



Green Campaigns Strategies and Waste Management in Higher Educational Institutions in Nigeria

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ARTICLE INFO

Keywords: Environmental Sustainability, Green Campaigns Strategies, Higher Education Institutions, Sustainable Waste Management, Waste Classification and Recycling

Received : 5 March

Revised : 23 April

Accepted: 23 May

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ABSTRACT

The huge amount of waste produced in higher education institutions and the great difficulty of eliminating it are of great concern to school administrators in developing countries. Higher education institutions (HEIs) in developing countries face significant challenges in managing the large volumes of waste they produce, which are often beyond the capacity of their institutions' maintenance units. Sustainable waste management practices are critical in HEIs to create a conducive learning environment. Green campaigns strategies are some of the initiatives that have become vital in promoting environmental sustainability within HEIs, leveraging their role as hubs of knowledge and innovation. This paper evaluates the effectiveness of implementing campaign strategies such as social media campaigns, educational blog and seminars, color-coded waste bins, "cash for trash" and non-cash incentives in fostering positive waste management behaviours among students and staff in HEIs. It identifies challenges associated with these initiatives in the forms of limited financial resources and technical know-how among others, and concludes that interactive, community-engagement campaigns, provision of infrastructure, combined with strategic placement of waste bins within the campus and activities like waste classification and recycling, can significantly enhance waste management practices on campuses

INTRODUCTION

Waste generation has surged dramatically worldwide in recent decades, with no indication of slowing down. Over 2 billion metric tons of municipal solid waste (MSW) are produced annually, and this figure is projected to rise by approximately 70% by 2050¹. Alarming, this increase in waste generation is poorly managed in many regions, particularly in developing countries, due to inadequate planning and resource constraints. This lack of effective waste management escalates environmental degradation and health risks, making it imperative for authorities to implement sustainable waste treatment and disposal systems².

The challenges of waste management have persisted since the Industrial Revolution, driven by heightened production activities and resource consumption. The World Bank (2020) highlights that at least 33% of the 2.01 billion tons of global MSW is not managed in an environmentally sound manner, posing significant ecological and health hazards. This is expected to increase geometrically to 3.4 billion tons by 2050 amplifying the urgency of adopting comprehensive waste management strategies³.

In developed countries, laws, policies, and regulations have played a pivotal role in addressing waste management issues. Many organizations in these regions have embraced green practices, effectively balancing environmental preservation with social and economic sustainability⁴. However, developing countries continue to grapple with significant barriers, including insufficient planning, economic constraints, outdated technology, a lack of recycling infrastructure, and public apathy toward waste management². Consequently, a substantial proportion of waste in these regions ends up in unregulated waste disposal sites, contributing to pollution and greenhouse gas emissions⁴.

To bridge these gaps, innovative approaches in waste management have emerged, particularly focusing on waste reduction, reuse, recycling, and resource optimisation. Among these are advanced technology, digital innovation and green marketing strategies that have gained rapid momentum as transformative solutions. Green marketing approach to waste management focuses on adopting marketing principles, concepts and strategies in solving waste problems in companies and institutions by promoting waste recovery and recycling as ways of achieving sustainable waste management.

Central to green marketing is the green campaign, which raises public awareness about sustainable production, responsible consumption, and waste reduction. These campaigns advocate for integrating environmentally friendly practices into organisations and institutions to foster sustainability in both economic and environmental dimensions⁴. In the context of higher education institutions (HEIs), green campaigns have proven to be powerful tools for encouraging sustainable waste management behaviours among students, staff, and other stakeholders.

HEIs, as leaders in education, bear a critical responsibility in shaping societal norms, particularly in environmental stewardship. With their large populations and substantial waste generation rates, HEIs face challenges such as

excessive paper use, improper food waste disposal, and inadequate recycling infrastructure. Green campaigns initiatives such as social media platforms, educational blogs, community engagement programs, incentives, and creative competitions to address these waste management issues. By integrating sustainability into daily campus life, green campaigns aim to create safe, eco-friendly learning environments and inspire students to adopt sustainable practices in their broader communities.

This study seeks to explore the role of students' involvement in green campaigns and their contribution to achieving long-term sustainability goals in HEIs. By assessing the effectiveness of initiatives like color-coded waste bins, cash-for-trash programs, and social media-driven awareness efforts, the research will highlight best practices for promoting positive waste management for environmental sustainability on campus. Ultimately, the goal is to position HEIs as models of environmental sustainability, setting a standard for broader societal transformation.

Statement of the Problem

The rapid increase in waste generation within higher education institutions (HEIs), particularly in developing countries, has become a pressing environmental concern. This challenge is caused by growing student populations, high consumption rates, and inadequate waste management policies. Issues such as excessive paper usage, improper disposal of food waste, insufficient recycling infrastructure, and the general neglect of sustainable practices persist across many campuses. As a result, institutions often face waste management challenges, especially during peak activity periods, with different types of litter accumulating across campuses. These problems not only degrade the campus environment but also undermine the role of HEIs as leaders in sustainability and education.

Despite the growing global emphasis on sustainability and the introduction of green campaigns strategies, their effectiveness in promoting sustainable waste management practices within HEIs remains limited. Many students, staff, and stakeholders remain either unaware of or resistant to adopting environmentally responsible behaviours. This lack of engagement, coupled with poor planning, weak institutional policies and inefficient waste management systems, often results in visible waste accumulation and environmental degradation in many HEIs in developing countries.

Furthermore, while green campaigns—such as social media initiatives, community engagement, color-coded waste bins, and incentive-based programme have shown promise, their potential has not been fully realized. Institutions still struggle with the traditional waste management methods of open dumping, incineration and landfilling that always cause green-house emission and hazard to the society.

This paper aims to assess the effectiveness of green campaigns in HEIs, particularly by evaluating the role of social media platforms, community engagement, colour-coded waste bins, incentives, and rewards (cash for trash) as key strategies for promoting positive waste management practices among members of the institutions. The goal is to ensure a clean, organized campus

environment that reflects the standards expected of institutions of higher learning and serves as a model for the broader society

Aim and Objectives of the Study

The aim of this study is to evaluate the effectiveness of Green Campaigns on Waste Management in Higher Educational Institutions, the specific objectives are to

- Evaluate the effectiveness of colour-coded bins for waste separation in Higher Education Institutions
- Examine the role of social media platforms in propagating sustainable waste management on campuses.
- Investigate the effectiveness of educational tools (e.g., blogs, workshops, and seminars) on waste management awareness.
- Determine the impact of incentive-based initiatives (e.g., cash-for-trash and reward systems) on waste management practices in HEIs.

Scope of the Study

This study focuses on assessing the effectiveness of green campaigns in promoting sustainable waste management practices within higher education institutions (HEIs), particularly in developing countries. It examines key aspects of green campaign strategies applicable in waste management such as colour-coded waste bins, social media platforms and educational blogs. The study also evaluates the impact of incentive-based programs (e.g., cash-for-trash) and reward systems fostering sustainable behaviours among students, staff, and other stakeholders.

It also addresses the unique challenges faced by HEIs in developing countries, such as resource limitations, inadequate recycling infrastructure, lack of enlightenment, weak institutional policies and public apathy. By analyzing the role of institutional policies and leadership in supporting these initiatives, the study aims to identify best practices and scalable solutions for improving waste management systems particularly in Colleges of Education (CoEs) in South West, Nigeria. Ultimately, the study will provide actionable insights for these CoEs where the students and staff will serve as role models of environmental sustainability in the society.

LITERATURE REVIEW

Solid Waste Management in Higher Education Institutions

There is no doubt that education has a role to play in harnessing opportunities for the populace to be conscious of their responsibility towards the earth and environment. Many scholars have research on waste management in HEIs and have shown that a higher percentage of waste generated is often organic waste, mixed plastics and paper. Due to the size of higher institutions, they are considered as mini cities where there are hospital, restaurants, banks, offices, classrooms, and places for events, among others, for this reason, there is a wide diversity of waste produced by HEIs, including construction and demolition waste, electronic waste, office waste, lamp, furniture, metal, hospital waste, and others⁵.

These waste materials generated could be turned around into useful inputs through recycling and waste to wealth technologies to enhance resource conservation and environmental protection. To achieve sustainable development and full economic benefit from campus waste materials there is need for enforcement of waste control mechanisms by the authorized waste maintenance unit of the institutions and the school authority should also implement modern waste management techniques to ensure that high levels of recyclable materials are recovered and recycled within the education institutions.

The adoption of effective waste management techniques and green campaign strategies on waste management can help reduce waste and promote sustainability in higher education institutions in developing countries is important to address environmental concerns and promote sustainability in these institutions. A solid waste management (SWM) technique on campus will benefit the campus by enhancing environmental sustainability and reduce resource consumption as well as cost spent on waste collection and disposal. Educational blogs, newsletter and social media can be used to inform, enlighten and educate researchers, staff, students and interested individuals in Nigeria higher education institutions about waste recycling. Similarly introduction of colour-coded bins to replace the typical waste baskets have great potentials for waste separation at source. These initiatives which are meant to be highly interactive will motivate staff and students to contribute ideas, suggestions and feedback to the environmental sustainability⁶.

The Role of Green Campaign Strategies in Solid Waste Management in HEIs

These campaigns aim to inform society about environmental challenges while encouraging individuals and communities to adopt sustainable practices. Regular awareness through community engagement, education blog such as campus newsletters and social media; incentives and rewards; competitions and film shows; and the use of colour-coded waste bins and signage at strategic locations will promote proper waste management practices among students, staff and other community members¹⁹. The following are some green campaigns for waste management:

Colour-Coded Waste Bins: The use of different coloured waste bins for different types of waste such as recyclable, non-recyclable waste, decomposable and non-decomposable is a vital process of green campaign towards effective waste management. By doing so, it becomes easier to sort waste, and the recyclable waste can be sold to recycling companies to generate income for the school. After collection, the next step in MSW management system is sorting or segregation of different types of wastes for further processing. Through waste segregation, waste can be separated into paper, plastic, glass, and organic wastes at the spot of generation, to facilitate recycling process by using different colours and signs to designate what type of waste each of the coloured bins is meant for storing⁷.



Figure 1. – Coloured Waste Bins – Source: 7

Social Media Platforms: Social media is a medium for people to socialize in the virtual world, send long-distance messages, or send images and pictures. These platforms such as WhatsApp, Instagram, Facebook etc can be used to engage students and the school community in discussions and challenges relating to waste management issues and possible solutions. Social media is one of the most effective ways to reach out to wider audience and increase public awareness⁸. With the advent of gadget nowadays it is very easy for information to spread widely among greater proportion of the younger generation who rely mostly on use of social media for information on recent and trending issues⁹. Social media is the most suitable medium to be used to reach society to share green campaign content in form of audio, visual and written content. On this basis, information related to environmental sustainability especially concerning waste management issues can be shared on facebook, instagram, whatsapp and other online platform to educate people efficient waste management. The University of Nigeria, Nsukka, launched a waste management program that involves creating awareness, organizing workshops, and collaborating with waste management experts to improve waste management on campus⁶. The use of Facebook, Instagram and Twitter as the communication media are the best social media platforms for “No Plastic Bag” Campaign to enlighten the people on the role of green behaviour in enhancing environmental sustainability⁹. This further proved that the use of social media as a green campaign strategy can be effective in reducing the effect of environmental damage caused by many factors and most of it is plastic waste.

Incentives or Rewards: Offering of incentives or rewards for sustainable behaviours like reducing waste or participating in clean-up events is also incorporated in green campaign. Incentives and rewards can be effective tools for promoting waste management and encouraging individuals and communities to adopt more sustainable practices¹⁰. For instance, incentives in the form of deposit systems where consumers return empty containers like bottles or cans to designated collection points in the campus and receive a refund on their deposit is a financial reward for responsible waste disposal.

Some organisations implement programmes such as “Cash for Trash” to provide direct financial incentives to residents who take their recyclable wastes to curbsides or participate in composting⁷. These individuals can receive cash rewards or discounts on waste collection fees based on the amount of waste they divert from landfills. EcoCash initiatives in Nigeria also organizes a non-monetary incentive programme that allows people to exchange waste for airtime

or other forms of e-payment, promoting waste management while leveraging digital financial services¹¹.

Educational Practical, Art Workshops and Competition: Green campaigns for waste management in schools also involves a combination of educational, practical, art workshops, competition, and other awareness-building tools to promote sustainable waste practices. Interactive workshops and presentations on waste reduction and environmental sustainability for students, teachers, and parents are now being used to create awareness, behavioural change and positive response to waste control¹³. Schools organize art and craft competitions and projects for students to repurpose waste materials and promote creativity while highlighting importance of waste as a secondary material for aesthetics. These initiatives help to inform the public about the potential of waste materials like old tyres, old paper and plastics and their roles in sustainable practices¹⁴ (See fig. 2) Educational institutions also organize recycling, waste reduction and clean-up competitions for students and offer rewards like scholarships, prizes, or recognition to hall of residents or departments that excel in exercise¹⁵.



Figure 2. Fence Made From Old Tyres, Source: 14

Community Engagement – This is among the key factors for achieving success in HEIs waste management. This is the involvement of the students and staff associations as well as other campus community members, Alumni association and College management to fully participate in ensuring a cleaner environment through efficient management of their wastes. The involvement of key actors such as community-based organizations, private contractors, and non-governmental organizations (NGOs) in the functions of SWM greatly assist in providing solutions to the inability of municipal authorities to deal with operations of waste management by providing waste management facilities to the institutions¹².

Challenges of Green Campaign for Waste Management

Green campaign strategies can significantly contribute to improving waste management practices, but the effectiveness of these campaigns is dependent on overcoming financial, cultural, and infrastructural challenges. Adopting green campaigns for waste management in higher education institutions (HEIs) in developing countries faces a range of challenges. Some key challenges include:

Limited Financial Resources - Many HEIs in developing countries operate on constrained budgets for meeting many infrastructures thus limiting their ability to invest in sustainable practices for green initiatives. Implementing effective waste management systems often requires significant upfront investment in infrastructure, technology, and training. Budget limitations in funding HEIs capacity to invest in sustainable waste management strategies, especially in African universities is often inadequate¹⁸.

Lack of Awareness and Education - There is often a lack of awareness about the benefits of green practices among students, staff, and administrators. Knowledge gaps about environmental sustainability hinder the adoption of green strategies in universities, as many staff and students are not familiar with the importance of waste reduction or recycling efforts.

Weak Institutional Frameworks and Policies - Green campaigns are often dependent on strong institutional frameworks and environmental policies to be successful. HEIs in many developing countries lack comprehensive policies that incentivize waste management practices thus making it difficult to promote green campaigns effectively.

Cultural Resistance to Change - There can be cultural resistance by individuals to change their long-standing waste disposal habits and adopt green campaign strategies which promote environmental sustainability. This resistance makes people refuse to participate in recycling programmes or adopt waste reduction behaviours.

Technological Barriers - Many HEIs in developing countries lack access to modern technologies that are vital for waste management, such as waste sorting, recycling facilities, or energy-efficient waste processing systems. Without these technologies, waste management campaigns cannot be effective. Recent advancements in waste management through the use of IoT (Internet of Things) sensors for waste monitoring, data analytics for optimizing collection routes, and the development of new recycling technologies all require highly qualified personnel to handle for effectiveness.

Government and Regulatory Challenges - Governments in many developing countries have not fully embraced or enforced environmental regulations, making it difficult for HEIs to implement efficient waste management campaigns in the campus. In some cases, there are insufficient incentives or regulatory frameworks to promote waste management practices. Most developing countries lack organized means of controlling waste; wastes are rarely collected regularly; lax and poorly implemented waste management regulations, and poor salaries associated with the waste business are factors that inhibit effective waste system.

Inadequate Monitoring and Evaluation Systems - Sustaining green campaign initiatives often requires continuous monitoring and evaluation, which many institutions lack. Without proper tracking systems, it would be difficult to evaluate the success of waste management efforts or make improvements over time. Nigerian institutions face challenges in effectively monitoring their waste management programs. Many maintenance staff members lack commitment, often neglecting their assigned responsibilities, unless closely monitored or held

accountable through strict supervision. This attitude makes it hard to implement effective green marketing strategies for waste management as most of them need close monitoring to function effectively.

The above challenges attest to the complexity of the green campaign initiatives as well as the school authorities' inability to adopt and implement them into practices. This is why it is essential to carry out massive public awareness and intensive training for the community on the importance of sustainable waste management practices through green campaign strategies.

Theoretical Review

This session explores the synergistic relationship between green campaign strategies and waste management practices through relevant behavioural and environmental theories. It examines the role of eco-conscious awareness and behavioural change approaches in mitigating environmental impacts, specifically focusing on waste reduction, individual waste control behaviour, and sustainable consumption patterns.

Theory of Planned Behavior (TPB) - The Theory of Planned Behavior (TPB) proposed by Ajzen, assumes that a person who has a positive attitude towards a particular behavior has a greater intention to involve in this behaviour and that an individual's behaviour is determined by three factors: attitudes, subjective norms, and perceived behavioural control¹⁹. The TPB is often applied to explain the relationships between attitude, social pressures, and perceived control over the act of recycling, as determinants of intention to recycle as well as recycling behavior.

Social Marketing Theory - Social marketing theory introduced by Kotler & Zaltman (1971) involves using marketing principles to influence behaviours that benefit individuals and communities for the greater social good. In waste management, green campaigns use social marketing strategies like social media platform and environmental advertising to promote behaviours like recycling and responsible waste disposal, thus reinforcing campaign efficacy in altering public attitudes and behaviors toward waste²⁰.

Protection Motivation Theory (PMT) - PMT assumes that individuals' decision to participate in risk-preventative behaviors is made based on their motivation to protect themselves from threats of natural disasters, global climate change, and nuclear explosion. Since the waste disposal process potentially yields environmental and health risks and also affects global climate change, it is possible that an individual's threat appraisal and coping appraisal, as indicated in PMT, will influence their engagement in efficient waste management practices²¹.

Waste Management Theory (WMT) - This theory represents a more in-depth account of the domain and contains conceptual analyses of what constitute waste, the activity leading to waste generation, and a holistic view of the functions and goals of waste management. WMT is founded on the expectation that waste management is to prevent waste from causing harm to human health and to contribute greatly to achieving the goals of resources conservation and environment protection²².

Empirical Review

Green business strategies include the entire practices connected with environmental concerns that are endlessly incorporated into eco-friendly manufacturing processes of goods and services. It involves transforming raw materials into finished goods that leaves less environmental hazards but with high efficiency. The initiative has great potential in all fields of human endeavor including waste management. Many advanced countries are applying green campaigns initiatives like colour coded bins, social media platforms and educational blogs among others in promoting sustainable waste management practices to curtail the issue of waste nuisances.

Introducing colour coded waste separation bins and optimizing waste collection centres will enhance waste segregation and facilitate recycling in tertiary institutions²³. The coloured-coded waste separation bins should be placed at the strategic waste generation points. In supporting this, it was observed that 75% of waste generated at the University of Lagos is recyclable and that 30% of the waste constitutes organics materials, 28% are mixed plastics, and 24% paper²⁴. The study conclude that properly waste separation at source through the use of colour-coded bins has great potential for recovery and income generation from HEI waste.

Studies on waste management in higher institutions generally showed that greater proportion of the waste is recyclable and that some members of staff are already engaged in unauthorized waste recycling on campus while waste pickers/scavengers also enter the campus and undertake unofficial recycling of university waste⁶. Advocating for the use of green initiatives such as biodegradable bags, recycled paper products, and reusable water bottles will promote sustainable waste management on campus. This can be done by partnering with vendors who offer such products or by providing incentives for students and staff as rewards for using them. The University of Port Harcourt has implemented a waste-to-wealth program that involves producing eco-friendly products from waste materials generated on the campus as a means of engaging students in efficient waste management²⁵.

Social media platforms and educational tools have large coverage and can be effectively utilized to disseminate information on environmental sustainability and its benefits among youth. The waste management system will be efficient when different colors are attached to specific types of waste, such as paper, plastics, glass and organic waste this will provide an intuitive and clear system for waste segregation¹⁹. For instance, the University of Lagos, Akoka, conducted a waste management campaign that integrated various green campaign strategies during a management orientation for new students in 2014, regular jingles on the university's radio station, strategically placed color-coded waste bins and signage, and awareness lectures involving faculty officers and commercial operators enhance environmental awareness and sustainability practices among young people²⁶.

In another study on the Effects of Different Marketing and Awareness Strategies on Recycling and Waste Minimization in the Residence Halls in University of Wisconsin, it was confirmed that analysis of Passive Programming

such as social media is effective in both increasing the percentage of green campaign on recycling relative to the total amount of waste and contributing to an increase in recycling behavior of the students and decrease in trash²⁷. This means that the change in recycling behavior of students can be modified where social media, tik toks and other educative blogs can be used to enlighten individuals about waste management. It was also observed that creating Eco-Rep sustainability ambassador among students positively affect the percentage of recycling relative to the total amount of waste.

Effective methods of bridging the communication gaps through efficient information dissemination, intensive awareness outreach and the use of educational blogs and poems help to ensure that communities are adequately educated on efficient waste recycling for sustainability in the country²⁸. This was observed in a study they carried out at Covenant University to explore the health and economic impacts of waste recycling and the need to educate communities in Nigeria on the benefits of waste recycling for sustainability in Nigeria.

Summary of Empirical Review

The above studies highlight the significant potential of green campaign strategies for environmental awareness and efficient waste management. Studies on waste management carried out in University of Lagos (UoL) and University of Nigeria, Nsukka (UNN) identified waste classification in these institutions and discovered that large percent of waste generated is recyclable. This suggests a strong opportunity for income generation and waste cost reduction through improved source separation using colour-coded bins. It was also revealed that waste recycling practices would be easier if various institutions in Nigeria can be placing colour-coded containers in the open for public use. Efficient waste management in HEIs is essential for maintaining a healthy learning environment, protecting public health, conserving resources, and promoting sustainable development. It is a collective responsibility that involves management, students, staff, businesses, and communities working together to reduce, re-use, recycle, and dispose of waste properly.

Generally, studies on waste management reveal that a substantial portion of waste is recyclable. However, they observed that only a few institutions implement the practice of waste separation and recycling, and that most of the recycling activities are being undertaken unofficially by some staff and informal waste pickers. To enhance sustainable waste management, institutions are encouraged to adopt and implement green campaign strategies such as social media platforms and educational initiative tools to enlighten the larger population of staff and students on the use of biodegradable bags, recycled paper products, and reusable water bottles and containers. This can be achieved by collaborating with eco-friendly vendors and motivation in forms of cash and non-cash incentives for the units with the best waste management practices.

METHODOLOGY

The search strategy was performed using standard and network approaches to source the literature. This involved the use of electronic sources and follow-up from reference lists. Standard articles and reputable journals were retrieved from the databases in Sci-hup.se, Google Scholar, Researchgate, and Science Direct among others. Grey literature by waste organizations was also searched.

RESULT AND DISCUSSION

The results of this study indicate that green campaign strategies have great potential in increasing awareness and behavior of sustainable waste management in higher education environments, especially in developing countries such as Nigeria. Although challenges such as limited funding, lack of infrastructure, and cultural resistance to change remain major obstacles, the implementation of methods such as color-coded bins, social media, educational blogs, and reward-based incentives have been shown to be able to drive behavioral changes towards a more environmentally friendly direction.

Similar points were made in the literature review, higher education institutions act as a miniature of a complex society, producing waste from various activities, ranging from academic, administrative, to consumption. Therefore, HEIs have an important responsibility in exemplifying good and sustainable waste management practices. Green campaign strategies focus on raising awareness and active involvement of the campus community in reducing, sorting, and reusing waste.

The use of color-coded bins has proven to be very effective in facilitating waste sorting at source. A study at the University of Lagos showed that about 75% of campus waste is recyclable, but the implementation of separate bins is still minimal. Proper separation at source not only allows the recycling process to be more efficient, but also creates economic opportunities through collaboration with recycling companies.

In addition, the use of social media as a digital campaign tool has proven to be very relevant in reaching the younger generation. Platforms such as Facebook, Instagram, and WhatsApp are a means of disseminating information quickly and widely. Digital campaigns allow institutions to continue to motivate students to protect the environment, while shaping public perception regarding the importance of interest.

Incentives and rewards, such as "cash-for-trash" programs and giving prizes to campus units with best practices, have also shown positive impacts. These incentives act as initial triggers that can form sustainable habits in the long term. This is in line with the Protection Motivation Theory (PMT) which explains that the perception of threats to the environment, when combined with appropriate coping strategies (eg imbalance), can trigger consistent preventive actions.

Educational and participatory activities, such as art competitions from used materials, waste management training, and community workshops, further add value to green campaigns as an educational and social action-based

approach. These activities not only educate but also create emotional bonds between individuals and their surroundings.

However, this study also highlights structural weaknesses in many HEIs, especially in developing countries, namely the lack of supporting internal regulations, weak monitoring and evaluation systems, and minimal support from institutional authorities. Without strong policies and supervision, green campaign initiatives are only temporary and unsustainable. In addition, the lack of awareness and training among staff and students also slows down the process of change towards an environmentally friendly campus culture.

Considering the empirical results of previous studies, such as those conducted at the University of Nigeria, Nsukka and the University of Wisconsin, a multi-strategy approach through collaboration between students, campus management, and external stakeholders such as NGOs and recycling companies, is essential for green campaigns to be effective.

In theory, this approach is very consistent with the Theory of Planned Behavior (TPB) and Social Marketing Theory, where positive attitudes, social norms, and perceptions of self-control play an important role in the formation of environmentally friendly intentions and behaviors. The combination of effective communication, provision of physical facilities, and economic or social motivations are key to forming sustainable behaviors in the campus environment.

CONCLUSIONS AND RECOMMENDATIONS

Green campaigns have the potential to significantly improve waste management practices in HEIs, but their success depends on the level of engagement, infrastructure, and institutional support. While this study has demonstrated the positive impact of green campaigns on waste reduction and recycling rates, it has also highlighted several areas for improvement. By addressing the identified barriers and incorporating the recommendations provided, HEIs can enhance the effectiveness of their green campaigns and contribute to a more sustainable future.

The findings of this study suggest that green campaigns can be effective in promoting sustainable waste management practices in HEIs, but their success is highly dependent on several factors. Community engagement among students and staff are critical, as well as the availability of necessary infrastructure and institutional support. Green campaigns that are interactive and engage the campus community on hands-on activities such as waste audits and recycling, and the availability of waste bins at strategic places, would be more successful than those that rely solely on awareness-raising efforts.

FURTHER STUDY

This research still has limitations so further research is needed related to the topic of Green Campaigns Strategies and Waste Management in Higher Educational Institutions in Nigeria to perfect this research and increase insight for readers.

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