Received: 23rd August 2025, Accepted: 28th August 2025, Published: 30th August 2025

INTERNATIONAL JOURNAL OF REAL ESTATE
IJRE
ISSN: 2476-8073

CAMPUS GREENING, PROPERTY AESTHETICS, AND LEARNERS' COMFORT: THE CASE OF ADELEKE UNIVERSITY, EDE, NIGERIA

Ankeli, Ikpeme Anthony[1] and Lawal, M. Oladimeji[2]

[1&2]Department of Estate Management and Valuation, Federal Polytechnic, Ede, Osun, Nigeria.
Corresponding email: thonyankeli@gmail.com +2348033543341

DOI: *https://doi.org/10.5281/zenodo.17008069*

ABSTRACT

The significance of greening our campuses and enhancing their scenic beauty is increasingly recognized as vital for supporting student well-being, boosting academic engagement, enhancing property aesthetics and shaping institutional identity. This research sets out to explore how property, greening aesthetic appeal, and student comfort interact at Adeleke University, Ede, Nigeria. The study employed a mixed-methods research approach, utilizing structured questionnaires, field observations, and in-depth interviews to gather insights into students' perceptions and experiences of their campus environment. The results indicate that property aesthetics, green spaces and visually appealing areas significantly improve students' psychological comfort, sense of belonging, and overall satisfaction with their academic surroundings. Moreover, well-kept greenery, shaded spots, and artistic sculptures contribute to students' relaxation, stress relief, and cognitive focus. This research highlights the importance of intentional landscape design and ecological care in fostering effective educational settings. It advocates for the strategic development of campuses as living laboratories and sustainable greening initiatives to strengthen the connection between built environments and nature.

Keyword: *Campus greening, Property, Aesthetics, Learners' Comfort, Adeleke University.*

1. Introduction

Issues of physical learning environment has increasingly become a subject of global attention and scholarly concern, particularly in the area of students' well-being, comfort, and academic performance. The recent innovations and revolution in the global educational institutions of higher learnings in order to meet the evolving 21st-century learning expectations, has placed emphasis on the need for a shift beyond mere curriculum and pedagogy to embrace both spatial and property aesthetics, ecological sustainability, and students' psychological comfort, targeted at enhancing the quality of learning and livelihood of students. Olorunfemi et al. (2022); Alshuwaikhat and Abubakar (2008) argued that campus greening and the aesthetics of institutional property are integral components of a conducive learning environments. University campus greening, in this case, include the deliberate integration of gardens, trees, lawns, and other natural features into campus landscapes - has proved to have positively contributed to the comfort and well-being of learners. Previous studies as Keniger et al., (2013) and Ulrich et al., (1991) have shown that green spaces within academic environments foster social interaction, reduce stress, and improve learners' concentration. Abimbola and Agboola

(2023) observed that, most Nigerian universities, particularly, universities in the South-Western states of the country have shown that, green infrastructure meaningfully stimulate better students' academic performance and mental health. Their study accentuated the promotional effect of campus vegetation on environmental quality and its provision of psychological relief for learners navigating academic pressures.
Similarly, physical infrastructures' aesthetic quality as architectural design and landscape layout have contributed positively to learners' experiences. This assertion corroborate the findings of Kweon, Sullivan, and Wiley (1998) that aesthetically pleasing spaces support attention restoration and emotional well-being. Ayuba et al. (2021) study of Nigerian University, specifically, the Federal University of Technology Akure, revealed that, property aesthetics, together with clean surroundings, well-maintained buildings, and orderly green areas, were associated with students' increased satisfaction and institutional pride. Likewise, Terblanche and Khumalo (2024) asserted that it has been observed in South African institutions, that the inclusion of natural elements in building space design enhances students' cognitive functioning thereby improving learning area preferences.

Notwithstanding all these benefits, property aesthetic and ecological quality in most institutions of higher learnings in Nigerian, particularly public universities and polytechnic campuses remains suboptimal and unappealing. Ogunode et al. (2023) attribute this challenge to the lack of maintenance culture or the lackadaisical attitude of the institution managers towards green initiative, limited resources and environmental awareness and the lack of regulatory standards on green infrastructure. The National Universities Commission (NUC), the National Board for Technical Education (NBTE) and the National Commission for Colleges of Education (NCCE) which are bodies charged with the responsibilities for the approval and governing of academic institutions in Nigeria, pay more attentions to land size and other educational equipment than the ecological sustainability on campuses for accreditation metrics. The consequences of not mainstreaming ecological sustainability and other environmental concerns in institutional planning and budgeting are often monumental. Though, some first generation institutions as Obafemi Awolowo University, University of Nigeria, University of Ibadan, Ahmadu Bello University and University of Lagos and a few others have standard botanical garden used for both academic and social or recreational services, while others in an attempt to promote environmental stewardship among learners have launched a Green Campus Initiative (NatureNews, 2022).

The concept of learners' comfort is multidimensional as it incorporates social, physical and psychological dimensions. The provisions of both tangible and intangible amenities and benefits as trees with canopies, shaded walkway, seat out, well design lecture theaters and halls, open lawns and sensory engagement contribute to improve learning outcome. Douglas and Gifford (2001) further argued that comfort in learning environments motivate learner to concentrate, stimulate their memory retention, and academic persistence. Closely related to this assertion are the submissions of Oyebanji and Aluko (2022); Abiodun and Ukoje (2021) and Gardezi et al. (2020) that green interventions reduces learners exposure to thermal radiation, contribute to passive cooling and the good perceptions of the campus by students to be a beautiful and well-kept environment, in their exhibition of positive academic behavior and institutional loyalty.

Nevertheless, a significant gap exists in literature regarding private universities in Nigeria, particularly those in semi-urban locales like Adeleke University in Ede, Osun, Nigeria. A privately owned faith-based educational Institution known for its academic excellence, discipline, serene environment, visible commitment to maintaining green spaces and aesthetic

https://doi.org/10.5281/zenodo.17008069

splendor. Reasonable attention has been accorded public universities, especially, the first generation universities due to their years of existence, scale and funding challenges, while issues relating to the learning environment of private owned higher institutions in the country remain under-researched. Hence, the need to assess the issues of campus greening, property aesthetics and learners comforts of an emerging private institution as Adeleke University, founded in 2011, with a rising student population, an aggressive but determined commitment to all-inclusive education become imperative. Its peri-urban locale offers a distinctive prospect to examine how greening and aesthetic practices impact learners in less urbanized contexts.

This study therefore, evaluates the relationship between campus greening, property aesthetics, and learners' comfort at Adeleke University with the aim to fill the critical gap in knowledge by exposing how ecological and property aesthetical factors shape learners' academic experiences in a private tertiary institution. The investigation is guided by the following research questions: What is the extent and quality of campus greening and property aesthetics at Adeleke University? How do learners perceive their comfort in relation to the campus environment? What is the correlation between greening, aesthetics, and students' academic engagement?

2. Literature Review

The word higher institutions learning environment goes beyond the mere classroom environment to include the ecological, visual, libraries and the entire campus spatial quality. Issues relating to campus greening and property aesthetics in determining the comfort, academic productivity and satisfaction of learners have recently become issues of typical discuss among academics and researchers. Earlier studies as Keniger et al., (2013), Alshuwaikhat and Abubakar, (2008), Douglas and Gifford, (2001) and Ulrich et al., (1991) argued that the presence of greenery and pleasant structural aesthetics on campuses have positive influences on the mental health, reduced stress, enhanced concentration, satisfaction and improve academic productivity among learners. This actually demystify the common believe that vegetation in our educational campuses help in its beautification and ecological sustainability. Kaplan and Kaplan, (1989) further observed that, as explained through environmental psychology, predominantly, the Attention Restoration Theory (ART) which is of the view that, depleted cognitive resources by academic tasks can be restore by natural environments. Hence; the integration of plants as gardens, trees, shrubs, lawns and other vegetation in our campuses are often refers to greening.

Several studies have been conducted in Nigeria on campus greening but none has linked campus greening, property aesthetics with learners' comfort. For instance, Abimbola and Agboola (2023) undertook the study of six universities located in southwestern Nigerian and averred that, they exist positive correlation between the reported students' academic comfort, mental stability and the presence of green infrastructure. The basic underpinning factor of the scholars findings are in the area of the provision of relaxation arena especially during examination period to the neglect of such important variable as the impact of the institutions' physical structure on the psyche of the learners. Furthermore, Oyebanji and Aluko (2022) submitted that students in Ladoke Akintola University of Technology Ogbomosho, Oyo state, Nigeria preferred areas with tree shades and tree-lined pathways for their social and academic interactions. This again support the assertions that the greening of an academic areas are not only for ecological sustainability but engender better academic attainment. In linking green campus spaces to improved academic excellence, Terblanche and Khumalo (2024) in their study of the University of the Witwatersrand concluded that the university students feel more relaxed and are satisfied studying within environments that are naturally embedded, which they

described as "rejuvenating" and "inspiring". This is congruent with the earlier assertion of Gardezi et al. (2020), who stated that students in institutions with better green campuses tend to exhibit superior institutional loyalty and motivation compare with others in a more green sterile settings.

Conversely, campuses of institutions of higher learning in Nigeria, particularly, public universities and polytechnics, habitually, faces substantial constraints in the initiation, implementation and adequate maintenance of green infrastructure development on their campuses. The reasons for these are not far-fetched as previous scholars as Ogunode et al. (2023) has adduced the lack of adequate and implementable policy frameworks, insufficient funding, and poor maintenance culture as major barriers. Though, private universities and polytechnics are not exempted from these constraints but only seems to be better off. However, others attributed the green infrastructure deficit to attitudinal inclination of the educational institution managers and the nonexistence of sustainable landscape planning for the institutions. This has often made various Nigerian educational institution campuses vulnerable to erosion and other environmental degradation and hazard, with untold consequences for learners' comfort and ecological resilience. Although campus greening accentuates vegetation and environmental sustainability, real property aesthetics incorporate the wider pictographic and spatial design of campus amenities, as the physical structures, pavements and sidewalks/walkways, furniture and fixture, lighting, and signage among others. Aesthetics on the other hand have profound influence on students' university experience, particularly, how they navigate the university spaces. This could meaningful impact the psychological comfort of the students resulting in reflective academic imports. Hence, Kweon, Sullivan, and Wiley (1998) contend that environments perceived as attractive tend to enhance emotional well-being, social cohesion, and attention retention.

Ayuba et al. (2021) carried out a study on Federal University of Technology, Akure campus and found that visual appeal, mostly in the upkeep of common areas and architectural harmony of structures on campus had a robust influence on students' satisfaction with their learning environment. Other previous studies have also highlighted the significant role of well-maintained, pleasing, orderly and clean settings and associated same with perceptions of pride, better academic performances and safety. The study of Ukoje (2021) further affirmed that students at the University of Ibadan, Nigeria preferred outdoor learning spaces that provides visual harmony and physical comfort through shade and air circulation to the conventional classroom spaces. As a holistic and multidimensional construct embracing socio-emotional, physical and the academic well-being of students within the university campus environment, issues concerning students' comfort requires full attention of the discussants. Douglas and Gifford (2001) opined that, the mere absence of discomfort does not tantamount to comfort, rather, the existence of adjuvant stimuli as spatial, visual and social factors that enhances and compliment both psychological safety and other academic interactions. A conducive environment is a good platform for a positive academic performances. Ogunode et al., (2023) observed that, poor sanitation, chaotic landscapes and overcrowded lecture halls that often exacerbate psychological stress and academic disengagement are the basic challenges of students' comfort in most Nigerian universities. Nevertheless, students in Nigerian universities with well-planned architecture and landscapes, greening, walkways and lawns report increased levels of satisfaction and motivation. Ede et al. (2020) studied Covenant University campus greening and found that, students who perceived the campus as green, safe, and aesthetically pleasing are significantly more likely to report comfort and academic focus.

https://doi.org/10.5281/zenodo.17008069

Despite the growing body of research on campus environments, most studies in Nigeria focus on public universities due to their larger scale and systemic issues. Private institutions as Adeleke University remain under-represented in scholarly discourse, despite their unique spatial designs, funding mechanisms, and student demographics. Private universities often have greater autonomy in infrastructure development and are thus well-positioned to implement green and aesthetic policies. Yet, there is limited empirical work examining how these environmental features influence student comfort in such settings. The identified research gap is particularly relevant for a holistic campus planning and student affairs policies. This study, focus on Adeleke University, and seeks to bridge the gaps through empirical insights into how environmental design affects students comfort in a private university context. The findings aim to inform campus planning, architectural policy, and educational management in Nigeria and beyond.

3. Research Methodology

Mixed-methods research approach integrating both qualitative and quantitative methods was adopted for this study in order to explore the relationship that exist between learner comfort, campus greening and property aesthetics at Adeleke University, Ede, Nigeria. The rationale for the choice of a mixed-methods approach, apart from the strengthening of the depth and validity of the findings, is the fact that, it allow for an all-inclusive analysis through the combination of quantitative data for generalizability and for in-depth understanding of the current situations through qualitative insights without the manipulation of the research environment. It also allow for the collection of both qualitative perceptions and quantitative data that could ease the description, interpretation, and evaluation of existing phenomena (Creswell, 2014).

The respondents for the study are the 2024/2025 academic session undergraduate intake from four out of the six faculties in the university, with an estimated intake of about 3,000 students. The sample frame include all the registered intake across the selected faculties in the University. To ensure fair representation of these academic faculties, the study adopted a stratified random sampling technique. The researcher employed the Cochran's formula to determine the sample size for the study. Out of the 341 questionnaires prepared and administered on the respondents, 304 were adequately completed and returned for analysis, giving about 89% response rate. Furthermore, the study purposively selected 6 other respondents based on their roles in campus planning, maintenance, or student representation who are from the property management/maintenance unit, parks and garden and students union leadership as key informants for semi-structured interviews. Data collected were triangulated which enhances the robustness of the interpretations (Tashakkori & Teddlie, 2010).

To determine the sample size for the study, the researcher employed the Cochran's formula as adopted by Ankeli et al., (2025) for finite populations and a 95% confidence level with a margin of error of 5%, the sample size was determined as thus:

$$n_0 = \frac{Z^2 pq}{e^2} \quad (1)$$

$$n = n_0 / (1 + (n_0 - 1)/N) \quad (2)$$

Where:

Z = 1.96 (standard normal deviate for 95% confidence)

p = 0.5 (assumed population proportion)

q = 1 – p = 0.5

e = 0.05 (margin of error)

N = 3000 (total population)

The structured questionnaire used to collect primary data for this study was titled "Campus Environment and Learners' Comfort Survey (CELCS)," divided into four sections. This consist

of closed-ended questions with a 5-point Likert scale used to assess the demographic profile of the respondents, students' perceptions of campus greening, property aesthetics appeal, and comfort. Questions contained in the questionnaire covered areas as the perception of students on the campus aesthetics and visual satisfaction, accessibility to green spaces, and perceived impact on the academic performance and mental well-being of the students. The researchers also undertook a systematic field observations of the campus to assess the physical state of green spaces, their contribution to the campus aesthetics, spread across the campus, and the presence of other aesthetic elements as building arrangements, sidewalks/walkways, seat out among others. While the semi-structured interviews conducted showcase and offered the qualitative data on students' perceived experiences and inclinations towards campus aesthetics, as well as staff perceptions on planning, maintenance, and policy considerations. The respondents' responses were measured on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), and appropriately ranked. The study analyzed the quantitative data using both descriptive and inferential statistics in order to established the relationship that exist between the variables (aesthetics, campus greening and learners comfort) using SPSS version 26.0. The qualitative data from field observations and oral interviews were thematically analyzed. Those themes considered to be common - aesthetics, comfort, awareness of campus greening plan and its accessibility were identified, isolated and interpreted to compliment the quantitative findings.

More so, to ensure the research validity and reliability, the researcher engaged environmental psychologist and education planning experts to validate the prepared questionnaires before its eventual administration on the respondents. Pilot survey involving 30 students was conducted in a similar institution and a cronbach's alpha coefficient of the three variables used are 0.82 for campus greening; 0.85 for property aesthetics and 0.88 for learners' comfort. All the achieved values exceed the 0.70 acceptable threshold; hence, indicating an acceptable reliability. Data for the study were collected within four weeks through self-administered questionnaires with the help of three research assistants. The researcher obtained necessary informed consent from all participants, while Interviews were conducted in-person, recorded with permission, and later transcribed verbatim and triangulated.

4. Data Presentation, Analysis and Discussion of Findings

The results of the research findings from the university are presented in this section. The analyzed data explored the relationships between property aesthetics, campus greening and learners' comfort. Findings from both quantitative and qualitative data collected are presented and interpreted in line with the existing literature.

Demographic Profile of Respondents

The demographic profile of the respondents for the study is presented in Table 1. The Table revealed that out of the 341 questionnaires administered, only 304 representing 89% response rate were adequately filled and returned for analysis. The demographic summary is presented in Table 1

Table 1: Demographic Profile of Respondents

Variables	frequency	% Rate
Gender		
Male	160	53
Female	144	47
Total	304	100
Faculties		

https://doi.org/10.5281/zenodo.17008069

Science	76	25
Art	76	25
Basic Medical Sciences	92	30.3
Engineering	60	19.7
Total	304	100

Source: Field survey, (2025)

Frequency distribution of respondent faculty by faculty: Faculty of Science (25%), Faculty of Art (25%), Faculty of Engineering (19.7%) and Faculty of Basic Medical Sciences (30.3%)

Students' Perception of Campus Greening in the Institution

The respondents rated the presence of vegetation and their quality, shaded walkways, tree-lined spaces and gardens on campus. Table 2 present the mean ratings of the campus greening items.

Table 2: Mean Rating of Campus Greening Variables at Adeleke University

Variable	Mean	Standard Deviation	Interpretation
Tree cover along sidewalk	4.21	0.84	Very satisfactory
Green Lawns and Open Spaces	4.05	0.90	satisfactory
Maintenance of Vegetation	3.72	0.97	satisfactory
Access to Shaded sit-outs	3.88	0.89	satisfactory
Overall greening promotes relaxation	4.09	0.81	Very satisfactory

*Source: Field survey, (2025) *Overall mean; 3.99 - revealed a significant positive perception of campus greening.*

Students' Perception of Property Aesthetics

The respondents' perceptions of the building design, positioning, colour matching, combination and coordination, cleanliness and the general spatial arrangement of structures on campus are presented in the Table below.

Table 3: Mean Rating of Aesthetic Qualities

Variable	Mean	Standard Deviation	Interpretation
Building design	4.02	0.78	Very satisfactory
Cleanliness and orderliness of the environs	3.94	0.83	satisfactory
Colour schemes and visual harmony	3.85	0.91	satisfactory
Outdoor furniture and fixtures quality	3.63	0.96	Fair
Night lighting and signage	3.57	1.03	Fair

*Source: Field survey, (2025) *overall mean: 3.80 - indicating a moderately positive perception of property aesthetics*

The importance of visually pleasing settings particularly in an academic area cannot be overemphasized. Previous studies have shown that clean and orderly surroundings, appealing building architecture, coordinated spatial landscape and organized academic activities influences students' emotional states and attitudes to academic task. Devlin (2018) argued that aesthetic quality in learning environments fosters a sense of pride, safety, and comfort among students. Furthermore, Cheryan et al. (2014) stressed that aesthetic features such as lighting, colour harmony, and spatial layout play critical roles in shaping students' cognitive engagement and perceptions of institutional quality. Analysis of this study revealed that, although campus aesthetics had a slightly lower predictive effect than greening ($\beta = 0.34$, $p < 0.001$), the relationship remains significant and meaningful and the number of students that rated campus property aesthetics positively also reported feeling relaxed feeling, high level motivation, and safety. The synergy between these variables reflects Douglas and Gifford's (2001) Ecological Design Theory (EDT), which suggested that, the integration of environmental features influence psychological and behavioral outcomes in educational contexts. The work of Oyesiku and Oduwaye (2020) in Nigeria, also reported that the physical arrangement and visual appeal of campus property positively impacted student satisfaction and retention. The findings of their study was echoed by the respondents' comments, particularly, the university students who expressed appreciation for well-designed academic blocks and

scenic landscapes, although they also identified few areas needing improvement, such as some of the dull lighting in some parts of the university campus and shaded furniture. In the same vein, Lu and Fu (2023), who studied Chinese universities reported that students these universities rated their comfort highest in zones where natural and built elements are properly integrated.

Learner Comfort on Campus

Students' emotional senses, cognitive and physical comfort in the university campus was measured through perceptional ranking of the variables

Table 4: Mean Rating of Learner Comfort

Variable	Mean	Standard Deviation	Interpretation
The green open spaces makes me feel relaxed	4.19	0.79	satisfactory
The campus layout makes me happy and focus on my study	4.01	0.87	satisfactory
I often enjoy having fun with friends at the garden	3.94	0.90	satisfactory
I feel comfortable taking a walk around campus using the sidewalk	4.08	0.81	satisfactory
I feel proud with less stress looking at the physical setting of the school	3.87	0.93	satisfactory

*Source: Field survey, (2025) *overall mean: 4.02 - revealing that the learners feel comfortable in the university environment.*

The mean rating in Table 4 shows all round satisfactory result; hence, the Attention Restoration Theory (ART) by Kaplan and Kaplan's (1989) remains germane. The theory posits that natural environments, through "soft fascination," rendered opportunities for mental convalescence from directed attention fatigue, which is commonly found among students in tertiary institutions. In Adeleke University, the availability of well coordinate green spaces/open green lawns and tree-lined walkways probably serves the restorative function, as reported by the respondents and the interview narratives. The work of Alzyoud and Kheir (2021), who assessed universities in the Middle East and discovered that students' exposure to campus vegetation positively predicted improved mood and greater time spent studying outdoors further provided a supporting evidence. Their findings mirror the current students' academic performances, where green spaces were associated with relaxation, reduced stress, and greater perceived comfort.

Pearson Correlation Analysis

The relationship between the variables were tested using Pearson's correlation matrix as presented in Table 5.

Table 5: Correlation Matrix

Variable	1. Campus Greening	2. Property Aesthetic	3. Learners' Comfort
1. Campus Greening	1.000		
2. Property Aesthetics	0.516**	1.000	
3. Learners' Comfort	0.612**	0.541**	1.000

Note: **p < 0.01

The Table revealed a positive strong correlation between campus greening and students' comfort ($r = 0.612$, $p < 0.001$) and moderately strong positive correlation between property aesthetic and students' comfort ($r = 0.541$, $p < 0.001$). This is in line with the general believe that environmental quality positively influences learner's ability and well-being.

Multiple Regression Analysis

The study further adopted a regression model to evaluate the predictive power of the variables, which are campus greening, property aesthetics and the learners/students' comfort on campus. The outcome is presented in Table 6.

Table 6: Regression table for Campus Greening and Property Aesthetics

https://doi.org/10.5281/zenodo.17008069

R	R^2	F-Stat	P-value
0.673	0.453	134.69 (2,324)	0.001

Coefficients

Predictor	B	SE	Beta	t	p
(constant)	1.12	0.23	-	4.87	0.000
Campus Greening	0.52	0.06	0.47	8.67	0.000
Property Aesthetics	0.36	0.07	0.07	6.34	0.000

The analysis revealed that the combination of campus greening and property aesthetics produces about 45.3% of the total variance in students' comfort on the university campus. All the predictors are statistically significant with campus greening having a relatively slight stronger effect. Furthermore, the strong positive correlation ($r = 0.612$, $p < 0.01$) and significant predictive value of campus greening on students' comfort with ($\beta = 0.47$, $p < 0.001$) align with a growing body of global research accenting the revitalizing and cognitive benefits of campus greening. Hartig et al. (2014) asserted that, natural elements in an academic settings often cut down stress effect and encourages attention revitalization, which in turn enhances learning outcomes. Similarly, Omole and Aribigbola (2022) observed that students in universities with well-maintained green infrastructure recorded better levels of academic performances and satisfaction with reduced emotional stress.

5. Conclusion and Recommendations

The study evaluates the influence of campus greening and real property aesthetics on the comfort of Adeleke University students. It adopted a mixed-methods research design approach, involving survey data from 341 respondents and qualitative interviews. The research revealed that, the variables that is, the open space greening and the real property aesthetic quality have a statistically significant relationships with students' comfort in the university. The result of the correlation and regression analyses revealed a stronger predictive influence of $\beta = 0.47$ for campus greening on students' comfort when compared with the $\beta = 0.34$ for property aesthetics. Hence, the R^2 statistic of these variables explained about 45.3% of the total variance in the perceived students' comfort on campus.

Apart from enriching the quality of the analysis and pointing out students' perception of the university campus environment, findings of the qualitative data further affirmed the postulations of the Ecological Design Theory (EDT) and the Attention Restoration Theory (ART) of both Douglas and Gifford, (2001), Kaplan and Kaplan, (1989) which asserted that a well-designed naturally built-up settings positively influences the satisfaction level and psychological well-being of users.

The study therefore enriches the body of knowledge particularly in campus real property development and maintenance, sustainable campus greening and planning, environmental psychology, and student welfare in the African context. It further stresses the significance of perceiving academic infrastructures beyond a mere functional and architectural enclosures, but rather, an environmentally designed entity that shapes the academic, emotion, and social well-being of students who are leaders of tomorrow. Based on the findings of the study, the following recommendations are proposed for academic institutions in the country. First, academic institutions in Nigeria should invest more in green infrastructure through tree planting/botanical gardens, creation and maintenance of lawns and walkways. These enhances outdoor learning and relaxation with positive psychological effects.

Again, the need for the institutionalization of periodic and routine building maintenance and landscaping on our campuses cannot be over emphasized. This will not only help in boosting the aesthetic quality of the campuses, but also enhances visual harmony, sustain functional quality of the university assets, promote environmental cohesion and improve students' academic performances.

Furthermore, the provision of learning amenities as study kiosks in green zones and the incorporation of input from students in campus planning and design through feedback mechanisms could bring about satisfaction and encourages academic and social interactions in a natural settings; hence, foster both learning comfort and productivity.

The Nigerian tertiary institutions, particularly, Adeleke University will contribute more to her vision and the broader goals of qualitative and sustainable university education in Nigeria through human- centered campus development.

References

Abimbola, O. A., and Agboola, R. A. (2023). Green infrastructure and students' academic comfort in selected universities in South-West Nigeria. *Journal of Environmental Studies and Education,* 4(2), 112–126.

Abiodun, O. M and Ukoje, J. E. (2021). Influence of landscape design on thermal comfort in Nigerian university campuses: A study of the University of Ibadan. *Journal of Environmental Design and Management*, 13(1), 45–60.

Ankeli, I A; Adebowale, A P; Okoh, G F and Sonibare, K (2025). Green Building Certifications and Sustainable Development in Osogbo, Nigeria: The Issues and Challenges. *International Journal of Real Estate (IJRE), 1(2), 160-176* https://doi.org/10.5281/zenodo.15575705

Alshuwaikhat, H. M and Abubakar, I. (2008). An integrated approach to achieving campus sustainability: Assessment of the current campus environmental management practices. *Journal of Cleaner Production*, 16(16), 1777 -1785. https://doi.org/10.1016/j.jclepro.2007.12.002

Alzyoud, M. S and Kheir, S. M. (2021). Impact of green spaces on academic performance and psychological well-being of university students. Environmental Psychology and Sustainability, 9(3), 115–129.

Ayuba, H. K., Oyetunji, O and Ajayi, M. A. (2021). Evaluating the effect of property aesthetics on students' satisfaction: Evidence from the Federal University of Technology, Akure. *Nigerian Journal of Built Environment*, 11(3), 29–42.

Cheryan, S., Ziegler, S. A., Plaut, V. C and Meltzoff, A. N. (2014). Designing classrooms to maximize student achievement. Policy Insights from the Behavioral and Brain Sciences, 1(1), 4–12.

Devlin, A. S. (2018). The Psychology of Environmental Design. Routledge.

Douglas, D., and Gifford, R. (2001). Environmental affordances and affective experiences on campus: The implications for student satisfaction and retention. Journal of Environmental Psychology, 21(1), 85–97.

Ede, O. A., Kolade, A. A., and Folarin, O. T. (2020). Environmental aesthetics and learners' satisfaction in Nigerian private universities: A case study of Covenant University. *Journal of Educational Research and Reviews*, 8(2), 101–115.

Gardezi, A. I., Mahmud, S. M and Hasani, S. M. (2020). Green campus and student learning: The mediating role of engagement and comfort. Sustainability, 12(8), 3250. https://doi.org/10.3390/su12083250

Hartig, T., Mitchell, R., de Vries, S and Frumkin, H. (2014). Nature and health. Annual Review of Public Health, 35, 207–228.

Kaplan, R and Kaplan, S. (1989). The Experience of Nature: A Psychological Perspective. Cambridge University Press.

Keniger, L. E., Gaston, K. J., Irvine, K. N and Fuller, R. A. (2013). What are the benefits of interacting with nature? International Journal of Environmental Research and Public Health, 10(3), 913–935.

Kellert, S. R., Heerwagen, J. H and Mador, M. L. (2008). Biophilic design: The theory, science, and practice of bringing buildings to life. Wiley.

Kweon, B. S., Sullivan, W. C and Wiley, A. R. (1998). Green common spaces and the social integration of inner-city older adults. Environment and Behavior, 30(6), 832–858. https://doi.org/10.1177/001391659803000605

Lu, X and Fu, Y. (2023). The combined effect of green spaces and architectural design on university students' perceived comfort. Journal of Campus Design and Wellbeing, 6(2), 33–50.

NatureNews. (2022). University of Lagos botanical garden: A green oasis for learning and leisure. https://www.naturenews.africa/unilag-botanical-garden

Ogunode, N. J., Yusuf, K. B and Abubakar, I. S. (2023). Challenges of maintaining green campuses in Nigerian public universities. African Journal of Sustainable Environment, 9(1), 19 - 33

Omole, F. K and Aribigbola, A. (2022). Environmental quality and student satisfaction in Nigerian university campuses: A case study approach. Journal of Sustainable Cities and Society, 15(4), 89–103.

Olorunfemi, A. F., Ayoola, A. O and Onifade, S. T. (2022). Enhancing student learning through sustainable campus landscape design in Nigeria. Landscape Research Record, 12(1), 56–71.

Oyebanji, A. O and Aluko, O. (2022). Spatial planning and environmental maintenance in Nigerian university campuses. African Journal of Environmental Design, 4(1), 67–80.

Oyesiku, O. O and Oduwaye, L. (2020). University campus aesthetics and student retention: Evidence from southwestern Nigeria. International Journal of Higher Education Research, 5(2), 104–120.

Scannell, L and Gifford, R. (2010). Defining place attachment: A tripartite organizing framework. Journal of Environmental Psychology, 30(1), 1–10. https://doi.org/10.1016/j.jenvp.2009.09.006

Terblanche, R and Khumalo, N. (2024). Biophilic learning environments and student well-being in South African universities. Journal of Educational Environments, 6(1), 75–92.

Ulrich, R. S., Simons, R. F., Losito, B. D., Fiorito, E., Miles, M. A and Zelson, M. (1991). Stress recovery during exposure to natural and urban environments. Journal of Environmental Psychology, 11(3), 201–230. https://doi.org/10.1016/S0272-4944(05)80184-7