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RESEARCH ARTICLE

STUDENTS SATISFACTION TOWARDS SUSTAINABLE PRACTICES IN HIGHER EDUCATION: EVIDENCES FROM PLS-SEM ANALYSIS

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ABSTRACT

This study examined the effect of various dimensions of sustainable practices in higher education institutions (HEIs) on students' satisfaction across various arts and science colleges under the University of Calicut. The extent to which various dimensions of sustainable practices influenced on higher education students' satisfaction was investigated using PLS SEM analysis. A sample of 358 students from various arts and science colleges was collected using a structured survey instrument. The study revealed that sustainable campus, sustainable infrastructure, sustainable curriculum, sustainable learning practices, and sustainable admission significantly influenced students' satisfaction. Notably, sustainable campus and sustainable infrastructure were the key dimensions of students' satisfaction in higher education institutions. This study provides a roadmap to the various stakeholders of HEIs on how sustainable practices can lead to higher education students' satisfaction and thus contribute to green campus initiatives. Furthermore, findings are expected to be beneficial for the policymakers, educational institutions, academicians, and the general public.

Keywords: *Sustainable practices, sustainable education, sustainable practices in higher education, students' satisfaction.*

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1.1. Introduction

The mounting environmental concerns have necessitated society to embrace sustainable practices (Murray, 2018) and sustainable development (Hsieh & Yeh, 2024). Educational institutions, governments, and various organisations have been actively engaged in fostering sustainable practices to address economic growth and environmental imbalances (Berchin et al., 2021). Education for sustainable development denotes the process of transforming education institutions in pursuit of the United Nations sustainable development goals (SDGs) (Isenmann et al., 2020). Higher education institutions (HEIs) play a pivotal role in integrating sustainability concepts into higher education through knowledge, innovation, governance,

and operations (Ankareddy et al., 2025), thereby achieving sustainable solutions for the environment and society (Aleixo et al., 2018; Zaleniene & Pereira, 2021).

The integration of sustainable practices is of prime importance for higher education institutions in developing a sustainable economy (Berchin et al., 2021). Students, academicians, and public at large are essential stakeholders in higher education to promote sustainable higher education (Chaudhary & Dey, 2021). Campus sustainability can be ensured through a comprehensive sustainable development policy framework using education, campus operations, research, and outreach activities (Filho et al., 2025). Moreover, it is fundamental to measure the perception of stakeholders at various levels of sustainable practices, which allows balancing institutional competitiveness and stakeholder expectations (Pedro et al., 2025).

Most notably, the perception and behaviour of students in achieving sustainable goals through institutional practices are important to consider (Chaudhary & Dey, 2021; Dagiliute et al., 2018). However, studies have shown that the implementation of sustainable practices in HEIs has been inconsistent (Jurgens et al., 2023). Most of the sustainability assessment tools in higher education context focused on theoretical or descriptive (Zhong et al., 2026) and qualitative aspects (Ankareddy et al., 2025). In addition, none of the previous studies sufficiently address students' satisfaction with various sustainable practices in higher education (Alm et al., 2022; Chaudhary & Dey, 2021; Lim et al., 2022; Nejati & Nejati, 2013). In light of this context, the current study seeks to validate various dimensions of sustainable educational practices from the perspective of higher education students. Thus, this study attempts to answer the following research question:

*RQ*1: what are the dimensions of sustainable practices in higher education institutions?
*RQ*2*:* How do sustainable practices in higher education institutions influence student satisfaction?

1.2. Literature review

Sustainable practices in HEIs

A sustainable higher education institution acknowledges and promotes sustainable practices, thereby mitigating the environmental impact of its campus operations (Zanellato & Tiron-Tudor, 2021). By disseminating sustainable knowledge and novel ideas to various stakeholders, HEIs play a pivotal role in addressing sustainability (Zaleniene & Pereira, 2021). Aleixo et al. (2018) argued that HEIs serve as catalysts for reducing sustainability impacts at the global level through academic activities, outreach programmes, community engagement and research initiatives. Moreover, HEIs are crucial to advancing sustainability, preferably through curricula, infrastructure development, campus operations, community engagement, and academic and research activities (Ankareddy et al., 2025).

Pandita and Kiran (2023) explored the effect of technology interface (TI) on students' sustainable learning satisfaction in sustainable higher education practices. The study assessed the effect of technology interface using three dimensions: cyber infrastructure, quality of e-content and technology-assisted facilities. Student satisfaction was measured from the employability, teaching, and learning perspective. Thus, technology driven education can be a major thrust towards sustainable online learning practices (Holst, 2023); therefore, ICT-enabled learning practices to enhance sustainability are important to consider (Angelaki et al., 2024). Ramanujan et al., (2019) investigated on curriculum integration in sustainable practices of HEIs. According to Chen et al. (2018), an industry-academia linkage is a pre-requisite for a sustainable curriculum, thereby bridging the gap between students' skills and industry requirements. Pedro et al. (2025) examined the economic, organizational, environmental, and social dimensions of sustainable development practices in HEIs. However, increased environmental awareness does not compromise the effective implementation of sustainable development practices in HEIs (Aldawsari et al., 2025). Based on the above arguments, the present study defines the dimensions of sustainable higher education practices to

be composed of **sustainable campus(**Dagiliute et al., 2018; Pedro et al., 2025; Sun et al., 2025**), sustainable infrastructure(**Ankareddy et al., 2025; Nejati & Nejati, 2013; Yadav et al., 2024**), sustainable curriculum(**Angelaki et al., 2024; Lim et al., 2022; Ramanujan et al., 2019**), sustainable learning practices (**Angelaki et al., 2024; Caird et al., 2015; Holst, 2023; Shard et al., 2024**),** and **sustainable admission(**Johora et al., 2022; Li & Xue, 2022; Man et al., 2023; Saha et al., 2022**).**

Students' satisfaction in sustainable practices

Recent research has provided important insights into students' behaviour in the field of sustainable practices in HEIs (Appuhamilage, 2019). Students' involvement and responsible contributions to sustainable campuses significantly impact their level of awareness and satisfaction with green campus initiatives (Dagiliutė et al., 2018). The perception of students towards ICT-enabled learning practices to enhance sustainability is important to be considered (Machado et al., 2017). Sun et al., (2025) explored user satisfaction with green campus and sustainable infrastructure. The findings indicate that considering students' behaviour, with scientific planning and public participation, HEIs can fulfil sustainable campus strategies. Pedro et al. (2025) found positive association between sustainable campuses and students' satisfaction in the context of university environment. In contrast, Angelaki, et al., (2024) observed that students were not satisfied with the engagement of higher education towards sustainability, and the study proposed an inclusive sustainable practice in ICT curricula with various students' awareness activities to support this engagement.

1.3. Hypotheses development

Sustainable campus and students' satisfaction

Green campus emphasises green infrastructure, green education and research, including green awareness among teachers and students (Sun et al., 2025; Zhou et al., 2025). Students' involvement in sustainable practices can be significantly promoted through environmental information and campus sustainability (Dagiliute et al., 2018). According to Pedro et al. (2025), students' satisfaction was positively influenced by sustainable development practises in HEIs in terms of social, economic, organizational, and environmental dimensions. Past studies have empirically confirmed that there are linkages between sustainable practices in higher education institutions and students' satisfaction (Chaudhary & Dey, 2021; Pedro et al., 2024; Sun et al., 2025). Based on the above discussion, this study proposes the following hypothesis:

H1: Sustainable campus positively influences students' satisfaction

Sustainable infrastructure in HEIs and students' satisfaction

Infrastructure facilities in HEIs comprise teaching-learning facilities, physical and digital resources, intellectual property, and emotional and networking infrastructure (Aithal & Aithal, 2023). Alammary (2024) explored the block-chain enabled digital infrastructure for students' enrolment across HEIs. Islam and Ali Khan (2023) examined the relationships between technological integration, infrastructure advancements, and sustainability initiatives in the higher education context. Jrad (2024) found a strong association between sustainable indicators, such as energy consumption, environmental responsibility, green infrastructure, and higher education student satisfaction. Kaplan (2015) investigated the extent of sustainable transportation on university campuses and confirmed that existing infrastructure inhibits sustainable transportation in academic settings. In an exploratory study, Nejati and Nejati (2013) examined on university students' perception of sustainable university through a four dimensional structure comprising, land use and planning, waste and energy, sustainability commitment and monitoring, and community outreach. Based on the above discussion, this study proposes the following hypothesis:

H2: Sustainable infrastructure facilities in HEIs positively influences students' satisfaction

Sustainable curriculum and students' satisfaction

Sustainable curricula encompass the integration of social and environmental perspectives within academic settings, including course content and teaching and learning practices that address environmental issues (Holm et al., 2015). Angelaki et al. (2024) investigated university students' perceptions regarding sustainability integration into undergraduate ICT curricula and the results confirmed that students perceived a significant increment in this linkage. In an exploratory study, Zwolinska et al. (2022) identified that students are increasingly aware of sustainable development goals (SDGs) within curricula, utilising four dimensions of sustainable curricula: university–business cooperation, course content, learning methods, and students' sustainable awareness. Additionally, the integration of AI tools in educational settings can enhance sustainability potential through the transformation of learning experience (Fosner, 2024). Past studies (Holm et al., 2015; Lim et al., 2022; Kanapathy et al., 2021; Stough et al., 2018) empirically confirmed that sustainability focused curricula foster environmentally friendly behaviour among higher education students. Moreover, differences in students' perception of sustainable curriculum content and sustainability teaching in the class room are important to consider (Watson et al., 2013). In view of the above arguments, this study proposes that:

H3: Sustainable curriculum in HEIs positively influences students' satisfaction

Sustainable learning practices and students' satisfaction

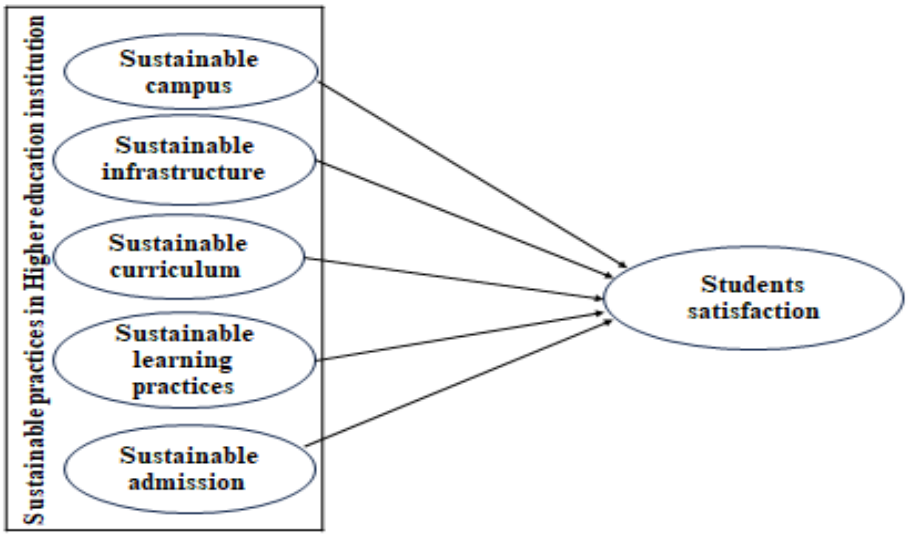
HEIs have embraced technology interfaces to advance the transfer of sustainable education outcomes (Nasir & Ngah, 2022). Technology interface encompasses technology-assisted facilities, e-content and cyber infrastructure, which enable interaction between users and systems (Pandita & Kiran, 2023). The adoption and use of technology in higher education has promoted the educational outcomes in pursuit of sustainability (Sousa et al., 2022). Pandita and Kiran (2023) contend that there is a strong bond between virtual learning practices and student satisfaction, with the mediating role of student engagement in higher education. Previous studies (Chu et al., 2021; Nasir & Ngah, 2022; Pandita & Kiran, 2023; Sousa et al., 2022) empirically confirmed that online learning practices in higher education and students' satisfaction are strongly correlated with promoting sustainability in education. Accordingly, this study proposes the following hypothesis:

H4: Sustainable learning practices positively influences students' satisfaction

Sustainable admission process in HEIs and students' satisfaction

The emergence of information technology in education administration has facilitated the process of centralised admission to HEIs (Saha et al., 2022). A web-based machine learning application has enabled a sustainable admission process, which is consistent with sustainable development goals (Johora et al., 2022) and student satisfaction. According to Igoche and Ayem (2025) sustainable solutions in the admission process can be achieved through big data analysis, which facilitates machine learning predictions and decision making. Existing studies (Johora et al., 2022; Li & Xue, 2022; Man et al., 2023; Saha et al., 2022) empirically confirmed that there exist a strong linkage between sustainable admission process and students' satisfaction in HEIs. Based on the above arguments, this study proposes that

H5: Sustainable admission in HEIs positively influences students' satisfaction



Conceptual model proposed for the study

1.4. Materials and methods

Methodology

This study employed quantitative deductive approach with a cross-sectional research strategy to test the hypotheses proposed in the model. Data were collected both online and offline modes. The target population was students pursuing under graduate and post graduate courses across various affiliated colleges under the University of Calicut. At first HEIs were finalised, and students were selected with the support of the concerned tutors. Initial permission was obtained from the heads of institutions to address ethical concerns. Google form was forwarded to students' email and Whatsapp groups, utilising the online mode of data collection. To ensure environmental awareness among students, screening questions were placed at the beginning. To gather data, we employed a multistage stratified sampling strategy from February to April 2025. This approach facilitated a comprehensive data collection process within a limited geographical area. We designed a structured questionnaire to elicit responses from the target students.

Out of the total 450 questionnaire distributed, we received 358 valid responses, reflecting an effective response rate of 79.5 per cent. To determine the sampling adequacy, we utilised G-power software 3.1.9.7(Faul et al., 2007) with an error of 0.05, power level of 0.8, and an effect size of 0.15. The required minimum sample size was estimated to be 92. The final sample surpassed these criteria. Moreover, we employed a ten-time sample criterion (Hair et al., 2019) to ensure the robustness of our study.

Instrument measurement

The survey instrument was composed of two parts: the first part focused on personal information, providing insights into the respondents' characteristics. The second part delved into six core constructs: sustainable campus, sustainable infrastructure, sustainable curriculum, sustainable admission, sustainable learning, and students' satisfaction. Sustainable campus was measured using four items adapted from Dagiliute et al. (2018). Five pre-validated items developed by Yadav et al. (2024) were employed to measure sustainable infrastructure. The sustainable curriculum comprised five items which were taken from Lim et al. (2022). The construct sustainable admission consisted of five items based on the studies of Saha et al. (2022) and Johora et al. (2022). Sustainable learning practices consisted of four items which were adapted from Caird et al. (2015) and Shard et al. (2024). The endogenous construct of students' satisfaction was

measured using five items based on the studies of Pedro et al. (2024) and Chaudhary and Dey (2021). The participants rated all items on a five point Likert rating scale (5=strongly agree to 1=strongly disagree).

Data collection and sample

The study was conducted on students enrolled in under graduate and post graduate programmes at various affiliated colleges under the University of Calicut. There are 35 government colleges, 41 aided colleges, and 233 self-financing colleges in the arts and science category (https://admission.uoc.ac.in). At first, colleges were selected proportionately, since the total strength of self-financing colleges was higher; hence, 10 percent of government and aided colleges and 20 percent of self-financing colleges were selected. Thus, a total of 30 colleges were finalised for the study. Five respondents from each stream were selected and therefore, 450 responses were expected.

1.5. Results

Respondents' profile

The data sample consisted of 358 students under University of Calicut (as shown in Table 2). Out of the total respondents, 64.8 percent were female whereas 35.2 percent were male. Approximately, 41.9 percent of these respondents were pursuing commerce stream, 32.4 percent were in the science stream and the rest were in the arts stream. A significant proportion (62 percent) of these students was enrolled under the self-financing category, while the remaining were government and aided college students.

Common method bias

The presence of potential common method bias (CMB) may influence survey method research using cross-sectional strategy (Podsakoff et al., 2003). To assess CMB, we employed Herman's single factor test (Podsakoff et al., 2012). The results indicate that a single factor accounts for 39.2 percent of the total variance, which is below the minimum threshold of 50 percent. Hence, CMB was not a dominant problem. Moreover, the present study estimated VIF inner values, and the outcomes revealed that all VIF values were less than 3.3, as suggested by Kock (2017).

Table 2: Demographic Profile of respondents(N=358)

	Frequency	Percentage
Gender		
Male	126	35.20
Female	332	64.80
Course stream		
Arts	92	25.70
Science	116	32.40
Commerce	150	41.90
College category		
Aided	72	20.10
Government	64	17.90
Self-Financing	222	62.00

Measurement model analysis

We followed the recommendations of Hair et al. (2021) to evaluate the measurement model, which was composed of assessing construct reliability and validity (Table 3). Construct reliability was assessed using item loadings for indicator reliability, Cronbach's alpha values (Nunnally & Bernstein,1994) and composite reliability scores for internal consistency reliability. The results indicated that the values of all constructs and their measures were above the minimum threshold of 0.7(Hair et al., 2019), confirming the reliability of the model.

The average variance extracted (AVE) values were extracted to confirm the convergent validity assessment, and the results demonstrated that all values were greater than 0.5, therefore, the model achieved convergent validity. Discriminant validity was assessed using the Heterotrait-Monotrait ratio (HTMT). The results (Table 4) indicate that all HTMT values were below the suggested value of 0.85(Henseler et al., 2015). Therefore, the model surpassed the validity criteria.

Table 3: Measurement Model

Components	Items	Loadings	Composite Reliability	AVE	Cronbach's alpha
Sustainable campus (SCA)	SCA1	0.771	0.833	0.555	0.732
	SCA2	0.735			
	SCA3	0.769			
	SCA4	0.704			
Sustainable infrastructure (SINF)	SINF1	0.807	0.876	0.639	0.811
	SINF2	0.747			
	SINF3	0.815			
	SINF4	0.825			
Sustainable curriculum (SCU)	SCU1	0.846	0.891	0.671	0.836
	SCU2	0.830			
	SCU3	0.782			
	SCU4	0.817			
Sustainable learning practices (SLP)	SLP1	0.817	0.906	0.658	0.873
	SLP2	0.827			
	SLP3	0.796			
	SLP4	0.805			
	SLP5	0.809			
Sustainable admission (SAD)	SAD1	0.715	0.855	0.596	0.773
	SAD2	0.761			
	SAD3	0.787			
	SAD4	0.822			
Students satisfaction (SS)	SS1	0.804	0.885	0.658	0.827
	SS2	0.786			
	SS3	0.853			
	SS4	0.800			

Table 4: HTMT Ratio

	SCA	SINF	SCU	SLP	SAD	SS
SCA	--					
SINF	0.770	--				
SCU	0.845	0.633	--			
SLP	0.451	0.172	0.375	--		
SAD	0.741	0.647	0.661	0.354	--	
SS	0.837	0.711	0.729	0.390	0.689	--

Structural model assessment

Initially, we followed multicollinearity check using Variance Inflation Factor (VIF) values, and the results confirmed that VIF values of all constructs were less than 3(Hair et al., 2021), indicating absence of multicollinearity issue. The hypothesised relationships between the constructs were assessed based on Partial Least Squares Structural Equation Modelling (PLS-SEM) using SmartPLS 4 software (Hair et al., 2023; Ringle et al., 2025). PLS SEM allows the assessment of complex models with multiple latent constructs, indicators, and paths without normality assumptions on the data (Hair et al., 2019). PLS SEM is also suitable for estimating exploratory models with new relationships and their predictive relevance (Hair & Alamer, 2022; Sarstedt et al., 2023). It is robust for smaller sample sizes (Hair et al., 2014). Consequently, PLS-SEM was considered as a suitable technique for this study (Lone et al. 2024).

Subsequently, the path coefficients were estimated using a bootstrapping procedure with 10000 subsamples (Hair et al., 2017). The findings demonstrate that all direct hypotheses were supported. The effect of sustainable campus ($\beta = 0.295$, $p < 0.001$), sustainable infrastructure ($\beta = 0.219$, $p < 0.001$), sustainable curriculum ($\beta = 0.181$, $p < 0.001$), sustainable learning practices ($\beta = 0.102$, $p < 0.001$), and sustainable admission ($\beta = 0.152$, $p < 0.001$) had significant positive effects on students' satisfaction, thereby validating H1, H2, H3, H4, and H5.

Table5: Path coefficient estimates

Hypotheses	PATHS	β	T statistics	2.5% CI	97.5%CI	Results
H1	SCA -> SS	0.295	3.684	0.132	0.446	Accepted
H2	SINF -> SS	0.219	3.300	0.090	0.349	Accepted
H3	SCU ->SS	0.181	2.321	0.025	0.330	Accepted
H4	SLP -> SS	0.102	2.033	0.001	0.198	Accepted
H5	SAD -> SS	0.152	2.087	0.014	0.300	Accepted

Table: 7: Co-efficient of Determination(R^2)

Paths	R^2	Adjusted R^2
Students' satisfaction	0.557	0.544

The predictive accuracy of the structural model was evaluated using the coefficient of determination (R^2), which quantifies the percentage of variance in the endogenous variable explained by the exogenous variables (Hair et al., 2017). The results demonstrated that the R^2 value of students' satisfaction was found to be 55.7, indicating that 55.7 percent of the variation in students' satisfaction with sustainable practices was explained by sustainable campus, sustainable infrastructure, sustainable curriculum, sustainable admission, and sustainable learning.

Table 8: PLS predict assessment of student's satisfaction

Constructs	Items	Q^2 Predict	$RMSE_{PLS-SEM}$	$RMSE_{LM}$	PLS-LM	Predictive power
Students' satisfaction	SS1	0.277	0.961	1.003	**-0.042**	**Above moderate predictive power**
	SS2	0.346	0.856	0.934	**0.078**	
	SS3	0.436	0.876	0.913	**-0.037**	
	SS4	0.303	0.946	1.037	-0.091	

The out-of-sample predictive relevance was estimated using the PLS predict procedure as suggested by Shmueli et al. (2019). The PLS predict procedure composed of evaluating Q^2 predict values, root square means residual error (RMSE), mean absolute error MAE and Q2_predict values. The results demonstrated that Q^2 predict values of all items in students' satisfaction were positive. In addition, the $RMSE_{PLS}$ values for all students' satisfaction indicators were lower than the $RMSE_{LM}$ benchmark, except for SS4. This indicates that research model has above moderate predictive power (Hair *et al.*, 2019).

1.6. Discussion

Despite the growing interest in integrating sustainable practices in academic settings, preferably among the stakeholders of higher education institutions, substantial progress is still required to effectively support the SDGs. This study examines how various dimensions of sustainable practices manifest in the specific context of emerging economies in higher education settings. The outcomes of the study address the under-researched gap in the literature, preferably on stakeholders' perceptions of sustainable higher education, which has so far mainly focused on the policy-level context in developed countries (Alexio et al., 2018; Chu et al., 2021; Dagiliute et al., 2018; Gamage et al., 2022). Therefore, this article has been made an attempt to explore the satisfaction of students across various dimensions of sustainable practices in colleges affiliated under University of Calicut.

The major objective this study was to investigate the factors that influence students' satisfaction on sustainable practices in HEIs. On the basis of literature review we came up the dimensions of sustainable practices such as sustainable campus, sustainable infrastructure, sustainable curriculum, sustainable learning practices and sustainable admission. Initially, a research model was proposed to validate students' responses on sustainable practices in HEIs through a structured survey instrument. A sample 358 students was selected using a multistage proportionate stratified sampling technique. The proposed model was evaluated using PLS-SEM analysis.

The findings indicated that sustainable campus has the highest significant impact on students' level of satisfaction. These results are in line with the previous outcomes of (Anthony Jnr, 2021; Chaudhary & Dey, 2021; Dagiliute et al., 2018; Pedro et al., 2024), which means that students are more akin to eco-friendly campus while they pursue their future career. They are more hopeful for facilitating environmental clubs, public transport facility, and reliable waste management system so as to make a green campus atmosphere. The results of the study proved the notable influence of sustainable infrastructure on students' satisfaction in HEIs sustainable practices. These outcomes are consistent with the previous findings of

(Jrad, 2024; Nejati & Nejati, 2013), which enumerates that students' perception on better sustainable infrastructure facilities like installing renewable energy based solar panel on campus, carbon-emission free mobility, plastic free campus and abundant greenery leads to their level of satisfaction in sustainable practices.

Sustainable curriculum also showed a significant impact on higher education students' level of satisfaction in sustainable practices. These results are corroborated the previous outcomes of (Bataeineh & Aga, 2023; Gamage et al., 2022; Nguyen et al., 2025), who suggested that integrating sustainability into curricula should address the students' potentials in promoting skills to advance environmental concerns. Therefore, it is worthy to integrate sustainability focused learning methods including projects, case studies and e-learning that can change students' mindset towards sustainability goals.

Our study demonstrates that sustainable learning practices in higher education significantly influences on students' satisfaction. These outcomes are similar to those of (Chu et al., 2021; Pandita & Kiran, 2023) who found that reshaping traditional pedagogy (blended learning with flipped classroom pedagogies) in the context of virtual learning environment is important for sustainable learning. This could be achieved using online interaction, advanced course design, virtual tools for self-learning and availability of online materials. The results also found a significant impact of sustainable admission on students' satisfaction in sustainable higher education practices. These findings are correspondent to (Johora et al., 2022; Li & Xue, 2022; Man et al., 2023; Saha et al., 2022) who validated the speedy and transparent process of sustainable admission with the advancement in technology. Moreover, the study findings demonstrated that students are comfortable with the existing system of centralised admission process followed by the university with paperless, prompt and meritorious admission to promote sustainable practices.

1.7. Implications

Theoretical implications

Our study findings make significant contribution to sustainable education literature by providing insights on various drivers of sustainable practices in higher education context. Since the area of sustainable higher education research is relatively scanty both theoretically and practically. In this backdrop, this study provides an empirical validation of students' satisfaction in various dimensions of sustainable practices in higher education, preferably in an emerging economies context.

Practical implications

This study has important implications for various stakeholders of higher education including academicians, policy makers, parents, government and above all the society itself. In pursuance to the mission of 'clean campus-green campus' by government of Kerala, HEIs are actively engaging to promote sustainable infrastructure, sustainable campus and thus, the behavioural outcomes of students are important for various policy level discussions. Moreover, HEIs can incorporate pro-student sustainable curriculum and pedagogy with students' motivation, involvement, practice sessions and learning modules. Policy makers and government can ensure sustainable practices are the perquisite for institutional accreditation so as to foster sustainable campus. In fact, for the betterment of delivery of sustainable practices, HEIs should consider service quality dimensions among various stakeholders like students, faculty and society. A comprehensive sustainability institutional framework to facilitate green practices in and outside campus could make academia-society linkage for sustainable development.

1.8. Limitations and scope for future research

This study also inherent with certain limitations. At first, this study was undertaken in local context with limited number of respondents and hence, generalisation of the study to a broad context cannot be possible.

The selected sample size was adequate but not large as much for complex analysis. To broaden the generalizability of the findings, future studies should replicate the research model in varied contexts and culture. A longitudinal approach could also offer deeper insights on students' satisfaction on various dimensions of sustainable practices over different period of time. Furthermore, group specific comparison based on category of colleges, streams of students with diverse socio-economic context would also possible.

Conflict of interest

Authors declare that no potential conflict of interest

Data availability

Data will be available based on request

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