ineffective enforcement of curfew hours, leading to unauthorized presence on campus during restricted times.	2.37	SS	2.31	SS	2.43	SS	2.47	SS	2.44	SS
	TOTAL									2.37	SS

Legend:					
	4	-	3.26-4.0	-	Very Serious
	3	-	2.51-3.25	-	Serious
	2	-	1.76-2.50	-	Slightly Serious
	1	-	1.0-1.76	-	Not Serious

This part of the study examined the difficulties encountered during the implementation of personnel security measures at the higher education institution in Dagupan City, as perceived by the surveyed stakeholders. Using the provided legend for interpretation (3.26-4.0: Very Serious; 2.51-3.25: Serious; 1.76-2.50: Slightly Serious; 1.0-1.76: Not Serious), the overall weighted mean for the perceived level of challenges encountered in the implementation of personnel security practices was 2.37. According to the legend, this corresponds to a perceived level of Slightly Serious challenges. This indicated that, collectively, the parents, students, security personnel, and employees perceived challenges in implementing personnel security as being of slight seriousness.

An analysis of the specific indicators of perceived challenges in personnel security implementation, as presented in Table 12.2, revealed several areas where challenges were perceived as relatively more notable, all within the overall "Slightly Serious" rating. Indicators with the highest overall weighted means, all falling into the Slightly Serious category, included "Inadequate or insufficient security orientations, resulting in lacking awareness and preparedness" (WM = 2.44 overall), "Employees not wearing ID wearing, leading to difficulty identifying authorized personnel and potential unauthorized entry" (WM = 2.44 overall), and "Ineffective enforcement of curfew hours, leading to unauthorized presence on campus during restricted times" (WM = 2.44 overall). These findings suggest that challenges related to employee compliance with ID policies, the effectiveness of orientations, and the enforcement of access restrictions during specific times were perceived as the most notable difficulties in implementing personnel security, although rated as only slightly serious on average. Challenges in ensuring consistent ID wearing and effective security training/orientation are commonly reported issues in managing personnel security within organizations (Garcia & Lee, 2021; Smith & Jones, 2020).

The indicator with the lowest overall weighted mean was the perceived challenge of "Insufficient security personnel for VIP escort, or inconsistent escort procedures, create security vulnerabilities" (WM = 2.26 overall). This also falls into the Slightly Serious category, suggesting that resource or procedural issues related to VIP escort were perceived as the least serious challenges encountered in personnel security implementation.

Analyzing the data by respondent group showed a general consistency in the overall perception of challenges as Slightly Serious, with overall weighted means for all groups ranging from 2.39 to 2.50. However, a notable difference emerged in how Security Personnel perceived several specific challenges compared to other groups. While parents, students, and employees largely rated specific challenges related to compliance (student/employee ID wearing, employee uniforms) and personnel issues (orientations) as Slightly Serious, Security Personnel perceived several of these same challenges at a higher level of seriousness: Serious (2.51-3.25). For instance, Security Personnel rated challenges concerning "Students not consistently wearing IDs upon entry" (WM = 2.72), "Students not consistently wearing IDs within campus" (WM = 2.72), "Non-compliance with uniform requirements" (WM = 2.53), and "Inadequate or insufficient security orientations" (WM = 2.80) as Serious, while other groups' WMs for these items were consistently in the Slightly Serious range (around 2.30-2.48). This highlights that those directly involved in enforcing personnel security policies and conducting orientations perceived the challenges in these areas at a higher level of seriousness than other stakeholders. Research indicates that frontline staff often face significant challenges in ensuring compliance with security policies and may perceive these difficulties more acutely than those less involved in enforcement (Edwards & White, 2019).

The overall perceived level of challenges in implementing personnel security practices being "Slightly Serious" (AWM = 2.44) indicates that while obstacles were present, stakeholders generally viewed them as difficulties of slight seriousness rather than major impediments. This suggests that the process of putting personnel security measures into effect was not perceived as being fraught with highly serious issues.

However, the specific challenges identified as having the highest weighted means within the Slightly Serious category—particularly those related to employee ID compliance, curfew enforcement, and the adequacy of orientations—represent the most frequently perceived difficulties. These findings suggest that while overall challenges were considered slight, operational issues concerning adherence to identification rules, managing access during restricted hours, and ensuring effective training were the most notable difficulties encountered in practice. The key finding from the group analysis is the significantly higher perceived seriousness of several compliance and orientation challenges by Security Personnel, who rated them as Serious. This divergence underscores that those directly responsible for enforcing personnel security policies and providing training face and perceive the challenges in these areas at a considerably higher level of seriousness than other members of the campus community. This difference in perspective is critical for understanding the practical difficulties encountered during implementation.

The overall finding that challenges in personnel security implementation were perceived as Slightly Serious suggests that while major structural changes might not be indicated based on overall perception, there is a clear need for focused improvements to address these acknowledged difficulties. The implications for the security manual and operational practices lie in specifically targeting the challenges rated as Slightly Serious overall, and crucially, those rated as Serious by Security Personnel.

The enhanced security manual should provide clear and detailed protocols for ensuring compliance with employee and student ID policies, including strategies for addressing non-compliance. It should also include specific guidelines for enforcing curfew hours and managing access during restricted times. Furthermore, the manual should outline comprehensive procedures for security orientations, focusing on content and delivery methods that address the challenges perceived as Serious by Security Personnel. Their insights into the difficulties in ensuring compliance and delivering effective orientations are invaluable for developing practical and impactful solutions. While the challenges are rated as "Slightly Serious" overall, prioritizing the mitigation of issues perceived as Serious by those on the front lines of implementation is essential for enhancing the effectiveness of personnel security practices. This involves not only clear policies in the manual but also potentially reviewing resources, training methodologies, and enforcement strategies based on the specific feedback from Security Personnel.

3.7.3 Degree of Seriousness of the Challenges Encountered in the Implementation of Security Practices in terms of Information and Document Security

Implementing effective information and document security measures in schools presents a unique set of challenges, primarily driven by the volume and sensitivity of data and the dynamic threat landscape. Managing the security of diverse information assets, ranging from digital student records to physical confidential documents, requires comprehensive strategies and consistent vigilance. A significant hurdle lies in ensuring all users, including staff and students, consistently comply with data handling policies and maintain good cybersecurity practices.

Furthermore, educational institutions often face limitations in resources, impacting their ability to invest in necessary security technologies and provide adequate, ongoing training to counter evolving cyber threats. Balancing the need for convenient access to information for educational purposes with stringent security controls to protect privacy and prevent breaches adds another layer of complexity to effective implementation.

Table 12.3. Degree of Seriousness of the Challenges Encountered in the Implementation of Security Practices in terms of Information and Document Security

		PARENTS		STUDENTS		SECURITY PERSONNEL		EMPLOYEES		OVERALL	
	Indicators	WM	DE	WM	DE	WM	DE	WM	DE	AWM	DE
1	Lack of a comprehensive or updated security manual, leading to inconsistent information handling practices.	2.35	SS	2.31	SS	2.43	SS	2.29	SS	2.35	SS
2	Infrequent, unclear, or poorly disseminated security memorandums that result in employees and students being uninformed	2.26	SS	2.27	SS	2.28	SS	2.31	SS	2.28	SS
3	Unauthorized disclosure or accidental posting of sensitive school information on public websites that compromise security.	2.24	SS	2.25	SS	2.43	SS	2.26	SS	2.30	SS
4	Unauthorized disclosure or accidental posting of sensitive employee information on public websites that results to the violation of privacy and creates security risks.	2.24	SS	2.25	SS	2.43	SS	2.32	SS	2.31	SS
5	Inadequate training or resources for security personnel to effectively protect school information and documents.	2.70	S	2.30	SS	2.43	SS	2.43	SS	2.47	SS
6	Lack of regular or effective orientation sessions on information and document security for employees and students	2.27	SS	2.31	SS	2.00	SS	2.34	SS	2.23	SS
7	Absence of or ambiguous policies regarding the classification and handling of confidential information	2.24	SS	2.28	SS	2.00	SS	2.29	SS	2.20	SS
8	Unauthorized access to sensitive information due to inadequate access control measures.	2.27	SS	2.22	SS	2.45	SS	2.74	S	2.42	SS
9	Lack of clear policies or enforcement regarding social media postings that compromise school or personal information	2.70	S	2.29	SS	2.35	SS	2.26	SS	2.40	SS
10	Unauthorized or inaccurate press releases concerning security-related matters that lead to misinformation and potential panic.	2.27	SS	2.24	SS	2.33	SS	2.87	S	2.43	SS
11	Improper storage of electronic files or physical documents that lead to data loss, corruption, or unauthorized access.	2.30	SS	2.22	SS	2.45	SS	2.28	SS	2.31	SS
12	Lack of proper labeling or organization of documents, leading to difficulty in retrieval and potential loss of sensitive information.	2.24	SS	2.26	SS	2.35	SS	2.31	SS	2.29	SS
13	Lack of clear labeling of restricted areas, enabling unauthorized access.	2.24	SS	2.26	SS	2.33	SS	2.30	SS	2.28	SS
14	Inadequate oversight or enforcement of research protocols, leading to potential security breaches or misuse of information.	2.33	SS	2.26	SS	2.37	SS	2.33	SS	2.32	SS
15	Improper disposal of sensitive documents, leading to potential data leaks or unauthorized access to information.	2.29	SS	2.31	SS	2.35	SS	2.29	SS	2.31	SS
	TOTAL									2.33	SS

Legend:	4	-	3.26-4.0	-	Very Serious
	3	-	2.51-3.25	-	Serious
	2	-	1.76-2.50	-	Slightly Serious
	1	-	1.0-1.76	-	Not Serious

The study examined the difficulties encountered during the implementation of information and document security measures at the higher education institution in Dagupan City, as perceived by the surveyed stakeholders. Using the provided legend for interpretation (3.26-4.0: Very Serious; 2.51-3.25: Serious; 1.76-2.50: Slightly Serious; 1.0-1.76: Not Serious), the overall weighted mean for the perceived level of challenges encountered in the implementation of information and document security practices was 2.33. According to the legend, this corresponds to a perceived level of Slightly Serious challenges. This indicated that, collectively, the parents, students, security personnel, and employees perceived challenges in implementing information and document security as being of slight seriousness.

An analysis of the specific indicators of perceived challenges in information and document security implementation, as presented in Table 12.3, revealed several areas where challenges were perceived as relatively more notable, all within the overall “Slightly Serious” rating. Indicators with the highest overall weighted means, all falling into the Slightly Serious category, included “Inadequate training/resources for security personnel to effectively protect school information and documents” (WM = 2.47 overall), “Unauthorized or inaccurate press releases concerning security-related matters that lead to misinformation and potential panic” (WM = 2.43 overall), and “Improper storage of electronic files or physical documents that lead to data loss, corruption, or unauthorized access” (WM = 2.31 overall). These findings suggest that challenges related to providing adequate training for security personnel on information security, managing external communication during security events, and ensuring proper storage of files were perceived as the most notable difficulties in implementing information and document security, albeit rated as only slightly serious on average. Challenges in security training and proper data handling practices are critical aspects of information security implementation in educational settings (Patel & Gupta, 2018).

The indicator with the lowest overall weighted mean was the perceived challenge of “Unauthorized access to sensitive information due to inadequate access control measures” (WM = 2.20 overall). This also falls into the Slightly Serious category, suggesting that challenges related to unauthorized access due to insufficient controls were perceived as among the least serious difficulties encountered in information and document security implementation.

Analyzing the data by respondent group showed a general consistency in the overall perception of challenges as Slightly Serious, with overall weighted means for all groups ranging from 2.31 to 2.42. However, a key finding emerged when examining specific challenges, as different groups perceived certain issues at a higher level of seriousness. For instance, Parents perceived the challenge of “Inadequate training/resources for security personnel to effectively protect school information and documents” (WM = 2.70) and “Lack of clear policies or enforcement regarding social media postings that compromise school or personal information” (WM = 2.70) as Serious (2.51-3.25), while other groups rated these as Slightly Serious. Similarly, Employees perceived the challenges of “Unauthorized or inaccurate press releases…” (WM = 2.87) and “Unauthorized access to sensitive information due to inadequate access control measures” (WM = 2.74) as Serious, while other groups rated these as Slightly Serious. Security Personnel consistently rated all challenges as Slightly Serious (Wms between 2.08 and 2.45), without rating any specific challenge as “Serious.” This highlights that while overall challenges were seen as slight, specific obstacles related to training, policy enforcement, communication, and access control were perceived at a higher level of seriousness by particular stakeholder groups. Research indicates that differing roles and interactions with information security practices can lead to varied perceptions of associated challenges among stakeholders (Ramirez & Garcia, 2020).

The overall perceived level of challenges in implementing information and document security practices being “Slightly Serious” (AWM = 2.33) indicates that while obstacles were present, stakeholders generally viewed them as difficulties of slight seriousness rather than major impediments. This suggests that the process of putting information and document security measures into effect was not perceived as being fraught with highly serious issues by the majority.

However, the specific challenges identified as having the highest weighted means within the Slightly Serious category—particularly inadequate training/resources for security personnel, issues with press releases, and improper storage of files—represent the most frequently perceived difficulties in implementation. These findings suggest that operational issues concerning the human element in protecting information, managing external communication, and ensuring proper data handling were the most notable challenges. The finding that specific challenges were rated as Serious by certain groups, such as Parents for security personnel training and social media policy, and Employees for press releases and unauthorized access, is critical. It indicates that while the overall picture is one of slight seriousness, specific stakeholders who interact with or are impacted by certain aspects of information security implementation perceive those particular challenges at a higher level of seriousness. This divergence underscores that different groups experience and evaluate the difficulties of implementation based on their unique perspectives and roles.

The overall finding that challenges in information and document security implementation were perceived as Slightly Serious suggests that while major structural changes might not be indicated based on overall perception, there is a clear need for focused improvements to address these acknowledged difficulties. The implications for the security manual and operational practices lie in specifically targeting the challenges rated as Slightly Serious overall, and crucially, those rated as Serious by specific stakeholder groups.

The enhanced security manual should include clear guidelines for information and document handling, storage (both electronic and physical), and disposal, directly addressing the perceived challenges in these areas. Furthermore, the manual should provide comprehensive details on the policy regarding social media postings and the authorized procedures for releasing security-related information to the public, addressing the concerns raised by Parents and Employees, respectively. Crucially, the manual and associated training programs should focus on providing adequate and relevant training for security personnel on information security, acknowledging the perception of this as a Serious challenge by Parents. While the overall perception is “Slightly Serious,” prioritizing the mitigation of issues perceived as Serious by key stakeholders is essential for enhancing the effectiveness of information and document security practices. This involves tailoring training, clarifying policies and procedures in the manual, and potentially allocating resources to address the specific challenges identified by different groups.

3.8 Significant Differences in the Degree of Seriousness of the Challenges Encountered in the Implementation of Security Practices in the Identified Variables According to Group

The following table presents the ANOVA analysis of the foregoing study.

Table 13. Significant Differences in the Degree of Seriousness of the Challenges Encountered in the Implementation of the Security Practices in Terms of the Identified Variables According to Group

Security Dimension	Source	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F statistic	p-value
Physical Security Challenges	Between groups	0.1224	3	0.0408	6.1122	0.0011
	Within groups	0.3739	56	0.0067		
Personnel Security Challenges	Between groups	0.1534	3	0.0511	4.3487	0.008
	Within groups	0.6587	56	0.0118		
Document Security Challenges	Between groups	0.0855	3	0.0285	1.456	0.2364
	Within groups	1.0967	56	0.0196		

One-way ANOVA tests were conducted to determine if there were statistically significant differences in the mean perceived levels of challenges encountered in implementation among the four respondent groups (Parents, Students, Security Personnel, and Employees) for each of the three security dimensions: Physical Security, Personnel Security, and Document Security. The results of these tests are summarized in the combined ANOVA table previously presented.

For Physical Security Challenges, the ANOVA yielded an F-statistic of 6.1122 with a corresponding p-value of 0.0011. Since this p-value was less than the conventional significance level of 0.05, the null hypothesis of no significant differences in mean perceived challenge levels across the groups was rejected. This indicated a statistically significant difference in the mean perceived challenges encountered in implementing physical security practices among the Parents, Students, Security Personnel, and Employees who participated in the study.

For Personnel Security Challenges, the ANOVA resulted in an F-statistic of 4.3487 and a p-value of 0.0080. This p-value was also less than the 0.05 significance level, leading to the rejection of the null hypothesis. Therefore, the analysis showed a statistically significant difference in the mean perceived challenges encountered in implementing personnel security practices among the different respondent groups.

For Document Security Challenges, the ANOVA produced an F-statistic of 1.4560 and a p-value of 0.2364. This p-value was greater than 0.05, leading to the non-rejection of the null hypothesis. This indicated no statistically significant difference in the mean perceived challenges encountered in implementing document security practices across the respondent groups.

These ANOVA results reveal that the perceived challenges encountered during the implementation of physical and personnel security practices varied significantly among the different stakeholder groups. The statistically significant differences found for these two dimensions ($p < 0.05$) indicate that the difficulties in putting physical and personnel security measures into effect were not perceived uniformly by Parents, Students, Security Personnel, and Employees. This suggests that each group may face or observe different types or levels of hurdles in these areas, likely influenced by their specific roles, daily interactions with security protocols, and perspectives on operational realities. For instance, security personnel might perceive challenges related to resource limitations or consistent enforcement more keenly than students or parents.

In contrast, the ANOVA results for Document Security Challenges showed no statistically significant difference in the mean perceived challenge levels across the groups (p = 0.2364). This indicates that stakeholders had statistically similar perceptions regarding the challenges encountered in implementing information and document security practices. While specific challenges were identified (as discussed in the descriptive analysis), the overall level of these challenges was perceived more uniformly across the campus community compared to the implementation challenges for physical and personnel security. This might suggest that some challenges in information security implementation (e.g., navigating digital systems, adhering to data policies) are experienced more consistently across different roles within the institution, or that the awareness of certain information security risks is more generalized.

The finding of statistically significant differences in the perceived challenges for Physical and Personnel Security Implementation has a critical implication: to effectively address these challenges, it is necessary to understand *which* specific groups perceive which challenges differently. This would require further analysis through post-hoc tests (such as the Holm test) to identify the exact pairwise comparisons between groups that are statistically significant. The enhanced security manual and operational improvement efforts should be tailored to address the challenges perceived as most significant by the groups who experience them most directly. For example, if security personnel perceive specific operational challenges in physical patrols as particularly serious, resources and training should be directed to address those specific issues, informed by their frontline experience.

For Document Security Challenges, the lack of significant group differences implies a more shared understanding or experience of the challenges in this dimension. While the overall perceived level of challenges for information and document security was rated as "Slightly Serious" (as per the descriptive analysis), the consensus across groups suggests that efforts to address these challenges through the manual and training can adopt a more standardized approach across the entire community. However, even with similar overall perceptions, the manual should still highlight the specific challenges identified in the descriptive analysis (ex. training for security personnel, press release procedures) to ensure they are proactively addressed, leveraging the collective understanding of these difficulties.

Chapter 4
Summary of Findings, Conclusions and Recommendations

4.1 Summary of Findings

Based on the analysis of the study's findings, the level of awareness of respondents on the security practices varied by aspect, with physical security awareness having an overall weighted mean of 3.19, indicating respondents were "Aware," though notably "Very Aware" of the presence of security personnel at entry/exit points (WM = 3.43). Awareness regarding personnel security practices showed a higher overall weighted mean of 3.36, interpreted as "Very Aware," suggesting a thorough understanding of these practices among the collective stakeholders. Awareness concerning information and document security practices also registered an overall weighted mean of 3.19, signifying an "Aware" level, indicating a general but not extensive understanding.

When examining significant differences in the level of awareness according to group, statistically significant differences were found among respondent groups for awareness in all three dimensions: Physical, Personnel, and Information/Document Security.

Regarding the perceived level of implementation, physical security measures were perceived as "Very Implemented" with an overall weighted mean of 3.29. Personnel security practices also had a perceived level of implementation rated as "Very Implemented," with an overall weighted mean of 3.39. Similarly, information and document security practices were perceived as "Very Implemented," with an overall weighted mean of 3.30.

Analyzing significant differences in the level of implementation by group revealed statistically significant differences in the perceived implementation levels among respondent groups across all three security dimensions, indicating that the perception of how consistently practices were carried out was not uniform.

Concerning the perceived level of effectiveness, physical security practices were perceived as "Very Effective," with a general weighted mean of 3.27. Personnel security practices were also perceived as "Very Effective," with a general weighted mean of 3.38. Information and document security practices were likewise perceived as "Very Effective," with a general weighted mean of 3.28.

A notable finding regarding significant differences in the level of effectiveness by group was that there were no statistically significant differences in the mean perceived effectiveness levels among the surveyed stakeholder groups for any of the three security dimensions, suggesting a statistically similar overall judgment of effectiveness despite varying awareness and perceived implementation.

Finally, regarding the seriousness of challenges encountered in implementation, physical security challenges were perceived as "Slightly Serious," with an overall weighted mean of 2.38. Personnel security challenges were also rated as "Slightly Serious," with an overall weighted mean of 2.37. Information and document security challenges were perceived as "Slightly Serious," with an overall weighted mean of 2.33.

When examining significant differences in the seriousness of challenges by group, statistically significant differences were found in the perceived challenges for the implementation of physical and personnel security practices among the different stakeholder groups, indicating that the perceived difficulties were not uniform. However, for information and document security challenges, no statistically significant difference in the mean perceived challenge levels was found across the groups, suggesting a more shared understanding or experience of challenges in this dimension.

4. 2 Conclusions

Based on the study's findings, the following has been concluded:

1. The overall "Aware" level for Physical and Information/Document Security awareness, contrasted with the "Very Aware" level for Personnel Security, implies that while the campus community has a basic understanding of most security measures, there is a need for targeted efforts to elevate detailed knowledge, particularly concerning physical and information security protocols. The high awareness of security personnel presence suggests that visible security efforts are successfully perceived, but less visible or more complex practices require enhanced communication and education.
2. The statistically significant differences in awareness levels among respondent groups across all security dimensions imply that a one-size-fits-all approach to security awareness campaigns is likely ineffective. The institution needs to develop tailored awareness programs that consider the

specific roles, daily interactions, and existing knowledge gaps of different groups (Parents, Students, Security Personnel, Employees) to ensure comprehensive and relevant understanding across the campus community.

3. The consistent "Very Implemented" perception across all three security dimensions (Physical, Personnel, and Information/Document Security) is a positive finding. It implies that the institution's efforts to put security policies and procedures into practice are largely successful in the eyes of the stakeholders. This suggests a generally well-functioning security system in terms of operational presence and execution of measures.
4. The statistically significant differences in the perceived level of implementation among respondent groups imply that while the overall perception is positive, the consistency or thoroughness of implementation may be experienced differently depending on one's role or perspective within the institution. This highlights the need for the institution to investigate where these perception gaps exist and ensure that security practices are applied uniformly and consistently across all areas and interactions on campus.
5. The consistent "Very Effective" perception across all three security dimensions implies that stakeholders collectively believe the implemented security practices are successfully achieving their goals of ensuring safety and security. This suggests that despite potential variations in awareness or perceived implementation consistency, the community generally feels

that the security measures in place are working to protect them and institutional assets.

6. The lack of statistically significant differences in the perceived level of effectiveness among respondent groups is a crucial implication. It suggests that despite differing levels of awareness or perceptions of implementation consistency, the various stakeholder groups largely agree on how well the security measures are achieving their intended outcomes. This consensus on effectiveness provides a strong foundation for the institution's security efforts and indicates that the overall impact of the security program is perceived positively across the board.
7. The consistent "Slightly Serious" rating for challenges in implementing security practices across all three dimensions implies that while obstacles exist, they are not perceived as overwhelming or debilitating by the collective stakeholders. This suggests that the institution is likely managing implementation challenges reasonably well, or that the identified difficulties are viewed as minor hurdles rather than major impediments to security operations.
8. The statistically significant differences in perceived challenges for Physical and Personnel Security implementation among groups imply that certain stakeholders experience or observe specific difficulties in these areas more acutely than others. This highlights the need for the institution to conduct a more granular analysis to identify which groups perceive which challenges

as more serious (e.g., security personnel facing resource constraints, students finding certain physical access controls inconvenient) to tailor solutions effectively. The lack of significant difference in Document Security challenges suggests a more uniform experience of difficulties in this area across the community, implying that standardized approaches to addressing these challenges (e.g., user-friendly data policies, technical support) may be more broadly effective.

4.3 Recommendations

Based on the study's conclusions regarding security practices and challenges at the higher education institution in Dagupan City, the following are hereby recommended:

1. **Enhance Targeted Security Awareness Programs**: Given the "Aware" level for Physical and Information/Document Security and the significant differences in awareness among groups, the institution should develop and implement targeted awareness campaigns. These programs should go beyond basic information and provide more detailed knowledge about specific physical security protocols (ex. access control procedures, surveillance coverage areas, reporting physical hazards) and information security practices (ex. data handling policies, recognizing phishing attempts, password management, secure use of institutional systems). Tailoring content and delivery methods to the specific roles and daily interactions of different stakeholder groups (students, faculty, staff, security

personnel, parents) is crucial to address the observed variations in awareness effectively.

2. **Investigate Perceived Implementation Gaps**: While the overall perception of implementation is "Very Implemented," the significant differences in this perception among groups warrant further investigation. The institution should conduct follow-up qualitative studies (ex. focus groups or interviews) with representatives from each stakeholder group to understand why their perceptions of implementation consistency differ. This will help identify specific areas or practices where implementation may be less consistent in practice or perceived as such by certain groups, allowing for targeted corrective actions and clearer communication about implemented measures.
3. **Leverage Perceived Effectiveness for Support**: The strong and consistent perception of "Very Effective" security practices across all groups is a significant asset. The institution should leverage this positive perception in communications to reinforce trust in the security program and encourage continued cooperation and compliance from the campus community. Highlighting successful security outcomes and the positive impact of implemented measures can build confidence and support for ongoing and future security initiatives.
4. **Proactively Address "Slightly Serious" Challenges**: Although challenges were rated as "Slightly Serious" overall, they still represent areas

for improvement. The institution should proactively address these identified challenges to prevent them from escalating. This involves allocating necessary resources, providing adequate training, and reviewing policies and procedures in the areas identified as presenting challenges in the descriptive analysis (ex. specific training needs for security personnel, clarity of press release procedures, if mentioned in the detailed findings).

5. **Conduct Deeper Dive into Group-Specific Challenges**: The significant differences in perceived challenges for Physical and Personnel Security implementation among groups necessitate a more detailed analysis. The institution should identify which specific groups perceive which challenges as more serious (ex. through post-hoc analysis of the quantitative data or targeted qualitative inquiry). This will enable the development of tailored strategies to address these group-specific hurdles, such as providing additional operational resources or training for security personnel if they perceive resource limitations as a significant challenge, or adjusting access control procedures if students or faculty find them particularly challenging to navigate.
6. **Standardize Approaches for Information/Document Security Challenges**: The lack of significant group differences in perceived challenges for Information and Document Security implementation suggests a more uniform experience of difficulties in this area. The institution can likely adopt standardized approaches to address these

challenges across the entire campus community. This might involve developing more user-friendly information security policies, providing easily accessible technical support, and implementing consistent training on data protection best practices for all users of institutional information systems.

7. **Maintain and Build Upon Current Implementation**: The high perceived level of implementation is commendable. The institution should continue to prioritize the consistent application of security practices and invest in the maintenance and modernization of security infrastructure and systems to sustain this positive perception and ensure ongoing effectiveness.

By implementing these recommendations, the higher education institution in Dagupan City can build upon its strengths, address identified areas for improvement, and further enhance the security and safety of its campus environment for all stakeholders.

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