



THE ROLE OF INFRASTRUCTURE AND STUDENT SATISFACTION IN HIGHER EDUCATION: INPUTS FOR CAMPUS DEVELOPMENT PLAN

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Abstract

This study assesses and ascertains the relationship between university infrastructure and student satisfaction, emphasizing how facilities influence students' academic experiences and overall well-being. Using a convergent parallel mixed-methods approach, the research collected quantitative and qualitative data from over 1,600 students across 13 colleges in one state university in the City of Malolos, Bulacan, Philippines. The survey evaluated student satisfaction in five categories: library and learning resources, IT and digital services, student support services, health and wellness facilities, and recreational spaces. Findings revealed high satisfaction in areas like library cleanliness, student portals, medical services, and grievance handling procedures. However, notable deficiencies were identified in Wi-Fi reliability, digital resource accessibility, comfort room conditions, and canteen facilities. Thematic analysis of qualitative feedback echoed these concerns and highlighted additional needs for improved ventilation, lounge areas, and inclusive recreational spaces. ANOVA analysis showed significant differences in satisfaction based on college and year level, suggesting disparities in infrastructure quality and service delivery across colleges. Considering the strategic investment in infrastructure, particularly in digital services, sanitation, and inclusive spaces, it becomes pivotal for enhancing student satisfaction and academic outcomes. With this, effective improvement includes regular restroom maintenance, upgrading Wi-Fi infrastructure, expanding study and lounge areas, and ensuring standardized support services across colleges. These efforts are critical to creating a learning environment that supports student engagement, performance, and holistic development.

Keywords: university infrastructure, student satisfaction, student support services, higher education, sustainable development goals

Introduction

Students' academic progress and their general satisfaction are greatly attributed to their experiences. The students' experiences consist of the university infrastructures, spaces, and services that are provided by the university; the physical environment and social environment have a unique context and will constitute the climate for learning, development, and community activity. These environments are created by student affairs departments to meet the diverse needs of the student population (Akens et al., 2019).

A clean and well-maintained campus may significantly enhance student satisfaction and performance, which results in higher retention rates among undergraduate students. According to a study conducted by Hanssen and Solvoll (2015), the availability of comprehensive library resources and quality study spaces encourages a disciplined approach to learning, as well as

academic success. Similarly, reliable IT infrastructure like stable Wi-Fi and user-friendly online portals supports seamless access to information and educational tools, which are all essential for modern learning models.

The importance of health and wellness facilities was found to be equally important, as these health facilities accommodate both the physical and mental health needs of students. Access to university medical clinics and mental health support services allows students to attend to their health concerns promptly and to be functionally able to academically engage. Recreation and extracurricular spaces (parks, sports fields, and student lounges) provide opportunities for stress relief, social engagement, and developmental learning opportunities that contribute to an equitable campus experience.

The alignment of university support delivery between academic affairs and student affairs is necessary to provide employees with the ability to create supportive and cohesive campus environments. According to Akens et al. (2019), when academic affairs and student affairs work together on a common agenda, this could lead to opportunities to create inclusive spaces that increase student engagement and academic success. These collaborations ensure that facilities and services are not available to students, as much as they are made accessible and supportive of the student experience.

Local studies in the Philippines specifically point towards the interrelationship between campus facilities and students' level of satisfaction and student performance in terms of their engagement within the university. Albarracin et al. (2024) published research that examined students' satisfaction with campus facilities, and the study also assessed factors such as year level, place of origin, and the graded level and its effect on their level of satisfaction. There was also a study on campus living experiences among Filipino undergraduate students, and the authors identified positive experience as well as negative experience related to staying on campus in dormitories. It was found that the quality of dormitory or housing facility experienced by students was contributory to their well-being (Velasquez-Garcia & Garcia, 2016).

In addition, students' living conditions in boarding houses or dormitories have implications for their academic performance as well. Arroyo (2023) found that boarding house locations affected students' educational success, further emphasizing the need to account for sufficient and viable living facilities and the potentially negative effects of substandard accommodation. Research conducted at a state university provided evidence that identifies overcrowded and inadequate housing may negatively affect the students' holistic wellbeing and academic success (Decena, 2015).

Thus, the type of facilities and supportive access facilities at university locations will be determinative for facilitating positive student performance and satisfaction. Well-planned and designed university facilities will improve student satisfaction, holistic wellbeing, and ultimately student performance.

Research Problem

The research problem centers on understanding how various components of university infrastructure—such as library and learning resources, IT and digital services, student support services, health and wellness facilities, and recreational spaces—affect the overall satisfaction of students. Despite growing awareness of the importance of physical and digital learning environments, there remains a gap in institutional data and targeted policy responses to student feedback on campus facilities.

The study recognizes that while educational content and teaching quality are vital, the learning environment itself plays a key role in supporting academic performance, well-being, and engagement. Furthermore, it identifies that infrastructure issues—such as unreliable Wi-Fi, inadequate restroom maintenance, and insufficient recreational areas—can negatively affect students' day-to-day experiences and outcomes.

By dissecting and implementing this study across 13 colleges within a university setting and integrating both quantitative and qualitative data, it seeks to assess and dissect strategic infrastructure planning and proposed inputs to more equitable and student-centered campus development.

Research Focus

The focus of the study is to explore the relationship between campus infrastructure and student satisfaction in a higher education setting. Specifically, the research concentrates on evaluating how different types of infrastructure—academic, digital, support services, health and wellness, and recreational facilities—contribute to or hinder the overall student experience.

Research Aim and Research Questions

This study aimed to examine the role of infrastructure in shaping student satisfaction within a higher education institution. It explored how various types of campus infrastructure, including academic facilities, digital and IT services, student support offices, health and wellness centers, and recreational spaces, impact the overall student experience. It provided evidence-based insights and inputs that inform campus development strategies aligned with students' academic and well-being needs.

To achieve this aim, the following research question was formulated: How do students perceive the current state of infrastructure in their respective colleges? Which infrastructure components contribute most significantly to student satisfaction or dissatisfaction? In what ways does the quality of infrastructure influence students' academic engagement, support systems, and campus life experience? Through these guiding questions, the research highlights the critical link between infrastructure investment and the delivery of quality, student-centered higher education.

Research Methodology

General Background

The purpose of this study was to examine the role of university infrastructure in shaping student satisfaction and educational experiences. Recognizing that infrastructure influences student engagement, health and well-being, and retention, the study sought to generate evidence to guide campus development planning. The study uncovered both overarching trends and specific student-reported needs at a large state university in the Philippines.

The study was descriptive and explanatory in nature and utilized a convergent parallel mixed-methods design (Creswell & Plano-Clarke, 2018). These designs allow researchers to embrace the differences that exist in quantitative and qualitative data to create a more holistic representation of student satisfaction with university infrastructure, such as facilities, services, and spaces. Quantitative data provided broad descriptions of satisfaction levels with five major categories of infrastructure, while qualitative data enabled the researchers to examine the students' lived experiences and their recommendations for local improvements.

The study was carried out from January to March 2025 with undergraduate students from first to fourth year across all 13 of the university's main campus colleges. The study scope included academic facilities, digital and IT services, college and student support offices, health and wellness services, and recreational and extracurricular spaces. The data were collected from undergraduate students across all four years.

The theoretical framework of the research was the use of models of student engagement and satisfaction in higher education contexts (Tinto, 2017; Strange & Banning, 2015). Many of these models contain mentions of the social and physical environments that complement student learning, development, and equitable access. Therefore, the theoretical framework helped provide guidance in making decisions regarding the method and design of the instruments, as well as in interpreting the findings, to ensure that the student-centered recommendations for infrastructure planning were evidence-based.

Sample

The study employed purposive sampling to ensure representation across academic levels and disciplines within the university. A total sample size of 1,639 students was achieved, drawn from the undergraduate population across all year levels (first year to fourth year) in each of the 13 colleges on the main campus. This distribution was designed to capture sufficient variation across colleges and year levels while ensuring that no academic unit was underrepresented.

Participants included students from the 1st to 4th year levels (20.4% 1st year, 36.6% 2nd year, 21.7% 3rd year, 21.4% 4th year), with 48.4% identifying as female, 47.4% as male, and 4% preferring not to disclose their gender. This stratified approach ensured diverse perspectives across academic progression, disciplines, and demographic groups.

The sample size was determined to achieve both statistical power for quantitative analyses (including ANOVA comparisons across year levels and colleges) and to generate robust qualitative themes through embedded open-ended responses. Drawing at least 100 participants per college supported subgroup analysis and comparability across academic units. Additionally, the large overall sample size improved the reliability and generalizability of the findings within the university context, enabling meaningful conclusions about student satisfaction and infrastructure needs.

Instrument and Procedures

The primary instrument used for data collection was a student satisfaction questionnaire that measured students' satisfaction with university facilities and services. Satisfaction was assessed using a 5-point Likert scale, with 1 representing very dissatisfied and 5 representing highly satisfied. The questionnaire was a self-developed research instrument to consider organizational culture and student preferences. The researchers invited at least five field experts to validate the questionnaire. The questionnaire underwent two-phase validation: content validation and face validation. After the validation process, all corrections and suggestions from the validators were considered and effected. Pilot testing was done using the Split-half and Test-Rest method to calculate Cronbach's Alpha value for its reliability. The overall Cronbach's Alpha of the self-developed questionnaire is .81, implying that the questionnaire for student satisfaction is reliable.

The second part of the questionnaire is used to assess the current state of the university's infrastructure. The questionnaire is a self-developed questionnaire to contextually assess its role in the students' satisfaction. The questionnaire has five key categories: Library and Learning Resources; IT and Digital Services; Student Support Services; Health and Wellness Facilities; and Recreational and Extracurricular Spaces. The researcher applied the same procedure for validation and reliability testing. Overall, Cronbach's Alpha is equal to .89, suggesting that the self-developed questionnaire is reliable and ready to be cascaded.

For the qualitative instrument, the researchers used an interview protocol guide to generate insights and perspectives about the role of university infrastructure in their satisfaction with their stay. The interview protocol guide was validated by five field experts in

their respective fields. The interview protocol guide underwent face and content validation to ensure the applicability of the questions in the nature of the study. The interview questions were embedded in the survey questionnaire. The data collection was simultaneously done as guided by the procedure of the research design.

Data Analysis

Descriptive statistics, like mean and standard deviation, were employed to summarize student satisfaction levels for each category. To determine whether significant differences existed in satisfaction levels across colleges, programs, and year levels, the study utilized Analysis of Variance (ANOVA), the Shapiro-Wilk test of normality, and post-hoc analysis. This statistical approach helped identify variations in student perceptions and satisfaction across different academic demographics, providing valuable insights for targeted policy improvements.

Using both quantitative and qualitative data, this study effectively captured student satisfaction trends and areas for enhancement in university facilities and services. For quantitative data, the researcher used Google Forms as the platform for data collection. The interview questions were embedded in the Google Form after the survey questionnaire. The use of a convergent parallel mixed-methods approach strengthens the validity of the findings, ensuring that both statistical trends and personal experiences contribute to data-driven recommendations for institutional improvements.

Research Results

Table 1 shows student satisfaction ratings for the library and learning facilities. Overall, students reported satisfaction across all benchmark statements, with a mean score of 3.85 ($SD = 0.99$), interpreted as “Evident” satisfaction.

Table 1
Student Satisfaction in Library & Learning Facilities

Benchmark Statements	<i>M</i>	<i>SD</i>	Interpretation
Availability of books, journals, and research materials	3.67	0.98	Evident
Library's physical space (seating, lighting, study areas)	3.96	1.02	Evident
Accessibility and usability of online library resources	3.67	1.02	Evident
Helpfulness and responsiveness of library staff	3.90	0.95	Evident
Convenience of library operating hours	3.84	1.00	Evident
Efficiency of borrowing and returning process	3.76	0.93	Evident
Availability of computers and printing services	3.59	1.03	Evident
Library as a quiet and comfortable environment for learning	3.80	1.10	Evident
Cleanliness and maintenance of library facilities	4.28	0.90	Evident
Regular updates and expansion of learning resources	3.87	0.97	Evident
Overall	3.85	0.99	Evident

The highest-rated aspect was Cleanliness and maintenance of library facilities ($M = 4.28$, $SD = 0.90$), indicating strong approval of hygiene and upkeep. Other highly rated items included the Library's physical space ($M = 3.96$) and the Helpfulness and responsiveness of library staff ($M = 3.90$). Areas with relatively lower—but still positive—ratings were Availability of computers and printing services ($M = 3.59$) and Accessibility and usability of online library resources ($M = 3.67$), suggesting opportunities for improvement in digital access and equipment availability.

Table 2
Student Satisfaction in Information Technology & Digital Services

Benchmark Statements	<i>M</i>	<i>SD</i>	Interpretation
The university provides a stable and reliable Wi-Fi connection across campus.	2.42	1.22	Least Evident
Online learning platforms (e.g., LMS, student portals) are easy to navigate and use.	3.56	1.01	Evident
The university's website and online resources provide accurate and up-to-date information.	3.65	0.95	Evident
IT support services are accessible and responsive to technical issues.	3.57	0.96	Evident
Computer labs and digital learning spaces are adequately equipped.	3.61	1.02	Evident
The availability of e-books, digital journals, and academic databases supports learning.	3.56	0.97	Evident
The student portal effectively facilitates enrollment, grades access, and other academic transactions.	3.94	0.95	Evident
The integration of technology in classrooms enhances the learning experience.	3.82	0.96	Evident
Online communication channels (e.g., email, chat support) are effective for student inquiries.	3.81	0.99	Evident
The university regularly updates and improves its digital infrastructure.	3.70	0.97	Evident
Overall	3.56	1.00	Evident

Table 2 summarizes student satisfaction with Information Technology and Digital Services. The overall mean satisfaction score was 3.56 ($SD = 1.00$), interpreted as “Evident” satisfaction. Students rated the *Student portal* most favorably ($M = 3.94$, $SD = 0.95$), highlighting its effectiveness for academic transactions. Other well-rated areas included *Integration of technology in classrooms* ($M = 3.82$) and *Online communication channels* ($M = 3.81$). In contrast, a *Stable and reliable Wi-Fi connection* received the lowest rating ($M = 2.42$, $SD = 1.22$), indicating a clear area for improvement in campus digital infrastructure. Overall, while students expressed general satisfaction with most digital services, network reliability emerged as a critical weakness needing attention.

Table 3
Student Satisfaction in Student Support Services

Benchmark Statements	<i>M</i>	<i>SD</i>	Interpretation
Academic advising services are accessible and helpful.	3.68	0.94	Evident
Career guidance and counseling services effectively support students.	3.70	0.95	Evident
Health and wellness services (e.g., medical, psychological) are available and responsive.	3.68	0.95	Evident
Student organizations and extracurricular activities enhance student engagement.	3.78	0.99	Evident
Scholarship and financial aid services are efficiently managed.	3.79	0.91	Evident
The university provides adequate support for students with special needs.	3.68	0.95	Evident
Orientation programs and transition support for new students are effective.	3.65	0.96	Evident
The grievance and complaint-handling system is efficient and responsive.	3.92	0.93	Evident
Student affairs offices provide timely and effective support.	3.80	0.97	Evident
The university regularly evaluates and improves student support services.	3.77	1.01	Evident
Overall	3.75	0.96	Evident

Table 3 presents student satisfaction ratings for Student Support Services. The overall mean score was 3.75 ($SD = 0.96$), interpreted as “Evident” satisfaction, indicating generally positive perceptions of the support services provided. The highest-rated item was *Grievance and complaint-handling system* ($M = 3.92$, $SD = 0.93$), suggesting students appreciate the university’s responsiveness to concerns. Other highly rated areas included *Scholarship and financial aid services* ($M = 3.79$) and *Student affairs offices* ($M = 3.80$). Slightly lower—but still positive—ratings were observed for *Orientation programs* ($M = 3.65$) and *Support for students with special needs* ($M = 3.68$), highlighting potential areas for targeted improvement to enhance inclusivity and transitional support.

Table 4
Student Satisfaction in the University Health & Wellness Facilities

Benchmark Statements	<i>M</i>	<i>SD</i>	Interpretation
The university provides adequate medical and first-aid facilities.	4.00	0.90	Evident
The availability of mental health and counseling services meets students’ needs.	3.76	0.97	Evident
Sports and recreational facilities are well-maintained and accessible.	3.82	0.93	Evident
The university promotes a healthy campus environment.	3.95	0.92	Evident
Drinking water and sanitation facilities are sufficient and clean.	3.71	1.06	Evident
Restrooms are well-maintained and hygienic.	3.86	0.93	Evident
The university offers wellness programs that support students’ health.	3.81	0.99	Evident
Emergency response services (e.g., campus security, medical assistance) are efficient.	3.82	0.96	Evident
The campus environment supports students’ physical well-being.	3.83	0.97	Evident
The university ensures a safe and secure campus for all students.	3.80	0.95	Evident
Overall	4.00	0.90	Evident

Table 4 summarizes student satisfaction with University Health and Wellness Facilities. The overall mean score was 4.00 ($SD = 0.90$), interpreted as “Evident” satisfaction, indicating strong positive perceptions in this area. *Adequate medical and first-aid facilities* received the highest rating ($M = 4.00$, $SD = 0.90$), reflecting confidence in on-campus healthcare support. Other highly rated items included *Promotion of a healthy campus environment* ($M = 3.95$) and *Restroom maintenance and hygiene* ($M = 3.86$). Slightly lower—but still favorable—scores were observed for *drinking water and sanitation facilities* ($M = 3.71$) and *Mental health and counseling services* ($M = 3.76$), suggesting areas for continued improvement to ensure comprehensive student well-being.

Table 5
Student Satisfaction in Recreational & Extracurricular Spaces

Benchmark Statements	M	SD	Interpretation
The university provides sufficient transportation options for students.	3.54	1.07	Evident
Parking spaces are adequate and well-managed.	3.39	1.16	Moderately Evident
Walkways and pedestrian pathways are safe and accessible.	3.47	1.12	Moderately Evident
The university maintains a clean and green campus.	3.83	0.96	Evident
The campus is free from excessive noise and pollution.	3.31	1.11	Moderately Evident
There are sufficient seating and lounge areas for students.	3.76	0.98	Evident
The campus has clear and visible signage for directions and information.	3.61	1.06	Evident
The university provides safe and well-lit pathways at night.	3.75	1.05	Evident
Waste management and recycling programs are effectively implemented.	3.57	1.07	Evident
The campus environment is conducive to learning and social interaction.	3.80	0.99	Evident
Overall	3.60	1.06	

Table 5 presents student satisfaction ratings for Recreational and Extracurricular Spaces. The overall mean score was 3.60 ($SD = 1.06$), indicating generally “Evident” satisfaction but with notable variation across items. The highest-rated aspect was *Maintaining a clean and green campus* ($M = 3.83$, $SD = 0.96$), reflecting student approval of environmental quality. Other well-rated items included *Seating and lounge areas* ($M = 3.76$) and *Safe, well-lit pathways at night* ($M = 3.75$). In contrast, lower ratings were observed for *Parking spaces* ($M = 3.39$, $SD = 1.16$), *Walkways and pedestrian pathways* ($M = 3.47$), and *Noise and pollution control* ($M = 3.31$), suggesting areas where improvements in accessibility, safety, and environmental management are needed to enhance the overall student experience.

The qualitative strand of study showed a few areas within the university’s facilities and infrastructure that needed improvement. These areas were comfort rooms, recreational areas, Wi-Fi connectivity, classroom conditions, and canteen facilities. The emerging themes provide rich information to understand students’ concerns that support or defy the findings from other research on campus infrastructure and student wellbeing.

Table 6
Qualitative Results on Areas for Improvement

Narrative Extracts	Codes	Sub-Theme	Emergent Themes
<p><i>"Maintenance for the newly established comfort rooms in CSSP Building."</i></p> <p><i>"As a student, I am satisfied with everything in our campus. How ever, the restroom should be maintained to its usage. But over all I am satisfied."</i></p> <p><i>"The cleanliness of comfort rooms, the facilities in elibrary, the canteen."</i></p>	<p>Maintenance and Security Restroom Cleanliness Overall Satisfaction Facility quality Comfort Ambience</p>	Issues with Maintenance	Comfort Rooms (679 mentions)
<p><i>"The restrooms and the availability of working toilets need improvements."</i></p> <p><i>"Availability of clean comfort room (CR)."</i></p> <p><i>"A common issue at the university is the inadequate state of the restrooms. They are frequently under maintenance, making them unavailable for proper use."</i></p>	<p>Availability Cleanliness Restroom Maintenance Under Maintenance</p>	Availability of Comfort Rooms	
<p><i>"The rest room of every college should be like the rest rooms in Flores Hall and E-Library. Have bidet, mirror, hand soap, working flushes, and sturdy door locks. Most of all it should be leasantly smelling and hygienic."</i></p> <p><i>"Bathrooms. Equip E-library with bidets."</i></p> <p><i>"The bathrooms. It would be better if all have bidets, soaps, and tissues in place."</i></p>	<p>Bidet Installation Hygiene Standards Personal Hygiene Privacy and Security Accessibility Paper Products</p>	Bidets, hand soap, etc.	

<p><i>"More seats around BSU for students who are on their break time. I noticed that some students are sitting around the hallway because there are no available seats for them."</i></p> <p><i>"Make more area for student to stay during vacant, like chairs, or lounge."</i></p> <p><i>"We need more areas where students can stay during our free time"</i></p>	<p>Seats availability Student Lounge Comfortability</p>	<p>Need for more lounges or waiting areas</p>	
<p><i>"More comfortable facilities for students to study"</i></p> <p><i>"The e-lib, I suggest that all floors be utilized so that more students will be able to have space for studying."</i></p>	<p>Student Facilities Study Are Learning Space</p>	<p>Study Area</p>	<p>Recreational and Common Areas (497 mentions)</p>
<p><i>"Areas for sports and recreational activities."</i></p> <p><i>"the rizal park and other spaces need landscaping and to add more kubos like in the Pimentel"</i></p>	<p>Sports and Development Park</p>	<p>Recreational Areas</p>	
<p><i>"extend at least 2hrs per day the connection in smart wifi in every college building"</i></p> <p><i>"as a BIT student. We are facing the internet connection in our building. When we are on 2nd or 3rd floor, there's no mobile data connection. It's very mabagal hehe."</i></p> <p><i>"Technology Integration Wi-Fi and Charging Stations Provide reliable Wi-Fi access and charging stations for students attending events or studying in the Activity Center. This will help create a more connected environment."</i></p>	<p>Wifi Connectivity Activity Area Internet Intermittent Virtual Learning Environment</p>	<p>Weak & Unreliable Connection</p>	
<p><i>"Improve wifi connections, not only for the faculty but also for the students"</i></p> <p><i>"The wifi can be improved to cater a larger number of students and faculty members which can greatly enhance the quality of learning within the campus."</i></p>	<p>Connection Improvement Connection Quality learning through Wifi Connection</p>	<p>BulSU WiFi Connection</p>	<p>Wi-Fi and Internet (461 mentions)</p>
<p><i>"The university should improve Wi-Fi speed, upgrade classrooms, expand study spaces, and maintain restrooms for a better environment"</i></p> <p><i>"Need improvements in WiFi connectivity and data signal strength"</i></p> <p><i>"the signal of data inside campus"</i></p>	<p>Signal disruption Classroom Upgrades</p>	<p>No or Weak Network Signal</p>	

<i>"In my opinion, in our university, the facilities that need to improve are the classrooms, especially the windows and the air conditioners."</i>	Classroom Ventilation Maintenance Pest Infestation Overcrowding		
<i>"Please provide better ventilation for the whole 1st floor classrooms of the Federizo Hall building. Also, FH110 is infested with mosquitoes that bites everyone inside the room."</i>		Ventilation & Airconditioning Unit Maintenance	
<i>"BulSU should focus on improving classrooms and outdoor spaces, especially due to the high number of students. Many classrooms need a better ventilation and mabilisang maintenance din kung magkkaproblema. "</i>			Classroom (424 mentions)
<i>"For me it's only our classroom size, But the rest is great. Thank youuu"</i>	Classroom size Students Conducive learning are Comfortable classroom facilities	Classroom size	
<i>"We need bigger rooms and better facilities as our classrooms are not able to fit 50 students. See FH 210 every Tuesday, 7am."</i>			
<i>"Kulang kulang ang chairs naghahanapan pa sa ibang rooms lalo na sa AD"</i>	Adequate ratio between chairs and students	Number of chairs	
<i>"Not enough chairs inside the rooms"</i>			
<i>"Also maybe a bigger space for canteens, I love eating sa CON canteen but parang nasa oven ang feels. Imagine eating in a space in between of stores na gumagamit ng mga stoves and such"</i>	Ventilation Maintenance Pest Infestation Overcrowding	Canteen Ventilation	
<i>"Magdagdag ng canteen kasi pag nagsabay sabay wala na makainan ung mga students di naman makapagbaon since wala space where to eat."</i>		Availability of Canteen	
<i>"Is there is a chance to improve something it's the space of the canteen both university canteen and the cssp canteen both lack of space and always hot even though it's a open area "</i>			Canteen (299 mentions)
<i>"the internet, public utilities such as restroom, inadequate space for lunch time"</i>			
<i>"Is there is a chance to improve something it's the space of the canteen both university canteen and the cssp canteen both lack of space and always hot even though it's a open area"</i>		Space for students to eat	
<i>"In my opinion, I think adding a waiting area or space where students can eat or do their academic tasks can be helpful for us students"</i>			

Areas for Improvement

Table 6 presents the thematic analysis of students' qualitative feedback on university facilities. The most frequently mentioned issue was *Comfort Rooms* (679 mentions), with students highlighting concerns about maintenance, cleanliness, availability, and the need for improved hygiene standards such as bidets and soap. *Recreational and Common Areas* (497 mentions) emerged as another major theme, with students requesting more seating, lounges, and study spaces to support comfort and social interaction.

Wi-Fi and Internet Connectivity (461 mentions) was a widespread concern, with repeated reports of weak, unreliable signals affecting academic work, especially in upper floors and common areas. *Classroom Conditions* (424 mentions) included problems with ventilation, overcrowding, maintenance, and pest control, indicating a need for better learning environments. Finally, *Canteen Facilities* (299 mentions) were criticized for overcrowding, poor ventilation, and insufficient space for dining, underlining the need for more comfortable, accessible eating areas.

These qualitative findings provide rich detail on students' lived experiences, revealing specific, actionable priorities for improving campus infrastructure and enhancing overall satisfaction.

Table 7
ANOVA Table of Student Satisfaction

Profile of Students	F	p value	Decision	Interpretation	Significant Post Hoc
Year Level	3.49	< .001	Reject the Null Hypothesis	Significant	1st vs. 4th Year: $p = .002 \rightarrow$ significant difference
					2nd vs. 4th Year: $p = .015 \rightarrow$ significant difference
					1st vs. 2nd Year, 1st vs. 3rd Year, and 3rd vs. 4th Year: $p > .05 \rightarrow$ no significant difference
Gender	2.88	.033	Reject the Null Hypothesis	Significant.	Male vs. Female: $p = .028 \rightarrow$ significant difference

Table 7 shows the results of the ANOVA testing differences in student satisfaction across year levels and gender. The analysis found a significant effect of year level on satisfaction ($F = 3.49$, $p < .001$), leading to rejection of the null hypothesis. Post hoc comparisons revealed that fourth-year students differed significantly from first-year ($p = .002$) and second-year students ($p = .015$), suggesting that satisfaction levels change meaningfully as students progress, potentially reflecting evolving expectations or cumulative experience with campus facilities. No significant differences were found between first and second-year, first and third-year, or third and fourth-year groups.

For gender, a significant difference was also observed ($F = 2.88$, $p = .033$). The post hoc result indicated a meaningful difference between male and female students ($p = .028$), suggesting that perceptions of satisfaction may vary subtly by gender. These results highlight the importance of considering demographic factors in campus planning to ensure that facilities and services meet the diverse needs of all student groups.

Discussion

Student Satisfaction in Library & Learning Facilities

Student satisfaction with the Library & Learning Resources section examines student perceptions of the university's academic environment. The evaluation of the library showed that factors such as cleanliness and maintenance were rated the highest, reflecting strong student satisfaction and agreement about its general upkeep. This suggests that well-maintained physical facilities remain a clear strength of the university library.

Overall, students rated aspects of the physical environment—seating, lighting, study spaces—and the helpfulness and responsiveness of library staff highly, indicating that they found the library conducive to learning. In contrast, the hours of operation received moderate satisfaction ratings, and borrowing and returning resources were also rated at a moderate level, suggesting that while these services are functional, they could be improved.

Conversely, the study found lower-than-average satisfaction in areas such as accessibility and usability of online library resources, and the availability of computers and printing services. These items also showed higher standard deviations, indicating variability in student experiences—some students had effective experiences while others faced difficulties accessing or using these resources. Similarly, students rated the library as a quiet and comfortable learning environment with moderate satisfaction, suggesting a balance of positive and neutral perceptions.

These results support findings from previous research. Kiran and Diljit (2011) highlight that cleanliness, support staff, and well-maintained study areas significantly enhance student satisfaction, consistent with this study's high ratings for physical space and maintenance. Soria et al. (2017) emphasize that library environments directly influence student retention and academic success, reinforcing the importance of maintaining quiet, accessible, and resourceful learning spaces. Meanwhile, O'Connor et al. (2020) discuss ongoing challenges in digital resource accessibility, which aligns with the lower satisfaction ratings for online library services observed in this study.

Student Satisfaction in Information Technology & Digital Services

The effectiveness of technological infrastructure in meeting students' academic and administrative needs was reflected in their assessments of the university's IT and digital services. Out of ten dimensions evaluated, the student portal for enrollment, accessing grades, and handling academic affairs received the highest rating, indicating strong student satisfaction with its efficiency for critical academic processes. Students also rated technology use in classrooms and the effectiveness of online communication channels highly, suggesting they value these technological elements as important for learning. The university's efforts to consistently upgrade and enhance its digital infrastructure received a favorable response, with students reporting moderate satisfaction with updated technology.

However, the study identified major challenges related to the reliability and consistency of the university's Wi-Fi, which received the lowest ratings and the highest standard deviation. This result indicates widespread dissatisfaction and variation in experiences, suggesting that some students have better access than others, depending on location or time of use. Online learning platform navigation and the availability of digital academic resources received moderate satisfaction ratings, pointing to areas that require improvement, given students' growing reliance on digital learning materials.

These findings align with prior research. Baryannis et al. (2021) emphasize that reliable internet connectivity is essential for accessing digital learning and note that poor connectivity

reduces student engagement, consistent with the low ratings for on-campus Wi-Fi. Al Fraihat et al. (2020) highlight ease of navigation in learning management systems as a key factor in student satisfaction, corresponding with the study's moderate ratings for platform usability. Dahlstrom et al. (2015) report that students expect seamless access to academic databases and digital libraries, while Watson and Watson (2017) demonstrate that technological tools in classrooms enhance learning outcomes, supporting the high ratings for classroom technology use.

Overall, these results suggest that while students express satisfaction with the efficiency of the student portal, classroom technology integration, and digital communication channels, concerns persist regarding network reliability, access to academic resources, and LMS usability. Addressing these issues, particularly by improving connectivity and access to learning resources, can enhance overall student satisfaction and learning experiences at the university.

Student Satisfaction in Student Support Services

The assessment of student satisfaction with support services at the university revealed students' perceptions of the availability, responsiveness, and effectiveness of various support programs. The grievance and complaint-handling procedure received the highest rating, indicating that students found the university responsive to their concerns and feedback. Student affairs offices and scholarship and financial aid services also received high ratings, suggesting that students viewed these offices as effective in providing prompt, reliable support.

Other areas received positive ratings as well, reflecting favorable student experiences in non-academic aspects of university life, such as engagement through extracurricular activities and opportunities to evaluate student services. However, the study found that transition support in orientation programs for new students and support for students with special needs, while rated as helpful, showed room for improvement, particularly regarding inclusivity and accessibility.

These findings align with established research on student support services in higher education. Tinto (2017) emphasizes that services like academic advising and financial aid are essential for student retention and success, as personalized guidance helps mitigate academic disconnection and reduce attrition. Kuh et al. (2011) assert that active engagement in student organizations fosters a sense of belonging, enhancing the overall student experience, consistent with the high ratings reported for these activities. Additionally, Seifert et al. (2010) argue that effective grievance mechanisms contribute to a responsive, student-centered institutional culture, aligning with the strong satisfaction expressed by students regarding the university's complaint management processes.

Overall, these results suggest that robust support structures—including advising, financial aid, co-curricular involvement, and transparent grievance procedures—are closely linked with positive student perceptions, greater engagement, and stronger institutional commitment. Enhancing inclusivity and accessibility in orientation and special needs support can further strengthen these outcomes.

Student Satisfaction in the University Health & Wellness Facilities

Overall, student satisfaction with health and wellness facilities on campus was markedly positive. Students rated the adequacy of medical and first-aid facilities the highest, indicating strong confidence in the university's ability to provide on-site healthcare support. Ratings for the promotion of a healthy campus and restroom cleanliness were also high, suggesting that the institution effectively supports health and hygiene through sound sanitation practices.

The study found that perceptions of accessibility and maintenance of sports and recreation facilities, as well as campus emergency response services, were generally positive but indicated a need for further improvement. Wellness programs and a supportive campus

physical environment contributed to overall student satisfaction, showing that the university has implemented important initiatives to support both physical and mental health.

Meanwhile, satisfaction ratings for the quantity and adequacy of drinking water and sanitation facilities were slightly lower, suggesting inconsistencies in access or cleanliness. Mental health and counseling services received reasonably good ratings but pointed to potential gaps in adequacy and the need for expanded support. Campus security and safety measures were rated positively overall, indicating student confidence in the university's ability to maintain a safe learning environment.

These results align with existing research on the role of campus health services in supporting student success. Watson et al. (2020) report that students with access to quality health and wellness programs show greater academic engagement and higher retention rates, underscoring the value of strong medical services and first-aid facilities in enhancing satisfaction. Eisenberg et al. (2019) emphasize the importance of robust mental health services for academic success and overall well-being, advocating for expanded counseling support to meet growing student needs. Additionally, Henning et al. (2021) find that well-managed recreational and wellness programs contribute to positive physical and psychological health outcomes, reinforcing students' favorable perceptions of recreational facilities and emergency response services.

Overall, these findings suggest that while the university has strong foundations in health and wellness support, continued investment in areas such as mental health services, recreation facilities, and sanitation access will be essential to further strengthen student satisfaction and well-being on campus.

Student Satisfaction in Recreational & Extracurricular Spaces

The survey findings regarding campus environment and transportation services provided key insights into students' perspectives on safety, accessibility, and overall campus sustainability. Students rated the university's commitment to maintaining a clean and green campus the highest, indicating strong satisfaction with sustainability project management and the upkeep of campus amenity buildings. Aspects of the campus environment that support learning and social engagement—such as the availability of adequate seating and lounge spaces—also received high ratings, suggesting that students found the physical spaces reliable and comfortable for academic and social interactions.

Overall, safety and accessibility issues received somewhat positive responses. Students rated factors such as well-lit pathways at night and signage to aid navigation satisfactorily, though these results indicate that further improvements in lighting and wayfinding could enhance students' comfort and sense of security on campus. Waste disposal management was rated at a moderate level, suggesting uneven implementation of sustainability practices.

Conversely, the study recorded lower scores in key areas related to campus mobility. Parking space availability and management, as well as noise and pollution control, received the lowest ratings, indicating persistent problems with congestion and environmental distractions. Students also reported moderate satisfaction with the adequacy of walkways and transportation options for getting to campus, suggesting that many experience challenges in moving around campus or commuting. High standard deviations in these ratings point to variability in student experiences, depending on their specific circumstances or locations.

These findings align with existing research on university infrastructure and student satisfaction. Strange and Banning (2015) note that aspects of the campus experience—such as cleanliness, green spaces, and architectural design—significantly influence student well-being and academic performance, consistent with the positive ratings for environmental quality in this study. Evans and Lepore (2021) emphasize that noise pollution and inadequate pedestrian

infrastructure can impair cognitive functioning and perceptions of accessibility, resonating with respondents' concerns about noise levels and pathway usability. Dober et al. (2018) highlight that clear signage and well-lit routes are essential for promoting navigation, confidence, and safety on campus, aligning with the moderate satisfaction ratings for these features.

Overall, these results suggest that while the university's efforts in maintaining a clean, green, and socially engaging campus are well-received, targeted improvements in waste management, mobility infrastructure, and safety features would further enhance student satisfaction and well-being.

Comfort Rooms: Maintenance and Availability

The most prominent theme identified in student responses related to comfort rooms (restrooms), specifically highlighting maintenance concerns, as well as issues of access and suitability. Students frequently reported problems with cleanliness, lack of essential amenities such as bidets, soap, and toilet paper, inadequate locks, and generally poor hygiene standards in university restrooms. These findings underscore a broader issue of sanitation within educational institutions.

Research indicates that well-maintained restroom facilities positively influence student health, well-being, satisfaction, and attendance, which can, in turn, affect academic performance. This suggests that addressing restroom maintenance is not merely about comfort but also supports broader health and educational outcomes. However, some literature argues that while restroom quality is important, academic resources such as libraries and faculty quality may have a more significant impact on overall student success. This perspective highlights the need to balance investments in restroom improvements with other infrastructure priorities to holistically enhance the student experience.

Recreational and Common Areas

The qualitative results revealed that students frequently expressed concerns about the lack of lounges, study spaces, and recreational areas on campus. They reported wanting more seating areas, green spaces, and environments that support studying. These findings highlight a need for spaces that are both socially inviting and academically supportive.

This interpretation is consistent with literature showing that campus design strongly influences student well-being and academic motivation (Tanner, 2019). Strange and Banning (2015) find that students at universities with better-designed study spaces tend to demonstrate higher engagement levels and develop broader campus networks. Douglas et al. (2018) add that common areas with comfortable provisions promote collaboration, reduce stress, and enhance learning opportunities. At the same time, Minges and McDade (2021) note that while recreational spaces contribute to student satisfaction, they do not necessarily translate to improved academic performance. This perspective suggests the importance of balancing the design of campus spaces to serve both social and academic needs effectively.

Wi-Fi Connectivity and Digital Infrastructure

Students frequently reported issues with unreliable Wi-Fi access and weak signal reception, particularly on higher floors of university buildings. This inconsistent connectivity hampered their ability to fully engage in academic tasks such as attending online classes, conducting research, and participating in virtual discussions. These findings align with studies that document the significant impact of digital infrastructure on student learning experiences.

Research indicates that robust and reliable internet connectivity is essential for effective participation in modern higher education. Inadequate digital infrastructure disproportionately affects students from lower socioeconomic backgrounds, who may lack alternative means of accessing digital learning resources. This digital divide exacerbates educational inequities by limiting opportunities for affected students to participate in academic activities and access essential learning materials.

Furthermore, addressing digital access alone is insufficient. Improving the quality of online education requires enhancing students' digital literacy and providing adequate training and support for faculty. Investments in both infrastructure and educational development are necessary to create an equitable and effective digital learning environment for all students.

Classroom Conditions and Learning Spaces

The analysis revealed that poor ventilation, overcrowding, and insufficient seating were primary concerns among students. Many reported malfunctioning air-conditioning units and cramped conditions in large classrooms. These findings indicate that physical learning environments present clear challenges to student comfort and engagement.

Empirical research supports these observations. Schneider (2002) demonstrates that temperature, air quality, and room size significantly influence student focus and achievement. Similarly, Earthman (2004) finds that substandard classroom conditions—particularly inadequate lighting, thermal control, and ventilation—are associated with lower cognitive functioning and increased absenteeism.

However, improved physical infrastructure alone is not sufficient to ensure optimal learning outcomes. Rashid and Zimring (2020) argue that pedagogical quality and curriculum design often have a greater impact on student success than infrastructure alone. This perspective suggests that while upgrading classroom environments is essential, such efforts must be balanced with investments in teaching quality to meaningfully enhance academic performance.

Canteen Facilities and Student Dining Areas

Students consistently identified university canteens as areas needing significant improvement. They reported issues such as overcrowding, poor air circulation, and insufficient seating. Several respondents noted that queuing and dining in hot, uncomfortable conditions reduced their willingness to use these spaces. These findings highlight clear challenges in the campus dining environment that affect students' comfort and use of these facilities.

Research supports the importance of well-designed dining spaces. Hwang and Lin (2021) find that such areas contribute to student well-being, encourage peer interaction, and enhance the overall campus environment. Similarly, Douglas et al. (2018) observe that students are more likely to stay on campus and engage socially when dining facilities are comfortable and inviting. However, Kim et al. (2019) argue that practical concerns—particularly food pricing and quality—have an even stronger influence on students' dining preferences than physical infrastructure alone. This perspective suggests that improvements to dining services should consider both environmental and operational factors to effectively meet student expectations.

More broadly, the qualitative findings revealed critical insights into students' lived experiences across university facilities. Students reported concerns with restroom maintenance, Wi-Fi connectivity, classroom ventilation, recreational infrastructure, and dining environments. These issues reflect the intersection of infrastructural and social challenges described by Perkins et al. (2020). At the same time, literature emphasizes that student well-being is also shaped by factors beyond facilities, including curriculum quality, instructional methods, digital literacy, and food service standards. This underscores the need for a holistic approach to meaningfully enhance the student experience.

The university has clear opportunities to improve student satisfaction and engagement, which can support greater academic success and well-being.

One-Way ANOVA Results

The one-way ANOVA of student satisfaction by gender and year level revealed that satisfaction with university facilities and infrastructure significantly differed across departments and faculties. Some aspects of student satisfaction in this study align with the literature, which highlights that variations in satisfaction can be influenced by service quality and institutional support. For instance, Annamdevula and Bellamkonda (2016) found that perceptions of institutional service quality are consistent across students, regardless of their department or academic level.

Also, the results reflect a significant difference across year levels and depart from studies that have suggested student satisfaction varies during the study. Ciobanu & Ostafe (2014) noted that first-year student satisfaction is generally higher than senior students because their expectations and experiences are still forming. Although evidence from our analysis does not support these notions, perhaps institutional and policy changes, student engagement programs, and service quality consistent with other college/department years minimize these differences.

The ANOVA results do show statistically significant differences in satisfaction by gender and year level. The ANOVA identified that student satisfaction is significantly different by year level ($p = .000$, $F = 3.49$). The p-value indicated that the college groups are significantly different, and since the significance is below .05, you reject the null hypothesis and conclude that college satisfaction is different and is a result of the different faculties. You would expect to see the differences between colleges due to student service quality, differences in quality of faculty and programs, levels of service, and local student services. After applying Tukey's HSD post hoc test on the significant ANOVA result for Year Level ($F = 3.49$, $p < .001$), we identified specific group differences. Fourth-year students differ significantly from both first-year ($p = .002$) and second-year students ($p = .015$), while no significant disparities emerged between first and second year, first and third-year, or third and fourth-year cohorts. This indicates a measurable shift in either performance or perceptions as students progress into their final year. Tukey's HSD is a conservative method that controls the Type I error rate, meaning these detected differences are reliable. The finding suggests that fourth-year students experience or report substantially different outcomes compared to their junior counterparts, while mid-program cohorts remain largely similar. These results may reflect transitional academic pressures, differing levels of curriculum difficulty, or changes in campus engagement experienced in the final year.

Student satisfaction was also statistically significantly different if analyzed by gender ($p = .033$, $F = 2.88$). Again, the p-value you see indicates that the year level groups are significantly different, since the significance is below .05, you reject the null hypothesis and conclude that the year level satisfaction is a different experience for all students. These differences may be explained by differences in study load, expectations across year levels, access to varied resources, or differences in university support for students are all different as students progress through their studies. After a significant ANOVA finding ($F = 2.88$, $p = .033$), Tukey's HSD test revealed a statistically meaningful difference between male and female students ($p = .028$) on the measured outcome. Although the effect size appears modest, this gender gap may correspond to slight but important variations in overall satisfaction or performance. The significant gender difference suggests that either male or female students report higher levels of the target variable (e.g., satisfaction or performance), but small enough that it's meaningful without being large. Considering broader research, this gap might reflect a slight female advantage in subjective satisfaction or academic outcomes. However, the small magnitude also emphasizes that the gender effect is not overwhelming and should be interpreted within a wider context that includes other factors such as year level, course type, and educational quality.

In summary, the results of the study indicate that there are differences to consider about enhancing student satisfaction levels, within both individual colleges and at the level of each year of study. Some improvements to consider by universities would be to improve academic support for students, improve student services quality and availability of student support, and improve the facilities available to students fairly across the college/department. Other analyses, such as post hoc tests, could provide more useful information about subgroup differences, and they may help inform emergency management policies for universities.

Conclusions and Implications

This study explored the role of infrastructure in a large public university in the Philippines as it related to student satisfaction. The study used a convergent parallel mixed-methods research design with quantitative measures of satisfaction on several related components of the university infrastructure as well as qualitative responses from over 1,600 students. The study finds that students were generally satisfied with several aspects, such as cleanliness of the library, medical services, and the student portal; yet, dissatisfied with unreliable Wi-Fi, the poor state of restroom maintenance, the poor number of canteens provided, and equitable access to recreational space.

The analysis also illustrated satisfaction levels varied greatly by year-level and gender of respondents; surprisingly, fourth year students in some areas reported lower levels of satisfaction than third year students, suggesting it is possible that students became accustomed to using the facilities over time and a bar set for satisfaction continues to incrementally increase with time. At the same time, there were gender differences that illuminated the need to recognize different perspectives from women and men regarding the facilities, and inclusivity should be reflected in organizational responses to evidence. Overall, this research conveys the need for both a common approach to examining evidence, as well as a data-informed, student-centered approach to formulate campus development.

Moreover, this research has indicated that physical (particularly) and digital learning environments impact student satisfaction, but also student engagement, well-being, and academic success. The study argues that in order to achieve equitable, high-quality higher education, funding for reliable, accessible, and well-maintained infrastructure could not be considered a luxury for the few but making an investment in public good. Institutions should make investments and focus on development planning to develop infrastructure that is based on evidence of systematic problem-solving with a focus on learner-centeredness rather than one-size-fits-all solutions.

More generally, the findings lend weight to the argument that student satisfaction should be a key measure of institutional quality. By being attuned to student voice and taking notes of feedback through institutional strategic planning, universities can create learning environments that support academic integrity, holistic development of students, and student retention. Therefore, this research contributes to continuous improvement for quality across the education sector in that it advocates for evidence-based infrastructure maintenance, planning with knowledge, with a view to extending a shared vision for infrastructure in higher education across all post-secondary institutions.

Recommendations

This study suggests the following recommendations to support student satisfaction and campus improvement for the university:

Improve and Maintain Comfort Rooms and Sanitation

With the volume of concern over the cleanliness of restrooms and amenities (bidets, hand soap, proper locks) and maintenance, the university needs to prioritize the checking routine and cleaning schedule of comfort rooms and sanitation areas. By committing to the immediate improvement of comfort rooms, we can start to immediately affect health, hygiene, and overall student satisfaction on campus.

Provide and Improve Recreational and Study Areas

To help support student wellbeing and pedagogical engagement, the university should focus on retaining spaces for student lounges, study areas, shaded outdoor spaces, and recreation facilities. Develop more spaces beyond the bare minimum, accessible lounge-like areas where students can relax or study as part of a group experience collectively, to better develop the feeling of a welcomed and vibrant campus space.

Update Wi-Fi Connectivity and Digital Services

To achieve meaningful student results, Wi-Fi access is critical to success. The university must commit to updating Wi-Fi access for additional coverage in all buildings, increasing bandwidth, and consistently providing digital access equity for all students. Increase technical support and institutional commitment to digital literacy programs to achieve maximum utility of IT services.

Improve the Classroom Environment

The classrooms must aim to provide proper ventilation, overall maintenance, and updates to ensure student access; and increase the continuing growth of the student body. In order to engage student learning, there should be sustained physical improvements to classroom square footage, air conditioning, ergonomic seating, and a commitment to consistent maintenance checks in place.

Update and Improve Canteens

There was a collective concern regarding crowded confines, poor ventilation, and seating in the current canteen areas; the university should respond accordingly in redesigning and improving these canteen provisions: Improve the comfort of student dining areas to support students' long-term retention on campus; improve social engagement by providing comfortable dining areas; and support students' overall satisfaction.

Standardization of Services

With significant differences in student participation and procedural satisfaction noted between colleges and year level, these experiences continue to occupy the students' memory, while greater overall satisfaction can be fostered through promoting a consistent quality of the facilities and support across all academic units. Institutionally encourage colleges that scored the lowest in satisfaction with facilities to improve through institutional improvement and development of targeted student services.

Health and Wellness

The university should maintain continued prioritization of access to mental health services, wellness, and emergency response, recreation facilities that holistically develop well-being, or students who need urgent, ongoing mental health supports. Focused and intentional health and well-being and mental health supports will assist in meeting students' physical needs and supporting their psychological and mental health.

Sustainability and Campus Community

Students showed their value for clean, green campuses. The university must deliberately align sustainability objectives with the current needs and potential of the institution and consider expanding its waste management systems: Increase quantities of green spaces, provide a well-lit outdoor campus, albeit at night; and improve noise associated with the location and air pollution to ensure sustainability to meet students' needs to learn in a vibrant, clean place.

Feedback Mechanism

The university should provide ongoing feedback through satisfaction surveys and incorporate informal feedback and student consultation methods. The desire to make decisions predicated on data helps to develop a consistent approach to address a student's needs and development considerations in terms of supporting student satisfaction.

Inclusive Service and Development Planning

Improvement of any facility or service that accommodates students should be inclusive, consider longitudinal engagement and consultation with students, and clearly identify inclusivity of the student body through collaborating internally with different academic units. This needs to foster infrastructure and services that are truly responsive to the student body, while realistically aligned with local, national, and international characteristics of quality education.

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Declaration of Interest

The authors declare no competing interest.

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