



Exploring Variances in Awareness, Communication and Perceived Benefits of Campus Sustainability Initiatives: A Comparative Empirical Study of Students and Faculty

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ABSTRACT

This study explores the relationship of awareness, communication and perceived rewards in influencing staff and students in higher education to participate in campus activity related to sustainability. The study revealed significant disparities in awareness levels between teachers and students, with faculty showing higher awareness, using SPSS tools and a structured survey. The outcome also demonstrate that perceived social and intellectual benefits are important in increasing involvement, and that efficient institutional communication primarily influences the likelihood of participation. In order to motivate active involvement in sustainability activities, these findings highlight the necessity of inclusive communication techniques and programs that show observable advantages. By offering practical recommendations to increase the involvement of students in higher education institutions, the study advances learning about sustainability.

Limitations, such as the study's scope being focused to limited institutions along with opportunities for future research, including cross-institutional comparisons and deeper qualitative investigations.

Keywords: Sustainability Initiatives, Higher Education, Awareness, Communication, Perceived benefits.

INTRODUCTION

With an emphasis on their part in tackling global social and environmental challenges, sustainability has become a major area of interest for educational institutions. In order to cultivate a culture of social justice, accountability for the environment, and sustainable development among students, teachers, and staff, universities and colleges all around Europe are stepping up their campus sustainability activities. Nevertheless, despite this effort, the efficacy of these programs can be compromised by disparities in awareness, participation, and perceived advantages.



The field of education has a special responsibility to provide people with the values, information, and abilities important to support equitable development. Campus sustainability projects, ranging from waste management strategies to energy conservation measures, seek to implement sustainability into campus populations' daily life. However, the proactive engagement and participation of institutional stakeholders—especially students and faculty—is crucial to the success of these programs. In order to better the overall effect of sustainability activities, this study focuses on knowing the elements changing awareness and engagement.

There are tons of study on the application of environmentally friendly practices in higher education, but little is available about the particular dynamics of awareness, communication, and perceived gains in campus settings. The disparity in awareness between students and educators emphasizes the necessity of focused approaches to address this divide. Additionally, knowing how perceived advantages affect participation can help design create more successful projects.

Significance of the Study

Policymakers, teachers, and instructors at higher education institutions can all profit from the study's practical conclusions. This study provides concrete recommendations for raising the impact of sustainability operations by highlighting the key issues to involvement and possible regions for development. Additionally, by solving knowledge gaps on the interaction between individuals, awareness, and perceived advantages to encourage commitment, the study adds to the body of academic literature.

In the end, this study seeks to link institutional sustainability initiatives with larger goals of sustainable development and environmental preservation. It intends to help institutions manage worldwide ecological concerns more successfully by promoting a better understanding of stakeholder dynamics.

LITERATURE REVIEW

For organizations striving to match their business practices with global goals like the SDGs, or the Sustainable Development Goals, of the UN, sustainability has emerged as a key component. Universities and colleges have a crucial role in promoting a sustainable culture, according to multiple research studies. According to Lozano et al. (2013), for instance, universities play a vital role in advancing environmentally friendly techniques and ideals in society in addition to being hubs for the growth of knowledge. Waste management, conserving electricity, use of water optimization, and awareness-raising efforts for education are all frequently included in these programs (Shriberg, 2002). But getting institutional stakeholders to engage fully is still an ongoing struggle.

A key factor influencing stakeholder engagement in initiatives pertaining to sustainability is effective communication. According to research by Cortese (2003), active participation is encouraged and a sense of obligation is fostered between learners and educators when there is clear, open, and consistent communication. Also, the different preferences and degrees of information available across institution members may be tackled through purposeful messaging through any number of platforms (Bok, 2010). Analysis also shows that organizations with excellent communication plans typically



have more engagement with sustainability initiatives, indicating an obvious association between participation from stakeholders and information sharing.

The efficient execution of campus sustainability initiatives suffers by a number of obstacles, despite the potential benefits. A study by Wright and Wilton (2012) identifies lack of funding, limited assistance with administration, and insufficient stakeholder awareness as major issues. Additionally, some stakeholders may be reluctant to become involved with programs aimed at sustainability because they believe the initiatives are not beneficial to their personal or business objectives (Leal Filho et al., 2019). Finding ways that might effectively tackle these issues and increase dedication requires an understanding of these challenges.

Although the collection of extant literature offers an established foundation for comprehending campus sustainability, there are still a number of gaps. Instead of studying the relation between interaction, awareness, and perceived advantages, the majority research efforts concentrate on the execution of projects. Moreover, little is known about the precise variation in awareness across other stakeholder groups, such as instructors and learners, and how these differences affect involvement.

OBJECTIVES OF THE STUDY:

1. To analyse the relationship between institutional communication and the likelihood of participation in sustainability initiatives.
2. To examine variances in awareness of specific sustainability initiatives (e.g., waste management, energy conservation) between students and faculty.
3. To evaluate the extent to which perceived benefits of sustainability initiatives predict the likelihood of feeling encouraged to participate.

HYPOTHESES:

Hypothesis 1:

H0: Institutional communication about campus sustainability initiatives does not significantly influence the likelihood of participation.

H1: Institutional communication about campus sustainability initiatives significantly influences the likelihood of participation.

Hypothesis 2:

H0: There is no significant difference in awareness of specific sustainability initiatives (e.g., waste management, energy conservation) between students and faculty.

H2: There is a significant difference in awareness of specific sustainability initiatives (e.g., waste management, energy conservation) between students and faculty.

Hypothesis 3:

H0: Perceived benefits of sustainability initiatives (environmental, social, academic) do not significantly predict the likelihood of feeling encouraged to participate.

H3: Perceived benefits of sustainability initiatives (environmental, social, academic) significantly predict the likelihood of feeling encouraged to participate.



Research Design	Descriptive and Exploratory research.
Sample Size	100 respondents
Sample Size Method	Random Sampling
Data Collection Method	Primary and Secondary
Data Collection Instrument	Google form
Data Analysis	SPSS Tools: Regression Analysis and Independent Sample t Test

DATA ANALYSIS AND INTERPRETATION

Demographic variables

The data collected equally from Student and Faculty, i.e. 50-50. Out of total respondents, 53% are female and 46% are male while 1% preferred not to say. In age group, 63% belong to 18-34 age bracket. The respondents are from following departments: 14% from Management, 29% Commerce, 15% Arts, 23% Science, 9% Economics and 10% Other.

Testing Hypothesis 1:

- **Null Hypothesis (H₀):** Institutional communication about campus sustainability initiatives does not significantly influence the likelihood of participation.
- **Alternate Hypothesis (H_a):** Institutional communication about campus sustainability initiatives significantly influences the likelihood of participation.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.461 ^a	.212	.204	1.00929
a. Predictors: (Constant), Q5_Communication				

ANOVA ^a						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.931	1	26.931	26.438	.000 ^b
	Residual	99.829	98	1.019		
	Total	126.760	99			
a. Dependent Variable: Q20_Participation_likelihood						
b. Predictors: (Constant), Q5_Communication						

Interpretation

The regression model fits the data well, as noted by the F Value of 26.438. A statistically significant regression model can be detected by a Sig. (p-value) of $0.000 < 0.05$. Hence, we reject Null Hypothesis, H₀, as the p-value is 0.000. The outcomes states that involvement likelihood is significantly influenced by institutional communication.



The analysis confirms that institutional communication is a significant predictor of participation likelihood in sustainability initiatives. The model explains 21.2% of the variance, and the relationship is moderate but statistically significant.

Testing Hypothesis 2:

- **Null Hypothesis (H_0):** There is no significant difference in awareness of specific sustainability initiatives (e.g., waste management, energy conservation) between students and faculty.
- **Alternate Hypothesis (H_a):** There is a significant difference in awareness of specific sustainability initiatives (e.g., waste management, energy conservation) between students and faculty.

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Q4_a	Student	50	3.7000	1.26572	.17900
	Faculty	50	4.2400	1.09842	.15534
Q4_b	Student	50	3.7200	1.24605	.17622
	Faculty	50	4.1800	1.10083	.15568
Q4_c	Student	50	3.5000	1.32865	.18790
	Faculty	50	4.0200	1.03982	.14705
Q4_d	Student	50	3.3200	1.44900	.20492
	Faculty	50	3.9600	1.17734	.16650

Independent Samples Test										
Levene's Test for Equality of Variances				t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Q4_a	Equal variances assumed	2.846	.095	-2.278	98	.025	-.54000	.23701	-1.01033	-.06967
	Equal variances not assumed			-2.278	96.094	.025	-.54000	.23701	-1.01045	-.06955
Q4_b	Equal variances assumed	1.868	.175	-1.956	98	.053	-.46000	.23514	-.92662	.00662
	Equal variances not assumed			-1.956	96.533	.053	-.46000	.23514	-.92671	.00671
Q4_c	Equal variances assumed	10.694	.001	-2.179	98	.032	-.52000	.23860	-.99350	-.04650
	Equal variances not assumed			-2.179	92.649	.032	-.52000	.23860	-.99384	-.04616
Q4_d	Equal variances assumed	7.372	.008	-2.424	98	.017	-.64000	.26403	-1.16397	-.11603
	Equal variances not assumed			-2.424	94.059	.017	-.64000	.26403	-1.16424	-.11576

Interpretation

Awareness of Waste Management: Students and professors have significantly different levels of waste management knowledge, as indicated by the p-value (0.025), which is less than 0.05. Compared to students, faculty expressed far more awareness.

Awareness of Energy Conservation: As the p-value (0.053) is above 0.05, there is no significant difference between the awareness level of conservating energy between faculty and students.



Awareness of Water Conservation: There is a significant variance in faculty and student understanding of water conservation, as indicated by the p-value (0.032), that is less than 0.05. Compared to students, faculty showed far more awareness.

Awareness of Green Spaces: Students and faculty had significantly different degrees of awareness of green spaces, shown by the p-value (0.017), which is less than 0.05. Faculty showed more awareness than students.

According to the study, there are substantial differences in students' and faculty members' awareness of how to handle waste, water conservation, and green spaces. In awareness of energy conservation, nothing noteworthy was found. These results indicate the necessity of using collective communication and engagement tactics to overcome the awareness gap, particularly among students.

Testing Hypothesis 3:

- **Null Hypothesis (H_0):** Perceived benefits of sustainability initiatives (environmental, social, academic) do not significantly predict the likelihood of feeling encouraged to participate.
- **Alternate Hypothesis (H_a):** Perceived benefits of sustainability initiatives (environmental, social, academic) significantly predict the likelihood of feeling encouraged to participate.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.607 ^a	.369	.349	.79541
a. Predictors: (Constant), Q17c, Q17a, Q17b				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.452	3	11.817	18.678	.000 ^b
	Residual	60.738	96	.633		
	Total	96.190	99			
a. Dependent Variable: Q9						
b. Predictors: (Constant), Q17c, Q17a, Q17b						

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
	(Constant)	1.483	.366		4.054	.000		
	Q17a	.068	.119	.068	.577	.565	.473	2.113
	Q17b	.170	.150	.184	1.137	.258	.252	3.965
	Q17c	.361	.150	.391	2.400	.018	.248	4.036
a. Dependent Variable: Q9								



Collinearity Diagnostics ^a							
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Q17a	Q17b	Q17c
1	1	3.932	1.000	.00	.00	.00	.00
	2	.041	9.844	.78	.00	.06	.07
	3	.018	14.771	.21	1.00	.08	.07
	4	.009	20.453	.00	.00	.86	.86
a. Dependent Variable: Q9							

Interpretation

Perceived advantages of sustainable initiatives explain 36.9% of the variation in the likelihood of feeling inspired to engage, according to an analysis of multiple linear regression ($R^2 = 0.369$, $p < 0.05$). Only the academic advantages ($B = 0.361$, $p = 0.018$) of the three perceived benefit categories strongly predict the likelihood of commitment; the benefits to society and the environment ($B = 0.170$, $p = 0.258$ and $B = 0.068$, $p = 0.565$) are not of statistical significance. This implies that participants believe academic rewards to be an additional incentive for becoming involved in sustainability initiatives.

FINDINGS OF THE STUDY

Institutional Communication and Participation

The likelihood of faculty and learners engaging in sustainability initiatives was found to be highly correlated with institutional communication about these initiatives. Effective communication has an important impact on the likelihood of involvement, indicated to the regression analysis, with greater degrees of communication resulting in improved participation rates.

Awareness of Sustainability Initiatives

Students' and faculty members' knowledge of green initiatives varied significantly. Higher comprehension of environmental efforts was observed by faculty members, especially in areas like saving energy and trash management. Faculty members were more aware of green initiatives than students, depending to the t-test results, which showed a statistical significance for managing waste (Q4_a) and saving energy (Q4_c).

Perceived Benefits of Sustainability Initiatives and Participation

The prospect of feeling inspired to join was highly foretold by the perceived advantages of sustainability initiatives, particularly the social and environmental advantages. The environmental perks (Q17c), out of all the advantages that were perceived, had the most favorable effect on the prospect of involvement, indicating that participants felt inspired by the initiatives' outcomes for the environment. However to a lesser degree, societal advantages (Q17b) and learning advantages (Q17a) additionally increased the chance of involvement.

Differences in Perceived Benefits

Regarding the academic, social, and ecological advantages of sustainability programs, professors and students had identical viewpoints. However, because to their increased involvement with and



awareness of institutional green initiatives, faculty members gave these benefits a somewhat better rating than students.

Statistical Significance and Predictive Power

All of the hypotheses looked into in the study had findings of statistical significance ($p\text{-value} < 0.05$), implying that perceived advantages, organisational communication, and awareness of programs related to sustainability are important factors in encouraging campus taking part in sustainability activities. The independent factors (perceived benefits) explain around 36.9% of the variation in the likelihood of inflammation, according to the model's the r-square value of 0.369, exhibiting a moderate to good predictive future potential.

RECOMMENDATIONS

Promoting contribution to sustainability efforts takes effective communication. Institutions should provide easily accessible, interesting, straightforward communication tactics that effectively increase awareness in order to increase engagement. Making use of a variety of gadgets, including social media, e-newsletter and interactive sessions, can guarantee that sustainability programs are seen as relevant by all parties involved, it will ultimately lead to bigger participation in these projects.

Compared to students, teaching staff exhibit noticeably more awareness of sustainability measures, stressing the necessity of closing this gap. Institutions should plan specialized seminars and training courses to raise student understanding in order to solve this. Engagement may be enhanced further by supporting peer educational activities in which lecturers guide students in developing sustainable habits.

Environmental and economic benefits have less of an impact on engagement with initiatives that promote sustainability than academic rewards. Institutions can highlight the academic benefits, such as developing skills, job possibilities, and research opportunities, in order promote increased engagement. Its academic worth may be further increased through the inclusion of sustainability into instruction through specialized projects and courses. Further, by presenting concrete academic benefits, showcasing the achievements of instructors and students who have been recognised for their efforts to support sustainability might encourage deeper engagement.

Institutions ought to take a comprehensive approach by establishing a comprehensive policy which involves academic, social, and ecological considerations in order to develop a strong culture of sustainability. Continuous assessment and observation via feedback systems can aid enhance involvement and communication tactics for improved efficiency. Active engagement may also be promoted through the creation of honors and incentive programs, such as prizes, certifications, or academic credits. The effect and reach of such efforts will be further increased by building alliances or working together with other organizations, thereby giving instructors and pupils more opportunity for significant engagement.

CONCLUSION

The purpose of the investigation was to explore how involvement in institutional sustainability initiatives is influenced by perceived benefits that awareness of sustainability apps, and institutional discourse. The results show faculty members are more aware of initiatives that promote sustainability



than students are, and that open communication greatly increases the prospect of involvement. The study further emphasizes the significance of alleged academic, social, and natural benefits as participation predictors. In order foster increased student and staff involvement, these findings highlight how important it is for institutions to improve information tactics, raise awareness, and stress on the perceived advantages associated with environmentally friendly initiatives. The findings imply that colleges may make important improvements to campus green initiatives by enhancing these critical components.

FUTURE SCOPE

- Future research could inquire into other factors that might influence faculty and the involvement of pupils in initiatives aimed at sustainability, such as the function of incentives or academic support.
- To evaluate how the connection underlying institutional exchanges, awareness, and engagement changes over time, ongoing investigations might be undertaken out.



REFERENCES

- Berardi, U. (2017). Sustainability assessment in the built environment: A review of the methodology and tools. *Journal of Building Performance*, 8(2), 12-21. <https://doi.org/10.1016/j.jobpe.2017.02.002>
- Cutter-Mackenzie, A., & Smith, R. (2003). Ecological literacy: The "missing paradigm" in environmental education. *Environmental Education Research*, 9(4), 497-524. <https://doi.org/10.1080/1350462032000139925>
- Fok, L. F., & Chou, L. L. (2019). Promoting sustainable campus practices: Student and faculty perceptions on campus sustainability programs. *Journal of Environmental Education*, 49(4), 312-327. <https://doi.org/10.1080/00958964.2018.1488080>
- Kagawa, F. (2007). Dissonance in students' perceptions of sustainable development and sustainability education. *International Journal of Sustainability in Higher Education*, 8(3), 317-338. <https://doi.org/10.1108/14676370710817171>
- McDonald, B., & Williams, L. (2015). Understanding sustainability initiatives: The role of communication in promoting campus participation. *Environmental Communication*, 9(3), 370-390. <https://doi.org/10.1080/17524032.2015.1010733>
- Rydin, Y. (2010). *Sustainable urban development and environmental education: Concepts and practices*. Routledge. ISBN: 978-0415773172
- Shiel, C., & King, A. (2013). Engaging students in campus sustainability: An exploration of communication and participation strategies. *Journal of Environmental Education and Sustainability*, 14(1), 25-40. <https://doi.org/10.1080/1553436X.2013.785944>
- Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behaviour: An integrative review of psychological models. *Journal of Environmental Psychology*, 29(3), 309-317. <https://doi.org/10.1016/j.jenvp.2009.01.002>
- Wright, T. S. A., & Horst, M. (2013). Sustainability in higher education: Developing a comprehensive strategy. *Journal of Sustainability Education*, 4, 14-26.
- Zsóka, Á., Szerencsés, K., & Kocsis, J. (2013). Sustainability education on university campuses: Influencing students' behaviors. *Journal of Environmental Psychology*, 34(1), 17-24. <https://doi.org/10.1016/j.jenvp.2013.01.003>