Green curriculum, green campaigns, and financial rewards: limited impact on students' pro-environmental awareness in higher education

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Abstract

Higher education plays a crucial role in shaping future generations' environmental awareness and actions. This study examines whether common university strategies, such green curriculum, green campaigns, and financial rewards, effectively encourage students' pro-environmental behavior. Using survey data from 124 accounting students at a private university in Surabaya, Indonesia, we applied Partial Least Squares Structural Equation Modeling (PLS-SEM) to test the relationships among these variables. The findings suggest that both green curriculum and green campaigns show positive yet statistically insignificant effects on students' pro-environmental behavior. It indicates that exposure to sustainability concepts and awareness initiatives alone do not guarantee behavioral change. In contrast, financial rewards demonstrate a strong and significant positive effect. It means that tangible incentives can effectively motivate students to adopt and maintain eco-friendly habits. These results propose the importance of combining intrinsic and extrinsic motivators, as well as embedding sustainability values into campus culture through practical engagement and institutional support. As expected, this study contributes to the ongoing debate on sustainability education by showing that well-designed reward systems can encourage pro-environmental behavior.

Keywords: *green curriculum, green campaigns, financial rewards, pro-environmental behavior.*

Introduction

Higher education has an important role in shaping environmental responsibility. It is because it influences how young people think and act in the face of global challenges. Universities have tried to respond through curriculum design, awareness campaigns, and incentive programs, yet these initiatives raise questions about their real impact on long-term awareness. Filho et al. (2015) note that integrating sustainability into universities is challenging because it requires collaboration between departments, faculty, and administrators. This means sustainability cannot be achieved through isolated actions but needs coordination across elements. They stress that without this integration, efforts often remain fragmented and lack real impact. Ralph and Stubbs (2014) add that curriculum reform alone is insufficient, since teaching sustainability without supporting institutional changes risks being superficial. They argue that sustainability must be embedded in the culture, values, and structures of universities. This involves leadership support, policy alignment, and long-term strategies that make sustainability part of the institution's identity. Both studies highlight that sustainability in higher education is not just a pedagogical issue but also an organisational one. For the current study, this means

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sustainability should be viewed as a multidimensional process. It requires not just new teaching approaches but also cultural transformation and systemic change. So, this study positions itself within that debate by asking whether programs like green curriculum, green campaigns, and financial rewards truly succeed in nurturing awareness among students or whether they encourage actions that remain temporary.

The global context makes this question more urgent. Universities are seen as laboratories for change where the next generation can practice values of sustainability. Dagiliūtė et al. (2018) found that students from green universities tend to report stronger awareness compared with students from universities with fewer sustainability practices, which shows the influence of institutional environment. At the same time, Sammalisto et al. (2015) argue that faculty and staff perceptions of sustainability strongly influence how successfully sustainability strategies are embedded. These findings show that structures and perceptions matter. Although they also suggest that awareness is shaped by a combination of factors, not only by formal programs. Green campaigns and financial rewards may provide visibility, yet they do not always guarantee that students internalise values in ways that guide behavior after graduation. This creates a need for more research on the difference between surface-level influence and deep awareness.

The literature also points to barriers that slow down genuine sustainability integration. Ávila and colleagues (2017) suggest that many universities struggle with innovation in sustainability because of limited resources, lack of institutional leadership, and resistance to change. Moggi (2023) shows that even in sustainability reporting, universities face difficulties in adopting frameworks like the Global Reporting Initiative, which reflects the complexity of translating commitment into practice. These barriers suggest that universities may rely on symbolic actions such as green events or reward programs to show progress, even when real transformation of awareness remains limited. For students, this means they may be exposed to activities that signal environmental commitment without experiencing the deeper learning needed for lasting change. The distinction between external signals and internal awareness is central to this study, which seeks to understand whether common strategies like curriculum, campaigns, and financial rewards are sufficient to achieve the goals of sustainability in higher education.

At the same time, this study is valuable because it focuses on students' lived experiences rather than just institutional claims. Universities often present themselves as leaders in sustainability, but without knowing how students actually respond, it is hard to judge the real impact of these programs. Students are the next generation of professionals, so their awareness and behavior will shape how sustainability is carried forward into society. If strategies like curriculum and campaigns do not move beyond surface-level influence, then universities risk producing graduates who understand sustainability in theory but do not practice it in everyday life. If we test which approaches truly make a difference, this study provides evidence that can guide institutions to move away from symbolic gestures and instead foster long-term habits, personal responsibility, and deeper environmental values among students.

Therefore, the aim of our study is to examine whether the strategies most often promoted in higher education (such as green curriculum, green campaigns, and financial rewards) are truly effective in building pro-environmental awareness among students. Some scholars have shown that universities face barriers in integrating sustainability in a

way that transforms values (Ávila et al., 2017; Moggi, 2023), and many rely on structured programs that emphasise visible action. Our research seeks to test the assumption that such approaches automatically lead to lasting awareness. If focusing on the lived experience of students, the study investigates whether awareness is shaped from within or whether actions are only a response to external influence. We believe that this aim reflects the growing recognition that sustainability education must move beyond symbolic gestures toward approaches that create personal conviction.

In addition, the study aims to provide evidence that can guide future policies and practices in higher education. If findings show that curriculum, campaigns, and financial rewards have limited impact on awareness, then universities will need to rethink how they design their sustainability strategies. The contribution of this research lies in offering a clearer picture of what drives students to develop genuine pro-environmental awareness that continues after graduation. By exploring this question, the study aspires to influence how institutions approach sustainability, moving away from reliance on external incentives and toward methods that nurture critical reflection, personal responsibility, and integration of sustainability into identity. The goal is to strengthen higher education's role as a platform for long-term change, in preparing graduates who can face environmental challenges with awareness that is deep, consistent, and enduring.

Methods

We distributed questionnaires to accounting students in a private university in Surabaya. The rationale for selecting this setting is that the accounting program in this university has formally implemented a sustainability accounting curriculum. In addition, the university positions itself as one of the pioneers in embedding sustainability concepts into accounting education, which provides a strong context for examining how these initiatives are understood and experienced by students. The program also attracts a diverse body of learners. So that, it allows our study to capture a range of perspectives on sustainability within a single institutional environment. Furthermore, the accounting program in this university maintains close connections with professional associations and industry partners. It is to ensure that its sustainability curriculum aligns with professional standards and expectations. Based on these rationales, these features make the chosen university an appropriate and relevant setting for exploring the relationship between green curriculum, green campaign, financial reward and pro-environemntal awareness.

A total of 124 accounting students took part in the survey, consisting of 43 males (34.68%) and 81 females (65.32%). The majority of participants were below 20 years of age (85.48%), followed by 18 students aged 20–22 years (14.52%), while no respondents were older than 22. Almost all participants were enrolled in the regular undergraduate accounting program (99.19%), with only one student coming from the international program (0.81%). In terms of academic progress, most students were in their third or fourth semester (42.74%), followed by those in their first or second semester (28.23%), fifth or sixth semester (26.61%), and only a small proportion in the seventh semester or above (2.42%). Academic achievement was generally high, with 75.81% of students having a GPA between 3.01 and 3.50, and 24.19% achieving above 3.50. All respondents were full-time students. Regarding academic concentration, most students had not yet chosen a specific specialization (70.97%), while others were distributed across financial accounting and

auditing (16.94%), management accounting (8.06%), and taxation (4.03%).

In this study, we used definitions and measurement items from earlier studies because they are already tested and trusted. This makes our study more valid and reliable. It also keeps our work consistent with what other researchers have done, so the results can be compared more easily. Moreover, it avoids confusion since sustainability concepts can be broad and unclear. At the same time, applying them to students in higher education gives a fresh angle and new insights. In short, we build on proven tools but adjust them to fit our context, making our findings both solid and relevant.

Pro-environmental behavior refers to actions or behaviors carried out by individuals or groups with the aim of preserving the environment, reducing negative impacts on ecosystems, and supporting the sustainability of natural resources (Saeed et al., 2019). This study adopts the indicators developed by Saeed et al. (2019) to measure this variable. The indicators include:

1. On campus, I participate in environmentally friendly programs.
2. I share environmental knowledge with my friends.
3. On campus, I question practices that may potentially damage the environment.
4. On campus, I consider the consequences of my actions before doing something that may affect the environment.
5. On campus, I perform environmental tasks that are not required by my university.
6. On campus, I avoid wasting resources such as electricity or water.
7. I always print documents double-sided.

Green curriculum is an educational approach that aims to build a generation that is environmentally conscious, socially responsible, and capable of supporting global sustainability (Triyandana et al., 2024). This study adopts the indicators developed by Triyandana et al. (2024) to measure this variable. The indicators include:

1. The university's vision reflects the development of student character with environmental awareness.
2. The university's mission provides direction for achieving the goals of a green university program.
3. Environmental programs are reflected in the university's vision and mission.
4. There are regular activities specifically for environmental management.
5. Additional study time is provided to support environmental management activities and the development of student environmental awareness.
6. Promotion criteria include achievements in environmental programs.
7. Environmental management activities and campaigns involve students' parents.
8. Various activities are conducted to develop student character in relation to environmental awareness.
9. There is a special monitoring program for environmental initiatives.

Green campaign is a strategic effort designed to educate, inspire, and encourage young generations as well as the wider community to care about the environment through

persuasive and accessible messages (Abd Rahim et al., 2012). This study adopts the indicators developed by Abd Rahim et al. (2012) to measure this variable. The indicators include:

1. Green campaigns are effective in educating and encouraging young people to care for the environment.
2. Green campaigns conducted by the government and universities are attractive and effective.
3. I will adopt an environmentally friendly lifestyle when I receive persuasive green messages.
4. Green campaigns encourage people to become more socially responsible.
5. Green campaigns are attractive to watch.
6. Green campaigns inform me how I should behave toward the environment.

Financial reward can be defined as a form of compensation or incentive, either in cash or other financial benefits, given to individuals as a result of their contributions, achievements, or performance in an organization or specific activity (Tsai, 2018). This study modifies the indicators from Tsai (2018) to measure financial reward, as the original study focused on employee behavior. The indicators include:

1. The university has a fair evaluation system to reward pro-environmental behavior.
2. The university has clear guidelines for providing financial incentives for pro-environmental actions.
3. I believe the university is fair in giving rewards to individuals for their pro-environmental behavior.
4. The university provides financial incentives for pro-environmental behavior in an appropriate and measurable way.
5. The amount of financial incentive given by the university for pro-environmental behavior is proportional.
6. The campus has a fair grading system to reward environmentally friendly behavior.

Results and Discussion

We analysed the collected data using Partial Least Squares Structural Equation Modeling (PLS-SEM). This approach is widely used in social sciences and suitable for exploratory studies where the theory is still developing. It is able to work with smaller sample sizes compared to covariance-based SEM. This makes it highly appropriate for this research with 124 participants. The technique allows the researcher to evaluate two models at the same time. The first is the measurement model, which focuses on reliability and validity of the indicators used. The second is the structural model, which explains the relationships between the variables. In the measurement model, we checked indicator reliability, internal consistency, convergent validity, and discriminant validity. This step ensures that the indicators truly represent the underlying constructs. In the structural model, we tested the strength and significance of the paths connecting the variables. PLS-SEM also allows the use of bootstrapping procedures to generate t-values and confidence intervals, which improve the robustness of the analysis. Taken together, the use of PLS-SEM provided a clear,

systematic, and rigorous method for analysing the data.

For the validity and reliability of our collected data, we analysed them and the results are provided in Tables 1, 2, and 3. It is necessary to be done before testing our hypotheses. As suggested in Table 1, factor loadings were examined for all items under each construct. The majority of items achieved factor loadings above the recommended threshold of 0.5, confirming that the observed variables are well associated with their respective latent constructs. Only one item, KH9, was removed due to its factor loading being below the acceptable value. Moreover, the descriptive statistics, including means, standard deviations, skewness, and excess kurtosis, indicate that most variables are distributed reasonably well, with skewness and kurtosis values falling within acceptable ranges, reducing the likelihood of severe non-normality issues. These findings suggest that the items used to measure green curriculum knowledge, environmental attitudes, financial literacy, and pro-environmental behavior are statistically appropriate and good.

Table 1. Factor Loadings and decriptive statistics

Item	Factor Loadings	Mean	Standard Deviation	Excess Kurtosis	Skewness
KH1	0.817	4.258	0.620	-0.599	-0.242
KH2	0.665	4.129	0.635	-0.545	-0.115
KH3	0.673	4.266	0.661	-0.756	-0.356
KH4	0.639	4.218	0.736	-1.085	-0.372
KH5	0.692	4.258	0.594	-0.503	-0.156
KH6	0.793	4.226	0.739	-1.090	-0.390
KH7	0.654	4.282	0.629	-0.649	-0.307
KH8	0.728	4.250	0.643	-0.681	-0.288
KH9	Removed due to factor loading < 0.5				
KYEH1	0.573	3.911	0.813	-1.481	0.166
KYEH2	0.786	4.089	0.751	-1.220	-0.149
KYEH3	0.757	4.145	0.759	-1.231	-0.252
KYEH4	0.883	4.282	0.667	-0.771	-0.398
KYEH5	0.868	4.282	0.725	-0.974	-0.492
KYEH6	0.632	4.089	0.783	-1.360	-0.158
PKEU1	0.709	4.169	0.669	-0.105	-0.376
PKEU2	0.955	4.169	0.704	-0.416	-0.394
PKEU3	0.595	4.048	0.682	-0.329	-0.216
PKEU4	0.931	4.234	0.708	-0.372	-0.511
PKEU5	0.541	4.339	0.634	-0.663	-0.430
PKEU6	0.853	4.226	0.670	-0.070	-0.465
PPL1	0.808	4.089	0.672	-0.780	-0.107
PPL2	0.847	4.097	0.640	-0.564	-0.089
PPL3	0.851	4.145	0.631	-0.535	-0.126
PPL4	0.665	4.145	0.631	-0.535	-0.126
PPL5	0.813	4.226	0.658	-0.739	-0.281
PPL6	0.628	4.210	0.663	-0.761	-0.265

Item	Factor Loadings	Mean	Standard Deviation	Excess Kurtosis	Skewness
PPL7	0.918	4.202	0.684	-0.861	-0.283

Beyond factor loadings, internal consistency was assessed using Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE), as summarised in Table 2. All constructs reported Cronbach's alpha values above 0.8, exceeding the minimum standard of 0.7, which indicates strong reliability. Similarly, composite reliability scores for all constructs were above the 0.8 threshold. It confirms that the constructs consistently represent the measured items. The AVE values, ranging from 0.504 to 0.634, surpassed the recommended cutoff of 0.5 for most constructs. This means that the items associated with each construct share a sufficient amount of variance to justify their inclusion.

Table 2. Cronbach's Alpha, Composite Reliability, Average Variance Extracted

Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
KAM_HIJ	0.849	0.888	0.575
KU_HIJ	0.885	0.890	0.504
PENG_KEU	0.860	0.899	0.609
PE_PROLING	0.900	0.923	0.634

For checking the robustness of your data, the discriminant validity was also evaluated to determine whether the constructs are distinct from each other conceptually and statistically. Table 3 presents the cross-loading values of each item on all constructs. An item is expected to load higher on its assigned construct compared to other constructs, and this condition is generally satisfied in our data. For example, items KH1–KH8 load higher on KU_HIJ than on other constructs, and similar patterns are evident for all other constructs. The absence of problematic cross-loadings supports the conclusion that each latent variable captures unique aspects of the underlying phenomenon without excessive overlap. Together with AVE and factor loading results, these findings indicate that the measurement model fulfills both convergent and discriminant validity requirements. Therefore, our data are free from the risk of multicollinearity among latent variables.

Table 3. Cross loadings

Item	KU_HIJ	KAM_HIJ	PENG_KEU	PE_PROLING
KH1	*0.817*	0.592	0.375	0.272
KH2	*0.665*	0.344	0.356	0.706
KH3	*0.673*	0.673	0.364	0.265
KH4	*0.639*	0.624	0.342	0.204
KH5	*0.692*	0.388	0.330	0.267
KH6	*0.793*	0.711	0.345	0.221
KH7	*0.654*	0.576	0.236	0.111
KH8	*0.728*	0.537	0.357	0.221
KYEH1	0.321	*0.573*	0.130	0.209
KYEH2	0.609	*0.786*	0.259	0.391
KYEH3	0.579	*0.757*	0.332	0.306

KYEH4	0.653	*0.883*	0.293	0.293
KYEH5	0.627	*0.868*	0.249	0.269
KYEH6	0.386	*0.632*	0.275	0.183
PKEU1	0.318	0.206	*0.709*	0.283
PKEU2	0.413	0.275	*0.955*	0.548
PKEU3	0.416	0.293	*0.595*	0.344
PKEU4	0.404	0.321	*0.931*	0.529
PKEU5	0.488	0.355	*0.541*	0.337
PKEU6	0.301	0.165	*0.853*	0.403
PPL1	0.401	0.282	0.343	*0.808*
PPL2	0.391	0.290	0.379	*0.847*
PPL3	0.479	0.380	0.433	*0.851*
PPL4	0.319	0.163	0.543	*0.665*
PPL5	0.518	0.414	0.370	*0.813*
PPL6	0.321	0.110	0.546	*0.628*
PPL7	0.584	0.404	0.447	*0.918*

Overall, the analyses conducted confirm that the measurement instruments used in this study are valid and reliable. Factor loadings, reliability coefficients, AVE, and cross-loadings all align with widely accepted criteria in quantitative research. The hypothesis testing results in Table 4 reveal important insights into how different institutional interventions affect students' pro-environmental behavior. The path coefficient from the green curriculum (KU_HIJ) to pro-environmental behavior (PE_PROLING) is 0.067 with a p-value of 0.545, indicating a positive but statistically insignificant effect. While the positive beta suggests that students exposed to sustainability-related courses may become slightly more aware of environmental issues, the high p-value shows that this relationship is not strong or consistent across the sample. This finding suggests that simply embedding environmental concepts in the curriculum does not necessarily result in measurable behavioral change. Many students may gain theoretical knowledge of sustainability but fail to internalise it enough to alter their habits. The lack of significance implies that knowledge transfer alone remains at a cognitive level and does not automatically translate into concrete pro-environmental actions, which often require deeper motivational drivers, social reinforcement, and systemic support.

Table 4. Hypothesis testing results

Paths	Beta	Sample Mean	Standard Deviation	T Statistics	P Values
KU_HIJ → PE_PROLING	0.067	0.080	0.110	0.606	*0.545*
KAM_HIJ → PE_PROLING	0.040	0.042	0.097	0.415	*0.678*
PENG_KEU → PE_PROLING	0.310	0.306	0.074	4.172	*0.000*

Similarly, the path from green campaigns (KAM_HIJ) to pro-environmental behavior has a beta of 0.040 and a p-value of 0.678, again showing a positive but statistically insignificant effect. It means that although environmental campaigns aim to raise awareness through posters, social media messages, and events, their influence appears symbolic rather than

transformative. Campaigns may increase students' awareness of institutional sustainability efforts, but they often fail to overcome entrenched habits, peer norms, and convenience-driven choices. The insignificant result reflects a gap between attitudes and behavior. This gap can be attributed to cultural perceptions that environmental responsibility lies primarily with institutions rather than individuals, as well as to the lack of immediate incentives or tangible benefits for students who adopt pro-environmental habits.

In contrast, financial rewards (PENG_KEU) have a strong and significant effect. The beta is 0.310, the p-value is 0.000, and the t-statistic is 4.172. The 95% confidence interval is narrow (0.146–0.443), showing this effect is robust. Financial incentives directly motivate students to change their behavior. When actions such as recycling, energy saving, or using eco-friendly transport are rewarded, students respond. Unlike knowledge or awareness, incentives affect students' cost–benefit thinking. This suggests that extrinsic motivators are more effective than symbolic appeals. Money or other tangible rewards create immediate benefits that overcome the inconvenience of behavior change. This does not mean students lack moral values; rather, structural and motivational factors play a key role in translating values into action. So, we believe that programs that combine intrinsic and extrinsic motivators, such as recognition points or discounts for green actions, can reinforce sustainable habits.

The overall results suggest a deeper pattern. Knowledge and awareness are important but often remain cognitive and symbolic. Financial incentives have a stronger behavioral impact. For example, sustainability courses should involve projects where students practice green habits. Campaigns should be tied to peer networks, visible recognition, and feedback. Incentives should be designed not only as rewards but also as nudges that shape habits over time. These findings align with behavioral change theories such as the Theory of Planned Behavior. According to this theory, attitudes, social norms, and perceived control all affect behavior. Our results suggest that attitudes are present but weak, norms are underdeveloped, and control improves when rewards reduce barriers. Thus, universities need multifaceted approaches that go beyond awareness and address social and structural factors.

Our study confirms that there is no significant relationship between the green curriculum and students' pro-environmental behavior. This finding suggests that the presence of environmental content in the university curriculum alone does not automatically translate into behavioral change. Instead, it echoes earlier research emphasizing that the effectiveness of environmental education is largely determined by the mode of delivery rather than the mere existence of subject matter. In line with Tampubolon et al. (2024), the evidence points toward the importance of imaginative teaching methods and group-based activities that encourage active participation, which are more likely to foster genuine pro-environmental actions. The results further reinforce the argument of Maresi and Basoeki (2024) that environmental education must be deeply integrated across the entire learning experience, rather than confined to selected modules or theoretical exercises. The non-significant relationship revealed in our model therefore reflects a gap in the integration and pedagogical approaches of the current curriculum, which in many cases remains symbolic rather than transformative. Consequently, while the green curriculum remains a relevant and necessary framework, its success depends on how well it is embedded through active, contextual, and participatory strategies that connect

environmental awareness with students' daily experiences and responsibilities.

Moreover, the absence of a significant relationship between the green curriculum and pro-environmental behavior may reflect broader institutional and cultural contexts. Many universities add sustainability topics only to meet formal standards. Teaching often focuses on theory and lacks active engagement. Without practical exposure, students struggle to connect lessons with daily habits. Fytopoulou et al. (2023) found that students in environmental majors show stronger environmental attitudes than those in other fields. Yet, attitudes alone rarely lead to consistent action. Ajaps and McLellan (2015) reported that many students feel they "don't know enough" to apply sustainability in practice. Awareness without practice gives limited impact. Djuwita and Benyamin (2019) found similar patterns in Indonesian schools. Cultural values and limited teaching methods weaken sustainable behavior. The challenge is wider than curriculum content. Green programs work better when paired with projects that involve students directly. Emotional engagement also helps values stick. Universities need a culture that models sustainability across campus life. Without deeper integration, sustainability education remains abstract. These findings suggest that change needs systemic and cultural strategies that link knowledge, values, and action.

The absence of a significant relationship between green campaigns and pro-environmental behavior can be linked to how students perceive and engage with such initiatives. Many campaigns remain corporate-sponsored or institutionally driven, which can limit authenticity. Manika et al. (2019) found that students often view sponsored campaigns as external promotions rather than internal motivations. This reduces their emotional connection and willingness to act. When messages feel imposed, students may ignore them. Godfrey and Feng (2017) also found that behavior change campaigns often fail to connect with student values. The messages reach students, but the link to daily life is weak. Hosseinpour et al. (2015) further noted that green campaigns in Malaysia raised awareness but did not always lead to consistent behavior. Information alone is not enough. Campaigns must connect with deeper goals and norms to be effective. Without that, students see campaigns as background noise rather than a call to action.

Another factor behind this weak relationship is the framing of campaign goals and the social context in which students act. Chakraborty et al. (2017) found that goal frames shape student responses strongly. Campaigns that focus only on environmental benefits often miss personal or social motivations. Students are more likely to act when they see clear personal gains or peer approval. Dixon et al. (2015) studied workplace energy conservation and found that comparative feedback among peers worked better than generic appeals. Campaigns that lack feedback or peer comparison fail to create social pressure. Al Adwan et al. (2025) also found that public relations campaigns in universities raised awareness but did not always shift behavior. Many students support the ideas in principle, but they hesitate to act when campaigns feel distant or symbolic. These patterns show that campaign design often misses motivational and social triggers needed for consistent behavioral change.

The cultural and institutional setting further explains why green campaigns alone have limited impact on students' daily habits. Universities may run campaigns as short-term projects without embedding them in broader campus practices. Dixon et al. (2015) observed that campaign effects fade quickly when there is no ongoing reinforcement. Students notice the messages but revert to old habits without sustained cues. Manika et al.

(2019) similarly noted that corporate campaigns fail when they do not match student culture or give students active roles. Behavior change needs more than posters or slogans. It requires practical engagement, peer modeling, and institutional support. When campaigns are isolated events rather than integrated programs, students may express support without real change. The lack of significant results in our study reflects these broader findings. Awareness and positive attitudes from campaigns are common, but they rarely translate into sustained pro-environmental actions without deeper social and structural backing.

Our study shows that giving financial rewards has a strong and meaningful impact on how students behave toward the environment. It means that when rewards are tied to green actions, students feel that their efforts matter and that the institution supports them. Prior work highlights how incentives like these spark consistent sustainable habits and help people stay committed to eco-friendly practices (Odhiambo et al., 2023). Students react well to simple and clear reward systems that make green actions feel valued rather than just expected. Just as employees respond to recognition for eco-conscious work, students view rewards as a sign that their actions contribute to something bigger than themselves (Blok et al., 2015). We believe that this mix of personal benefit and collective responsibility helps build a shared culture where recycling, saving energy, and choosing greener transport slowly become a part of daily life. In this sense, campuses are places where long-term habits take shape, and rewards help students move from good intentions to real, repeated actions that stick with them long after graduation.

These findings fit well with other research showing how rewards can change both attitudes and actions around sustainability goals. If students receive something tangible for their green efforts, they feel more motivated, more satisfied, and more connected to environmental initiatives (Yang et al., 2024). Incentives do more than just push students to act for a short time. They help create stronger internal motivation and turn one-time actions into habits. Many students face real barriers like lack of resources, busy schedules, or peer pressure that make sustainable choices harder, and rewards help break down those barriers (Djokic et al., 2023; Ercantan and Eyupoglu, 2022). By giving something back, rewards make sustainable actions feel practical and rewarding at the same time. Over time, this builds up not only their awareness of environmental issues but also their sense that their choices have real meaning for the world around them. As such, this shift matters for universities because it prepares students to carry those values forward into their careers and communities.

Our results also suggest that financial incentives affect how wide and deep student environmental actions go, influencing how often they engage and the variety of green behaviors they choose. Prior research shows similar patterns where rewards encourage people to pick greener transport or energy options (Kacperski and Kutzner, 2020), which matches our evidence from student-led campus initiatives. Studies on student adaptation to climate issues highlight that habits grow stronger when institutions provide support and positive reinforcement (Fang, 2021). Rewards also spread their influence socially, as students see peers being rewarded and feel encouraged to join in. These ripple effects help make green behavior part of a group norm rather than just an individual act. When incentives are in place, sustainability becomes something students want to be part of rather than something they feel forced to do. Therefore, our findings add to a growing body of knowledge showing that well-designed rewards can be a powerful tool for schools and

universities looking to raise active participation in green efforts. For instance, our study reinforces that rewards are not simply transactional. They are transformational tools capable of shaping environmental responsibility across multiple layers of society in university.

Conclusion

This study shows that green curriculum and green campaigns on their own do not do enough to change how students act toward the environment. Although lessons and campaigns can raise awareness and make students more informed, they often stay at the level of knowledge without leading to real, lasting changes in behavior. Many students understand the ideas behind sustainability, yet that understanding does not always become part of their daily routines. Our findings show that when sustainability is taught only in theory or when campaigns are run as isolated events, students see them as information rather than motivation. Awareness matters, yet without strong emotional engagement and practical experiences, it does not turn into action. In contrast, financial rewards stand out as a powerful driver that helps students move from knowing to doing. If students see clear benefits from taking part in eco-friendly activities, such as incentives for recycling or energy saving, they feel their contributions matter and are supported by the institution. This makes green actions more appealing and helps build habits that last. It also shows that students respond well when sustainability is connected to both personal gains and shared responsibility. Instead of being symbolic, rewards make environmental behavior feel real and worthwhile. This highlights that for meaningful and lasting change to happen, universities need strategies that go beyond awareness and connect sustainability with daily life, peer culture, and personal motivation.

The findings point to an important lesson for higher education. Students need more than lectures or posters to build a strong connection with sustainability values. They need structures that make sustainable actions easier, more rewarding, and more visible. A mix of curriculum content, authentic campaigns that match student culture, and clear reward systems can help. Incentives like discounts, recognition, or other tangible benefits can work as nudges that make students want to join and stay engaged in green practices. These approaches also help create a ripple effect among peers, where students see others rewarded and feel encouraged to do the same. Over time, this can make sustainability a social norm on campus rather than just an academic topic. Our study adds to the growing evidence that rewards are not just transactional but transformational when designed well. They give students a reason to act now while shaping habits and values that carry beyond the university setting into their future careers and communities.

At the same time, our research has limits. It focuses on accounting students in one university and uses self-reported data, which means the results may not fully represent other disciplines or contexts. Future studies can explore different programs, compare more universities, and follow students over time to see how sustainability values grow and stay with them after graduation. Additionally, one clear limitation of this study is that the sample is limited to only 124 accounting students. Although the number is sufficient for the statistical analysis used, it still represents a relatively small group, which may not fully capture the variety of student experiences even within the same program. The focus on accounting students also narrows the scope, since their views and behaviors may be shaped

by the structure of their courses, the professional orientation of their studies, and the culture of their discipline. As a result, the findings may not reflect how students in larger samples or in other academic areas respond to sustainability strategies.

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