
Level of Security Satisfaction Among College Students at Saint Mary's University

Romualdo, Natalie C., Jagto, Myka Cinderly Z., Gawongna, Noilyn D., Caoile, Neil Bryan V., and Caligue, Juni P.

ABSTRACT

This study assessed university students' satisfaction with campus security measures, focusing on first-line defense, second-line defenses, and monitoring systems. The study can help the university identify security weaknesses, risks, and areas needing improvement. Respondents were selected using convenience and quota sampling based on availability, allowing for quicker and more cost-effective data collection. Data were gathered through a quantitative survey involving 498 randomly selected students from Saint Mary's University during their free time in classrooms. The survey questionnaire was adapted from Caligue's 2015 study and included demographic variables such as gender, year level, and school. Descriptive statistics, including mean and standard deviation, were used for data analysis. Findings revealed that most respondents are female and second-year students, with a balanced distribution across schools. While gender and year level had little effect on satisfaction, significant differences were observed across schools. Results showed overall satisfaction across all areas, with the highest rating for visitor verification and the lowest for uniform enforcement. Gender and year level had no significant impact on satisfaction, except for the monitoring system, where males reported higher satisfaction than those who preferred not to disclose their gender. Significant differences were found across schools, with SEAIT students reporting the highest satisfaction. Students at Saint Mary's University are generally satisfied with campus security, but to ensure equitable and consistent safety, it is recommended that protocols across schools be standardized, weaker areas like parking surveillance improved, uniform policies fairly enforced, infrastructure with more CCTV and lighting enhanced, inclusive access promoted, and findings disseminated through informative pamphlets.

Keywords: campus safety, physical security infrastructure, risk assessment, security measures, student satisfaction

INTRODUCTION

School safety and security have become pressing concerns due to the increasing incidents of violence, bullying, and external threats that disrupt learning environments. However, ensuring school safety requires a multi-stakeholder approach involving policymakers, educators, parents, and law enforcement agencies. Moreover, continuous monitoring and adaptation of safety protocols are essential for maintaining a secure and conducive learning environment (Osegbue et al., 2025).

There are three major divisions in security namely the first line of defense, second line and monitoring system. The first line of defense in protecting any facility is usually setting up some kind of perimeter security. This means securing the outer boundary of the property, often with fences made from materials like chain link, barbed wire, or concertina wire. Sometimes, stronger barriers like concrete walls, steel, or even natural obstacles are used to make it harder for anyone to get in (Center for Development of Security Excellence, 2017). The second line of defense of security focuses on the building itself—making sure walls, windows, and doors are well-protected. Alarm systems are often installed to alert staff if someone tries to break in (Fuller, 2013). On top of that, monitoring systems help keep an eye on things by using guards, alarms, and video cameras such as CCTV. These tools work together to stop unauthorized people from entering sensitive areas and to keep both the building and everything inside safe (Biswas, 2023).

Security on a global scale has become an increasingly important issue. The United Nations, through the Security Council, plays a central role in maintaining international peace and security, influencing policies that guide safety measures in various sectors, including education. In higher education, campus security focuses on protecting students, staff, and university property by preventing crime and creating a safe environment for academic and professional growth. Legal frameworks support this goal. In the U.S., the Clery Act mandates crime reporting and safety procedures, while in the Philippines, the 1987 Constitution and Republic Act No. 11917 emphasize the state's responsibility in ensuring campus safety. Additional measures, such as House Bill No. 4232 and the Campus Security Act, require institutions to implement security policies and disclose crime statistics, reinforcing the importance of safety in educational settings.

Improving campus security benefits the entire school community by enhancing safety, well-being, and trust, which supports better student performance and employee satisfaction. A secure environment fosters community and participation, contributing to a positive campus experience. Ultimately, this strengthens the school's reputation and appeal to prospective students.

This study aims to assess the level of security satisfaction among college students at Saint Mary's University. Specifically, it sought to measure the satisfaction of the university's physical security measures during the 2024-2025 school year, based on the experiences of the students. By evaluating the students' perspectives, the research helps identify areas of weakness, risks, and vulnerabilities within the current security system. These insights can guide improvements or replacements in security infrastructure to enhance campus safety and address issues like unauthorized access, theft, and bullying.

Specifically, this study determined the demographic profile of respondents, which includes gender, year level and school; their satisfaction with Saint Mary's University's security in terms of first line, second line and monitoring system; and the existence of statistically significant difference between the level of security satisfaction among college students at Saint Mary's University. Finally, infographic materials were distributed to help students better understand the university's security protocols, including the roles of the first and second lines of defense and the monitoring system. This aims to enhance the perception and effectiveness of campus security, and support the continued improvement and equal implementation of security measures across all departments and facilities.

METHODOLOGY

This study used a quantitative approach using a descriptive-comparative method of research. The descriptive method was used to describe the profile of the respondents and the level of security satisfaction among college students of Saint Mary's University in terms of physical security measures. At the same time, the comparative method was used to identify the significant difference in the level of security satisfaction among college students at Saint Mary's University when grouped in terms of their profile.

The study was conducted at Saint Mary's University located in Brgy. Don Mariano Marcos in the Municipality of Bayombong, Nueva Vizcaya. The Institution is composed of four schools namely: School of Teacher Education and Humanities (STEH), School of Accountancy and Business (SAB), School of Engineering, Architecture and Information Technology (SEAIT), and School of Health and Natural Sciences (SHANS). Saint Mary's University is secured by an agency, operating in three shifts with more guards assigned during the day and fewer at night. The number and roles of guards are adjusted per shift to maintain campus security.

The research participants were the selected college students of Saint Mary's University. The researchers used the Raosoft sample size calculator to determine the number of respondents from each department, applying a 5% margin of error, a 95% confidence level, and a 10% response distribution. As a result, 120 respondents came from STEH, 122 from SAB, 126 from SEAIT, and 130 from SHANS, making the overall number of respondents 498 selected college students of Saint Mary's University. The respondents were chosen using the convenience and quota sampling method. Using both of these methods enabled the researchers to gather data more quickly and cost-effective. The 498 respondents at Saint Mary's University were selected based on their availability. The researchers approached each respondent personally at a convenient time.

The researchers utilized a survey questionnaire adopted from the study of Caligue (2015) as a tool to determine the level of physical security satisfaction among college students of Saint Mary's University. The questionnaire is composed of three parts. The first is on the profile of the respondents determining their gender, year level and school, the second on questions on three items - first line of defense, second line of defense, and the monitoring systems and the third on recommendation of the respondents. The second part was answered through a Likert scale, with responses 1 (Not Satisfied (NS)), 2 (Slightly Satisfied), 3 (Satisfied), and 4 (Very Satisfied) (VS). This research instrument was pilot tested, and passed the reliability test.

Frequency and percent were used in the presentation of the respondents' profile; name, gender, year level and school. One-way ANOVA was utilized to determine the significant difference between the level of security satisfaction among students at Saint Mary's University in terms of their profile.

RESULTS AND DISCUSSION

Section 1. Profile of the Respondents

Females make up the largest portion of respondents at 49.8%, suggesting that their perspectives may significantly influence the overall survey findings, while only 2.6% preferred not to disclose their gender.

The year level shows that the majority of respondents were second year students, comprising 35.5%, followed by first year students, third year students and fourth year students. The data implies that second-year students were the most represented among the respondents, potentially influencing the results to reflect the perspectives and experiences of this year level more prominently than other year levels.

The school indicates a fairly even distribution of respondents across schools. SHANS had the highest representation with 26.2% , followed by SEAIT at 25.3%, SAB at 24.5% , and STEH at 24.1%. This suggests that the survey gathered a balanced range of perspectives from each school, thereby enhancing the reliability and inclusiveness of the results.

Section 2. Level of Security Satisfaction Among College Students of Saint Mary's University in Terms of Physical Security Measures

Table 1

Level of Security Satisfaction Among College Students at Saint Mary's University in Terms of First Line of Defense

Indicators	Mean	SD	Qualitative Description
1. Security guards armed with prescribed firearms, batons and other non-lethal weapons	3.12	0.80	Satisfied
2. All entry and exit points of the university are physically monitored by security guards	3.41	0.69	Satisfied
3. The boundaries of the university premises are clearly defined, properly fenced and protected with top guards or concertina wires	3.33	0.74	Satisfied
4. Security guards DO NOT allow unauthorized persons to enter the university	3.21	0.81	Satisfied
5. The "No ID, No Entry" policy is strictly implemented	3.37	0.75	Satisfied
6. Vehicle Control in the University (RFID) stickers are given to employees and students and are visibly posted at the front windshield of the car on the passenger side	3.36	0.71	Satisfied
7. University gates are closed and locked during non-operations days	3.46	0.69	Satisfied
8. Deployment of security guards at the entry and exit points of the university	3.51	0.63	Very Satisfied
9. Students who are NOT in uniform on designated days are refused to entry to the university	3.10	0.88	Satisfied
10. Inspecting vehicles entering and leaving the university	3.14	0.84	Satisfied
11. Protective lightings are switch on during night time and are not blocked by trees or bushes to provide adequate illumination	3.29	0.74	Satisfied
12. The height of fence provides enough privacy and security	3.39	0.69	Satisfied
13. Purposes of visitors are verified by security personnel and required to sign in the logbook before entering the university	3.53	0.65	Very Satisfied
14. Gates are secured with secure padlocks and chains when campus is closed	3.47	0.69	Satisfied
	3.33	0.42	Satisfied

Mean Ranges: 1.00 – 1.49: Not Satisfied; 1.50 – 2.49: Slightly Satisfied; 2.50 – 3.49: Satisfied, 3.50 – 4.00: Very Satisfied

In terms of the university's first line of defense, Table 1 shows that the highest ratings were given to the verification of visitors 3.53 and the deployment of security guards 3.51, both indicating strong approval. Although the lowest rating was for refusing entry to students not in uniform 3.10, the overall mean of 3.33 shows that students are generally satisfied with the entry protocols. The findings indicate that students prefer security measures that enhance safety without causing inconvenience, valuing protocols like visitor verification and security presence for preventing external threats, while showing less support for strict compliance rules such as uniform enforcement.

Implementing stringent visitor verification protocols and mandatory sign-in procedures at university entrances can significantly contribute to students' sense of security and well-being within the academic environment (Bhat et al., 2023). Also, the verification of visitors' purposes by security personnel serves as an initial layer of defense, deterring individuals with malicious intent from gaining unauthorized access to campus facilities (Saheed et al., 2017). The high satisfaction with security guards at entry and exit points reflects students' recognition of their role in maintaining order and enhancing campus safety, affirming that strategically placed, visible, and responsive security personnel are essential to effective institutional security (Gabata et al., 2024).

Table 2

Level of Security Satisfaction Among College Students at Saint Mary's University in Terms of Second Line of Defense

Indicators	Mean	SD	Qualitative Description
1. Doors have security locks	3.07	0.88	Satisfied
2. Roofs are NOT accessible by climbing trees, building mounted ladders, and walls	3.20	0.77	Satisfied
3. Windows and offices, computer laboratories, and cafeteria containing valuable items are well protected by grills	3.19	0.76	Satisfied
4. Emergency lightings are installed inside buildings and hallways of the university	3.27	0.76	Satisfied
5. Building walls CANNOT be easily penetrated	3.32	0.73	Satisfied
6. Building floors CANNOT be easily penetrated	3.32	0.70	Satisfied
7. Hallways and comfort rooms are properly lighted for safety	3.16	0.83	Satisfied
Over-all Mean Rating	3.22	0.54	Satisfied

Mean Ranges: 1.00 – 1.49: Not Satisfied; 1.50 – 2.49: Slightly Satisfied; 2.50 – 3.49: Satisfied, 3.50 – 4.00: Very Satisfied

In terms of the second line of defense, Table 2 shows that the highest-rated items were the impenetrability of building walls and floors, both with a mean of 3.32, while the lowest was “Doors have security locks” with a mean of 3.07 all falling under the “satisfied” category. Overall, the students expressed satisfaction with the second line of defense, as shown by the overall mean rating of 3.22. The findings suggest that students are satisfied with the university’s second line of defense, as they perceive the infrastructure, particularly the walls and floors as strong and secure, and despite door security receiving the lowest rating, it still indicates overall trust in the physical measures ensuring their safety.

These results are in consonance with the assessment of student satisfaction regarding the perceived impenetrability of building walls and floors represents a nuanced area of inquiry within architectural and educational settings (Mas et al., 2013). This goes beyond basic structural integrity, delving into psychological and emotional dimensions related to safety, security, and acoustic privacy, ultimately shaping the overall learning environment (Xu et al., 2020).

Table 3

Level of Security Satisfaction Among College Students at Saint Mary's University in Terms of the Monitoring System

Indicators	Mean	SD	Qualitative Description
1. All areas of school building and grounds are accessible to patrolling security guards	3.37	0.69	Satisfied
2. All entry and exit points in the university are physically monitored by security guards	3.44	0.64	Satisfied
3. Multiple entries to school buildings are controlled and supervised	3.37	0.67	Satisfied
4. CCTV cameras are installed on strategic locations of the university	3.23	0.81	Satisfied
5. Parking areas are well lighted and visual surveillance from security post is possible	3.11	0.81	Satisfie
6. All areas of school buildings are accessible to patrolling security guards	3.37	0.72	Satisfied
7. Visual surveillance of parking lots, school building and grounds from security post is possible	3.30	0.74	Satisfied
Mean Rating	3.31	0.53	Satisfied

Mean Ranges: 1.00 – 1.49: Not Satisfied; 1.50 – 2.49: Slightly Satisfied; 2.50 – 3.49: Satisfied, 3.50 – 4.00: Very Satisfied

The table presents that the highest-rated item was the physical monitoring of all entry and exit points by security guards, with a mean of 3.44, while the lowest was the lighting and surveillance of parking areas, with a mean of 3.11 both under the “satisfied” category. The students are generally satisfied with the monitoring system, as indicated by the average mean rating of 3.31. This implies that students are satisfied with the university’s monitoring system primarily due to the visible presence of security guards at entry and exit points, though the lower rating for lighting and surveillance in parking areas indicates a perceived need for improvement in less supervised zones.

These results are supported by the study that says perception of safety and security within university campuses is a multifaceted issue that significantly impacts student satisfaction and overall well-being (Peng et al., 2024). The presence of a monitoring system at entry and exit points represents a visible manifestation of institutional efforts to ensure a secure environment (Botchway et al., 2024).

Section 3. Comparison on the Level of Security Satisfaction Among College Students at Saint Mary’s University When Grouped in Terms of Profile

Table 4

Comparison on the Level of Security Satisfaction Among College Students at Saint Mary’s University When Grouped in Terms of Gender

Domains	Gender	Mean	SD	Qualitative Description	F	p-value	Remarks
First Line of Defense	Male	3.34	0.44	Satisfied	0.804	0.492	Not Significant
	Female	3.34	0.40	Satisfied			
	LGBTQ+	3.33	0.36	Satisfied			
	PNTS	3.16	0.46	Satisfied			
Second Line of Defense	Male	3.28	0.52	Satisfied	1.850	0.136	Not Significant
	Female	3.15	0.54	Satisfied			
	LGBTQ+	3.21	0.54	Satisfied			
	PNTS	3.03	0.60	Satisfied			
Monitoring System	Male	3.37	0.50	Satisfied	3.680*	0.012	Significant
	Female	3.27	0.54	Satisfied			
	LGBTQ+	3.41	0.44	Satisfied			
	PNTS	2.95	0.77	Satisfied			

* Significant at < 0.05

Mean Ranges: 1.00 – 1.49: Not Satisfied; 1.50 – 2.49: Slightly Satisfied; 2.50 – 3.49: Satisfied, 3.50 – 4.00: Very Satisfied

Students from different gender groups (male, female, LGBTQ+, and those who preferred not to say) are generally satisfied with the university’s security measures. For the first line of defense, there is no significant difference in satisfaction levels when grouped according to gender $F = 0.804$, $p = 0.492$, implying that all gender groups share similar views regarding this aspect of security. Likewise, for the second line of defense, no significant difference was found $F = 1.850$, $p = 0.136$, suggesting that satisfaction with structural security is also consistent across genders. The findings imply that students, regardless of gender, are equally satisfied with the university’s first and second lines of defense, indicating that these security measures are consistently implemented for all. However, for the monitoring system, a significant difference in satisfaction levels was observed among gender groups $F = 3.680$, $p = 0.012$. The post hoc table below shows the statistics.

Table 5

Comparison on the Level of Security Satisfaction Among College Students at Saint Mary’s University When Grouped in Terms of Year Level

Domains	Year Level	Mean	SD	Qualitative Description	F	p-value	Remarks

First Line of Defense	First Year	3.34	0.414	Satisfied	1.620	1.820	Not Significant
	Second Year	3.29	0.448	Satisfied			
	Third Year	3.37	0.395	Satisfied			
	Fourth Year	3.41	0.421	Satisfied			
Second Line of Defense	First Year	3.21	0.525	Satisfied	0.690	0.558	Not Significant
	Second Year	3.18	0.567	Satisfied			
	Third Year	3.26	0.531	Satisfied			
	Fourth Year	3.28	0.511	Satisfied			
Monitoring System	First Year	3.36	0.493	Satisfied	1.530	0.206	Not Significant
	Second Year	3.25	0.555	Satisfied			
	Third Year	3.36	0.543	Satisfied			
	Fourth Year	3.32	0.532	Satisfied			

* Significant at < 0.05

Mean Ranges: 1.00 – 1.49: Not Satisfied; 1.50 – 2.49: Slightly Satisfied; 2.50 – 3.49: Satisfied; 3.50 – 4.00: Very Satisfied

Students from different year levels are generally satisfied with the university's security measures. The first line of defense, $F = 1.620$, $p = 1.820$; second line of defense, $F = 0.690$, $p = 0.558$; and monitoring system, $F = 1.530$, $p = 0.206$ —no significant differences in satisfaction were observed across year levels. These findings indicate that students across all year levels share a consistent perception of security, showing similar levels of satisfaction with the university's first line of defense, second line of defense, and monitoring system. This suggests that security protocols are implemented uniformly and effectively, and the absence of significant differences in satisfaction reflects a fair, reliable, and adequate system for ensuring student safety.

The relationship between student perceptions of security and their year-level is a multifaceted issue warranting thorough investigation. It is possible that a student's year-level may not influence their perception of security since security satisfaction depends on a lot of factors (Korovessis, 2011).

Table 6

Comparison on the Level of Security Satisfaction Among College Students at Saint Mary's University When Grouped in Terms of Schools

Domains	Schools	Mean	SD	Qualitative Description	F	p-value	Remarks
First Line of Defense	STEh	3.23	0.45	Satisfied	18.56	< 0.01	Significant
	SAB	3.20	0.43	Satisfied			
	SEAIT	3.54	0.28	Very Satisfied			
	SHANS	3.36	0.42	Satisfied			
Second Line of Defense	STEh	3.06	0.57	Satisfied	18.85	< 0.01	Significant
	SAB	3.21	0.53	Satisfied			
	SEAIT	3.50	0.36	Very Satisfied			
	SHANS	3.09	0.54	Satisfied			
Monitoring System	STEh	3.14	0.53	Satisfied	19.69	< 0.01	Significant
	SAB	3.26	0.55	Satisfied			
	SEAIT	3.60	0.32	Very Satisfied			
	SHANS	3.25	0.57	Satisfied			

* Significant at < 0.05

Mean Ranges: 1.00 – 1.49: Not Satisfied; 1.50 – 2.49: Slightly Satisfied; 2.50 – 3.49: Satisfied; 3.50 – 4.00: Very Satisfied

Students from different schools are generally satisfied with the university's security measures. However, significant differences in satisfaction levels were found across schools for all three aspects of security. For the first line of defense, the variation is statistically significant $F = 18.56$, $p < 0.01$, indicating differing perceptions of security measures among schools. Similarly, significant differences were observed for the second line of defense $F = 18.85$, $p < 0.01$ and the monitoring system $F = 19.69$, $p < 0.01$. These results imply that students' satisfaction with

security measures and their experiences with the first and second lines of defense and monitoring systems varies by school affiliation, likely due to differences in infrastructure, security personnel presence, or surveillance coverage.

SEAIT students report significantly higher satisfaction with the first line of defense compared to those from STEH and SAB, likely due to their background in engineering and architecture, which enhances their understanding of structural security. SHANS students also show higher satisfaction than SAB students but lower than SEAIT, possibly because their focus on health and safety makes them more attentive to security measures, though not as technically informed as SEAIT students. These differences suggest that academic background influences how students perceive and value security protocols.

Students from SEAIT report significantly higher satisfaction with the second line of defense compared to those from STEH, SAB, and SHANS, likely due to their academic exposure to engineering and safety principles, which enhances their appreciation of infrastructure-related security measures, unlike the other schools whose students may have different academic orientations and expectations.

Also, these students tend to exhibit a higher level of awareness and understanding of safety and security measures, primarily due to the technical and practical nature of their curriculum. This suggests that their academic training equips them with a deeper understanding and appreciation of security protocols compared to students from non-technical fields (Alhammedi et al., 2024). Understanding both physical and virtual threats provides a clearer view of how security protocols function. Awareness and preparedness are crucial, especially in higher education institutions, where Engineering and IT individuals often have an advantage in grasping security dynamics and appreciating the importance of these protocols (Aliyu et al., 2020).

The dynamic interplay between a student's academic path and their perceived security satisfaction is a multifaceted issue with increasing relevance in contemporary higher education (Peng et al., 2024). It is imperative to explore how various aspects of a student's course enrollment, such as course difficulty, quality assessment, and interpersonal dynamics, correlate with their overall sense of security and well-being within the academic environment (Harnash-Glezer & Meyer, 1991). The concept of security satisfaction extends beyond mere physical safety, encompassing emotional and psychological security, which are significantly influenced by the quality of teaching, academic rigor, and the nature of social interactions within the educational setting (Mwesiumo, 2025).

Section 4. Recommendations Based on the Result of the Study

To improve the overall security experience of college students at Saint Mary's University, the researchers recommend distributing educational materials such as informative pamphlets to raise awareness and understanding of the university's security protocols. These materials would explain the roles of the first and second lines of defense, as well as the campus monitoring system, fostering student trust and confidence in existing safety measures. By familiarizing students with proper procedures, emergency contacts, and appropriate responses during incidents, the initiative empowers them to respond effectively in emergencies and take an active role in campus safety.

Highlighting areas of high and low satisfaction, like strong structural security and poor lighting in parking areas, promotes transparency and helps identify areas for improvement. Sharing materials through pamphlets and bulletin boards, especially in the School of Teacher, Education, and Humanities, raises awareness, invites feedback, and supports better implementation of security policies across the university.

CONCLUSION AND RECOMMENDATIONS

Conclusion

Female and second-year students comprised the largest respondent groups, with a balanced representation across schools enhancing data reliability and inclusive of the result. Students at Saint Mary's University are generally satisfied with the security measures pertaining to the first line of defense, second line of defense and monitoring system. Gender and year level do not affect security satisfaction at Saint Mary's University, but significant differences were observed across schools in the first line of defense, second line of defense, and monitoring system. Security measures are seen as effective and inclusive across gender and year levels, the school emphasizes the need to standardize protocols to ensure equitable security for all students. The pamphlets contain a detailed presentation of the study's results and findings, with particular emphasis on defense strategies and implementation of physical security measures, and are designed to clearly communicate key insights and recommendations aimed at enhancing security practices within the school.

Recommendations

Future researchers are encouraged to ensure a more balanced distribution of respondents in terms of gender and year level. Moreover, although the university security measures are broadly effective, there are disparities across schools that call for standardized protocols, improvements in weaker areas, and increased awareness among students less familiar with security systems. Saint Mary's University should also continue to strengthen its comprehensive and inclusive security system, that adequately serve students of all genders and year levels, while focusing on the development and implementation of security protocols across all schools to eliminate notable differences in satisfaction and guarantee equitable, consistent, and high-quality security measures for every student, thereby fostering a secure and supportive campus environment for all. The pamphlets should be distributed within the DSAS and prominently posted on bulletin boards across the campus to maximize their reach and effectively inform students, faculty and staff about the study's findings and security measures.

Moreover, the ADSAS must be strict in the implementation of the policy about uniforms. Students who are not in their proper uniform should not be allowed by the security guards to enter the university. There must also be no discrimination among students when it comes to entering the university irrespective of gender and school. Besides making sure that hallways are well lit, especially at night, aAdditional CCTV cameras and protective lighting especially in strategic locations should be installed. Lastly, doors can be locked to control access to certain areas of a campus, and systems can be programmed to lock and unlock at specific times such as before, during, or after classes.

REFERENCES

- Alhammadi, Y., Farouk, A. M., & Rahman, R. A. (2024, May 1). Enhancing construction safety education: Insights from student perspectives. *Buildings*, 29(4), 13. <https://doi.org/10.3390/buildings14030660>

- Aliyu, A., Maglaras, L., He, Y., & Yevseyeva, I. (2020, May 25). A holistic cybersecurity maturity assessment framework for higher education institutions in the United Kingdom. *Applied Sciences (Switzerland)*, 10(10), 3660. <https://doi.org/10.3390/app10103660>
- Bhat, S., R., N., & S., P. (2023, July 8). *Enhancing room security and automating class attendance using ID cards*. <https://doi.org/10.48550/arXiv.2307.03926>
- Biswas, P. (2023, January 16). *ISO 27001:2022 A 7.4 physical security monitoring*. Pretesh Biswas. <https://preteshbiswas.com/2023/01/16/iso-27001-a-7-4-physical-security-monitoring/>
- Botchway, E. A., Agyekum, K., Pittri, H., & Lamina, A. (2024, March 4). Deployment of physical access control (PAC) devices in university settings in Ghana. *Frontiers in Engineering and Built Environment*, 4(1), 1–14. <https://doi.org/10.1108/FEBE-01-2023-0005>
- Caligue, J. P. (2015). *The security management of Saint Mary's University Bayombong, Nueva Vizcaya* [Thesis, Saint Mary's University].
- Center for Development of Security Excellence. (2017). *Introduction to physical security: Student guide*. <https://www.cdse.edu/Portals/124/Documents/student-guides/PY011-guide.pdf>
- Fuller, S. (2013, August 22). *Perimeter protection: Your first line of defense*. Barry Bros Security. <https://www.barrybros.com/2013/08/perimeter-protection-your-first-line-of-defence/>
- Gabata, J. S., Rarugal, J. M. J., & Torres, K. A. R. (2024, June 1). Level of satisfaction on the security services of a state university: Basis for continuous improvement. *The Research Publication*, 4(6), 1–13. <https://doi.org/10.53378/trp.0624.1.6.2>
- Harnash-Glezer, M., & Meyer, J. (1991). Dimensions of satisfaction with collegiate education. *Assessment & Evaluation in Higher Education*, 16(2), 101–118. <https://doi.org/10.1080/0260293910160201>
- Korovessis, P. (2011). Information security awareness in academia. *International Journal of Knowledge Society Research (IJKSR)*, 2(4), 17–27. <https://doi.org/10.4018/jksr.2011100101>
- Mas, Á., Blasco, V., Lerma, C., & Angulo, Q. (2013). Comprehension of architectural construction through multimedia active learning. *Higher Education Studies*, 3(2), 1–9. <https://doi.org/10.5539/hes.v3n2p1>
- Mwesiumo, D. (2025, March 19). Identifying critical factors in higher education studies: Combining necessary conditions and importance–performance map analyses. *Studies in Higher Education*, 1–21. <https://doi.org/10.1080/03075079.2025.2478948>
- Osegbue, G. C., Ohamobi, I. N., & Alordiah, C. O. (2025, March 30). Enhancing school safety and security: Developing and implementing effective protocols for a secured learning environment. *African Journal of Social and Behavioural Sciences*, 15, 1018–1033. https://www.researchgate.net/publication/390123321_ENHANCING_SCHOOL_SAFETY_AND_SECURITY_DEVELOPING_AND_IMPLEMENTING_EFFECTIVE_PROTOCOLS_FOR_A_SECURED_LEARNING_ENVIRONMENT
- Peng, Y., Li, Y., Wei-Ying, W.-Y., & Wang, K. (2024, February 1). Evaluation and optimization of sense of security during the day and night in campus public spaces based on physical environment and psychological perception. *Sustainability*, 16(3), 1256. <https://www.mdpi.com/2071-1050/16/3/1256>
- Saheed, Y. K., Hambali, M. A., Adeniji, I. A., & Kadri, A. F. (2017). Fingerprint-based approach for examination clearance in higher institutions. *FUOYE Journal of Engineering and Technology*, 2(1), 46–53. <https://doi.org/10.46792/fuoyejt.v2i1.46>
- Xu, X., Sunindijo, R. Y., & Mussi, E. (2020, August 24). Comparing user satisfaction of older and newer on-campus accommodation buildings in Australia. *Facilities*, 38(11/12), 793–810. <https://doi.org/10.1108/F-11-2018-0133>