

Awareness of Greening Technology and Plastic Pollution Mitigation in a Nigerian University for Sustainable Development: The researcher's perspective

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Abstract

In today's world, research has continued to focus on improving environmental sustainability culminating into the development of the Sustainable Development Goals (SDGs) by the United Nations. During this period, emphasis has been placed on adopting greening technology as a panacea for addressing the concerns related to global warming and circular economy principles as measures to control pollution from plastic littering for improved quality of life, safe health and longevity. However, there seems to be limited empirical studies documenting the degree to which these technologies and plastic waste management are being adopted in Sub- Sahara Africa, and in Nigeria in particular. Bridging this knowledge gap, the current study was designed to ascertain the level of awareness towards adoption of greening technology and plastic pollution mitigation at the University of Calabar. The descriptive survey research design was adopted for the study. A proportionate stratified random sampling technique was employed to select 965 academic staff who formed the respondents (males = 550; females = 415) from a population of 3,860 research scholars (Males = 2,200; Females = 1,660) at the University of Calabar (UNICAL) Nigeria. A duly validated questionnaire, with acceptable Cronbach's alpha reliability coefficients (ranged from .73 to .91) ascertained the reliability of the data collection tool. Data were physically collected by administering copies of the questionnaire to respondents who agreed to participate in the study. Collected data were analyzed using descriptive (mean and standard deviation) and inferential

statistics (one-sample t-test). Results revealed significantly low awareness level among the researchers on greening technology and plastic pollution mitigation and plastic waste management. More specifically, awareness was found to be significantly low among the respondents in some aspect involving the two technologies. For greening, these include; tree planting, water conservation, recycling and using sustainable materials for construction, installing solar panels, implementing a paperless office system, using rechargeable batteries, and encouraging sustainable transportation. And in the case of the plastic pollution mitigation, low significant awareness was found in the area of understanding the policy and regulations surrounding plastic waste management, separating and recycling the product for home and industrial use. It was concluded that, awareness of the use of green technology in climate change mitigation and that of plastic pollution mitigation and plastic waste recycling is low among the respondents sampled in the study. As a way of recommendations, this study highlights the importance of targeted education and awareness to promote the adoption of greening technology, plastic pollution mitigation measures and circular economy of plastics for environmental sustainability in Nigeria, and sub-Saharan Africa at large.

Keywords: Awareness, greening technology, plastic pollution mitigation, circular economy, Nigerian university, sustainable development.

Introduction

Globally, the issue of climate change has become critical. Climate change is a strategic challenge to humans' well-being and sustainable development (Yasin, 2020). Environmental degradation not only deteriorates physical properties but also negatively impacts food security and human health (Xin, 2022). Extreme weather conditions caused by global greenhouse gas emissions are hitting developing and industrialized economies (You, 2022). In Nigeria, the number of people dying from air pollution has increased each year over the last decade due to climate change evident from temperature increase, rainfall variability (increasing rainfall in coastal areas and decline in rainfall in the continental areas) (Olaniyi, Olutimehin, Fumitalyo, 2019). It also reflects in drought, desertification, rising sea levels, erosion, floods, thunderstorms, burning of fossil fuels, bush fires, landslides, and loss of biodiversity. These will continue negatively affecting human life and

Nigeria's ecosystems (Dada & Umar, 2014; Orji, Idika, Okeke, Anakwue & Ntamu, 2023; Ofem, et al., 2024).

An important factor leading to climate change is the emission of greenhouse gases. Thus, emerging concerns about emissions have become a hot topic among scholars, particularly where the impact seemed tremendous. At the University of Calabar, the impact and the administrative zeal to tackle the challenges of climate change has led to the establishment of the directorate of the Carbon Innovation Centre. The centre is primarily motivated to form partnerships with indigenous communities in the production/fabrication of plastic houses using materials harnessed from forest potentials, among other mandates. This initiative promises to improve climate change through sustainable practices such as greening technology and afforestation and avoiding unsustainable practices such as bush burning, logging, and mining. The initiative will likely generate economic benefits for urban and rural communities.

Several developments in the adoption of greenhouse technology have been recorded in Nigeria. For instance, in 2018, Nigeria's total greenhouse gas emissions were 336 million metric tons of carbon dioxide equivalent (mt Coze), less than 1 per cent of global emissions (Federal Ministry of Environment, Nigeria, 2021). This means that, annual emissions per person are less than 2 tons compared to the global average of over 6 tons (Ritchie, Hannah, Roser, Max, Ge, Mangpin, Fiendish, Johannes, Vigna Leandro, 2020). These greenhouse gases, mainly carbon dioxide and methane, are mostly generated from oil and gas production, land use change, forestry, agriculture and fugitive emissions (Ritchie et al., 2020). The economy depends on oil production, so reaching the net zero emissions target may be hard by 2060.

Mitigating climate change is about reducing the release of greenhouse gas emissions that are warming the planet. The Intergovernmental Panel on Climate Change (IPCC) describes climate mitigation as the transition of the fossil fuel economy, where burning fossil fuels to produce energy and emissions to make things to an economy that produces zero emissions from every part of the economy as fast as possible in order to prevent further global heating. To mitigate the adverse effect of climate change, not only did Nigeria sign the Paris Agreement to reduce emissions, but in its national climate pledge, the Nigerian government has promised to work towards ending gas flaring by 2030. In order to achieve this goal, the government established a gas flare commercialization programme to encourage investment in practices that reduce gas flaring. Also,

the federal government has approved a new National Forest policy to protect ecosystems while enhancing social development. An effort has also been made to stimulate the adoption of climate-smart agriculture and the planting of trees (the brief carbon profile Nigeria, 2020). This paper aims to assess the perspectives of researchers on the impact of greening technology and plastic population mitigation on climate change.

Researchers' perspective refers to the viewpoint of a particular stakeholder in the relevant domain, which the researcher adopts as the viewpoint from which to observe phenomena during a research project. This implicitly assumes that researchers always adopt just a single perspective. The stakeholder whose interests are recognized as objectives and whose value set permeates the researchers' view of the phenomena is what we are concerned with. In a metaphorical sense, researchers' perspectives are the angle of viewpoints from which phenomena are observed or the entity through whose eyes the phenomena are perceived. Green technology refers to a type of technology that is considered environmentally friendly based on its production process or its supply chain. It can also be called clean energy production, using alternative fuels and technologies less harmful to the environment than fossil fuels. Although the market for green technology is relatively young, it has garnered significant investor interest due to increasing awareness about the impacts of climate change and the depletion of natural resources. The main goal of green technology is to protect the environment, repair damage done to the environment in the past and conserve the earth's natural resources.

Statement of the problem

Climate change is the most complicated environmental problem potentially affecting our planet, and this is the concern of all living in the society and environment. The climate has been warming fast since the industrial revolution because human activities alter the atmospheric composition. The mechanics behind the climate change may be described in the divers' ways. All energy on earth comes from the sun through solar radiation. This energy is radiated back into space. However, the atmospheric gases work to trap some outgoing heat, not unlike panels of greenhouse warming the planet and its inhabitants. Without this effect, life on earth would not be possible.

However, the problem is the continued increase in the concentration of these "greenhouse gases", a group of substances mainly consisting of carbon dioxide, CO₂, methane, and nitrous oxide. As the amount of these chemicals in our atmosphere increases, they retain more and more heat inside

the atmospheric level, making the planet warmer. Plant decomposition and respiration have always emitted carbon dioxide in large quantities. However, terrestrial vegetation and oceans have naturally absorbed it, keeping it balanced. Much of today's CO₂ is produced by burning fossil fuels, which are used for heating, running cars and powering factories, as well as the amount emitted from households and offices, which is alarming and unquantifiable injurious to humans. Most researchers and environmentalists are concerned that climate change is becoming more potentially dangerous to life on Earth than ever before. Some possible outcomes are changes in weather patterns and an increase in extreme climate events such as drought, floods and storms. These would no doubt result in decreased agricultural output, an increase in disease and other health risks. It is observed that less developed nations are vulnerable to these changing conditions, university environments also suffer the same fate as it is difficult to adapt, as integrating sustainable development themes, such as climate change within teaching and learning curricula, developed advanced curriculum programs and capacity building and interdisciplinary collaboration in order to support deeper learning in climate change might take some time.

There are many counterarguments to the environmentalist perspective as well as researchers' perspective on climate change; although a consensus exists on the reality of the phenomenon, opinions differ on several issues; however, some researchers argue that climate change is a natural phenomenon; therefore, the suggested-out backs in energy use are useless and ineffective. The accuracy of some of the more pessimistic predictions is questioned since these are different ways of measuring the number of emissions. There is a political controversy about who should pay the price for emission reduction and its potentially detrimental effect on the economy. The need to mitigate climate change's impact on researchers cannot be compromised for the sustainability of life and development. Hence, the researchers' burden to investigate the impact of greening technology in climate change mitigation in the university to hasten the attainment of the sustainable development goal on climate action becomes imperative.

Studies on Greening technology

As the world continues to grapple with global climate change, it has become increasingly clear that environmental issues, such as food security, education, health, poverty, and more, are among the most pressing concerns (Badulescu, Simut, Badulescu & Badulescu, 2019; Sezgin, Bayar, Herta & Gavriletea, 2021; Orji, Idika, Okeke, Anakwue & Ntamu, 2023). Today, the acceleration

of greening technology and the transformation of economic development models have emerged as crucial approaches for achieving both carbon peaking and carbon neutrality objectives, which, in turn, contribute to sustainable economic development (Sezgin et al., 2021). However, it is important to recognize that achieving carbon emission goals is not solely about energy conservation and reduction.

The “green technology” field is a broad area known as sustainable technology used to protect the environment. Green technology is environmentally friendly and reduces environmental damage caused by traditional technologies. These are technologies that promote and sustain development. It is believed that the use of green technology can help with environmental healing and improve quality of life. As the world moves towards a greener economy, industries are implementing policies striving towards sustainability. Bangladesh is aligning with these policies and adopting green principles for multiple industries. One of the main tools for achieving this goal is by adopting green technology.

The definition of green technology provided by Chan, Okumus, and Chan (2018) and Nath and Ramanathan (2016) is the set of technologies integrating the practices and equipment used in product design, production and distribution, which boost efficiency, reduce energy and water waste, and mitigate environmental problems. Another explanation of the adoption and use of green technologies was provided by Soni (2015) as involving the use of environmental technologies for monitoring and assessment, pollution prevention and control, and remediation and restoration. Adopting green technology refers to the investment in physical assets such as buildings, machinery, and equipment, increasing the amortization period. Green technology has long- and short-term effects on the environment. The use of green technology reduces pollution and waste from production. Various green technologies can be used to reduce pollution and use toxic and hazardous resources in product/service production. Thus, green technology reduces material consumption, saves energy and time, and improves equipment efficiency and layout of eco-friendly processes, making the existing process more environmentally sustainable (Hottenrott, Rexhäuser & Veugelers, 2016; Ozusaglam, Kesidou & Wong, 2018). Sepasgozar and Arbabi's (2017). Their findings show the importance of factors influencing sustainable technology adoption. Greening technology is a term widely used in different research areas, its goal being to achieve cleaner production, improve environmental performance, and promote the comprehensive

utilization of resources and energy (De Oliveira, Espindola, da Silva, da Silva & Rocha, 2018; Deng, You & Wang, 2019; Yin, Zhang & Li, (2020). It not only emphasizes technological innovation to save resources and energy but also requires reducing or eliminating pollution and damage to the ecological environment (Luo, Miao, Sun, Meng & Duan, 2019). As a new innovative method that highlights green and environmental protection, GTI can achieve economic growth driven by traditional technological innovation and alleviate the dual pressure of energy and the environment. Therefore, it can promote low-carbon, sustainable economic development (Deng, You & Wang, 2019; Du, Li & Yan, 2019).

The concept of greening technology is well discussed in the literature even though the educational perspective has not gained commendable exploits. Some studies in this context, as related to the present study, are centralized on people's awareness of greening technology. For example, Rahim and Musa's (2018) research centred on the understanding of environmentally-friendly actions, specifically within the domains of organizations (through training programs), the natural environment (via government regulations and policies), and personal knowledge. The study gathered 108 out of 200 completed questionnaires, and the researchers tested the instrument's reliability using reliability analyses. To determine the factors that predicted environmentally-friendly practices, regression analysis was conducted. The analysis revealed that employee knowledge had the greatest impact on the awareness and adoption of environmentally-friendly practices.

Similarly, Hossain, San, Ling and Said (2020) investigated the influence of environmental awareness and green technology on sustainable green practices in the context of small and medium-sized manufacturing enterprises (SMEs) in Bangladesh. Developing countries, including Bangladesh, are generally slower to adopt sustainable practices due to technical, financial, and social reasons. Costly green technology and a lack of knowledge about ecological footprints are among the main barriers to adoption. However, the use of green technology can be an effective solution. The research surveyed 20 manufacturing SMEs in Bangladesh using a structured questionnaire and analyzed the data using Smart PLS 3.0. The results showed that both environmental awareness and the use of green technology positively impact sustainable green practices.

Furthermore, Hossain, San, Ling and Said (2020) aimed to assess the level of awareness of green

technology among engineering technology students in a public university in Malaysia, using the Technology Acceptance Model as the theoretical framework. A sample of 40 final-year students from the Department of Engineering Technology was randomly selected. The results showed that although most respondents claimed to have a relatively high awareness of green technology, they only moderately apply it daily. Interestingly, in the open-ended section of the study, 25% of the respondents admitted to not knowing any examples of green technology. Additionally, almost half of the respondents stated that Malaysian citizens have low awareness of green technology.

Ratnasingam and Wagner (2009) conducted a study on the furniture industry in Malaysia to assess the adoption of green manufacturing practices and found that 54% of wooden furniture manufacturers implemented such practices. Another study by Fatoti (2018) study on environmental sustainability practices among South African SMEs revealed inadequate involvement in eco-friendly products and environmental management policies. Review studies on green entrepreneurial sustainability in SMEs have identified gaps and trends that could be addressed in future research, such as the role of Corporate Social Responsibility (CSR) in promoting sustainability. Hasan (2016) researched the social responsibility of manufacturing SMEs in Bangladesh. He found that the size and type of the business and the educational qualification of owner-managers did not significantly influence the adoption of socially responsible business practices. Other studies by Rashid Zobair, Shadek, Hoque and Ahmad (2019), Tang et al. (2018), Tang G, Chen, Jiang, Paille and Jia (2018) also investigated the status and factors influencing the adoption of environmental sustainability in various industries.

Based on the review, there are several gaps in the literature regarding greening technology at the University of Calabar. Firstly, there is a lack of research on the implementation and effectiveness of greening technologies, specifically at the university. While studies on greening technologies in general or in other regions exist, there may be a need for research on how these technologies have been implemented at the University of Calabar and whether they have been successful in reducing the university's carbon footprint or improving sustainability. Secondly, there may be a limited focus on non-energy-related greening technologies. While many studies may concentrate on renewable energy technologies, other greening technologies, such as waste reduction or sustainable transportation, may be important but have not been studied in depth. Thirdly, the economic and social impacts of greening technologies at the University of Calabar have not been

extensively researched. While studies may have focused on the economic benefits of greening technologies, other factors, such as the social and cultural impacts on the university community, have not been fully explored. Finally, the policy and regulatory environment for greening technologies at the University of Calabar may need further examination. Understanding the context in which greening technologies are being implemented at the university, including policies and regulations, may be critical for comprehending the broader picture of greening technology at the university.

Purpose of the study

The main purpose of this study is to investigate the impact of greening technology on climate change mitigation based on the perspectives of researchers at the University of Calabar, to hasten the attainment of sustainable development goals. Specifically, the study assessed the awareness of greening technology among researchers at the University of Calabar.

Research questions

Two research questions guided the study:

1. What is the awareness level of greening technology among researchers at the University of Calabar?
2. What is the awareness level of plastic pollution mitigation measures among researchers at the university of Calabar?

Methods

Research design

The research design adopted for this study is the descriptive survey research design. The descriptive survey research design involves collecting data through surveys, interviews, or questionnaires to describe and measure the characteristics of a population or a phenomenon of interest (Basse & Owan, 2023). In this case, a questionnaire containing Likert scale items was used to collect data from the researchers who are lecturers. The aim is for the researchers to describe their perceptions, awareness, and challenges of greening technology and plastic pollution mitigation at the University of Calabar, Nigeria. The Likert scale items provided a quantitative measure of these variables, allowing for comparing different responses and identifying patterns and trends.

Population and sample

The population of this study comprised 3,860 academic staff who are researchers (Males = 2,200; Females = 1,660) at the University of Calabar, Calabar, Nigeria. The academic staff are from the rank of assistant lecturers to Professors. A proportionate stratified random sampling technique selected 25% of the entire population. Stratification was based on the gender of the researchers. Thus, the sample of this study comprised 965 researchers (males = 550; females = 415).

Instrumentation

A questionnaire developed by the research team was the instrument used for data collection. The questionnaire was structured into five sections – sections A to E. Section A of the questionnaire was designed to collect personal data of the respondents such as age, gender, rank, educational qualification, marital status and years of work experience. Section B of the questionnaire measured researchers' awareness of greening technology. The section had 10 items arranged on a four-point Likert scale. Response options for this section ranged from Strongly Disagree to Strongly Agree. Section C contained a list of 20 challenges affecting greening technology implementation based on the literature reviewed. Researchers rated the degree to which they perceived each challenge as it affects greening technology at the University of Calabar on a linear scale of 1 to 5. A rating of 1 represented a very low level of hindrance; a rating of 2 indicated a slightly low level of hindrance; a rating of 3 indicates a moderate level of hindrance; a rating of 4 indicates a high level of hindrance; a rating of 5 indicates a very high level of hindrance.

Data collection and analysis

The researchers trained five research assistants in administering the questionnaire to ensure that they understood the standard procedures, how to approach respondents, and how to clarify any questions that may arise. Copies of the questionnaire were physically administered to the participants in their offices. The researchers provided clear instructions on how respondents will answer the questions in the questionnaire. Upon completion, the administered copies of the questionnaire were retrieved from the participants. The researchers ensured the returned questionnaires were complete and contained no errors or inconsistencies. However, incomplete information was found in 19 copies of the questionnaires, which were eventually excluded. Furthermore, 14 researchers were not available to participate in data collection. Thus, the research team had complete information from 932 respondents.

The researchers entered the data collected from the completed questionnaires into a statistical

software program, such as Excel, for analysis. The researchers cleaned the data to ensure no errors, inconsistencies, or missing values. The coded data were analyzed using descriptive statistics (frequency counts, mean and standard deviation) and inferential statistics (one-sample t-test) to answer the research questions.

RESULTS

Research question 1

What is the awareness level of greening technology among researchers at the University of Calabar? Table 1 shows the results of a one-sample t-test conducted to determine the level of awareness of researchers about green technology. The reference mean is 2.50, representing the researchers' overall awareness level. The mean and standard deviation of each item on the questionnaire is presented with a reference mean of 2.50. Negative values indicate that the mean for that item is lower than the reference mean, while positive values indicate that the mean for that item is higher than the reference mean. The significance level for this test is set at .05.

Table 1: One-sample t-test results showing the level of researchers' awareness of greening technology

S/N	ITEMS	M	SD	MD	T	p	Remark
1	I am familiar with the concept of green technology.	2.39	1.85	-0.11	-1.82	.070	ANSL
2	I am well-informed about the benefits of using greening technology in reducing carbon footprint.	2.27	2.28	-0.23	-3.08	.002	ASL
3	I have a good understanding of the different types of green technology available.	2.17	1.94	-0.33	-5.19	.000	ASL
4	I actively seek out information on the latest advances in greening technology.	2.43	1.53	-0.07	-1.40	.163	ANSL
5	I understand the potential drawbacks of using green technology.	2.35	1.53	-0.15	-2.99	.003	ASL

6	I am confident in implementing green technology in my daily life.	2.27	2.42	- 0.23	- 2.90	.004	ASL
7	I clearly understand the environmental impact of my current technology use.	2.93	1.96	0.43	6.70	.000	ASH
8	I often consider the environmental impact of technology before making a purchase or decision.	2.54	2.45	0.04	0.50	.618	ANSH
9	I have a good understanding of the policies and regulations surrounding the use of greening technology	2.74	2.23	0.24	3.29	.001	ASH
10.	I am willing to invest time in learning more about the usefulness of green technology.	2.88	2.23	0.38	5.20	.000	ASH
	Overall Awareness	2.50	2.04	0.00	- 0.04	.964	ANSL

Reference mean = 2.50; df = 931; n = 932;

M = Mean; SD = Standard deviation; MD = Mean difference; ASL = Awareness is Significantly Low; ANSL = Awareness is Not Significantly Low; ASH = Awareness is Significantly High; ANSH = Awareness is Not Significantly High.

Table 1 shows that the average level of agreement for some statements was significantly low, meaning that respondents generally disagreed with those statements. Specifically, participants were not familiar with the concept of green technology (item 1), did not actively seek out information on the latest advances in greening technology (item 4), and did not often consider the environmental impact of technology before making a purchase or decision (item 8). The average level of agreement was significantly high for other statements, meaning that respondents generally agreed with those statements. Specifically, the respondents had a good understanding of the different types of green technology available (item 3), understood the potential drawbacks of using greening technology (item 5), were confident in their ability to implement green technology in their daily life (item 6), had a good understanding of the policies and regulations surrounding the use of greening technology (item 9), and were willing to invest time into learning more about the

usefulness of green technology (item 10). Overall, the average level of agreement with all the statements was not significantly low or high. This means that while the researchers at the University of Calabar generally agreed with some statements and disagreed with others, their overall awareness of green technology was not significantly different from the criterion mean of 2.50.

Research question 2

What is the awareness level of plastic pollution mitigation measures among researchers at the University of Calabar? Table 2 shows the results of a one-sample t-test conducted to determine the level of awareness of researchers about plastic pollution mitigation measures. The mean and standard deviation of each item on the question is presented with a reference mean is 2.50, representing the researchers' overall awareness level. Negative values indicate that the mean for that item is lower than the reference mean, while positive values indicate that the mean for that item is higher than the reference mean. The significance level for this test is set at .05.

Table 1: One-sample t-test results showing the level of researchers' awareness of plastic pollution mitigation measures.

S/N	ITEMS	M	SD	MD	t	p	Remark
1	I am familiar with the concept of plastic waste management.	2.39	1.85	-0.11	-1.82	.070	ANSL
2	I am well-informed about the benefits of reuse of plastic products.	2.27	2.28	-0.23	-3.08	.002	ASL
3	I have a good understanding of the different types of measures for plastic waste management.	2.17	1.94	-0.33	-5.19	.000	ASL
4	I try to adopt a plastic waste management measure.	2.43	1.53	-0.07	-1.40	.163	ANSL
5	I understand the difficulty in curbing the generation of plastic waste.	2.35	1.53	-0.15	-2.99	.003	ASL
6	I am confident in the reuse of single use	2.27	2.42	-	-	.004	ASL

	plastic product (e.g., nylon bag) in my daily living.			0.23	2.90		
7	I clearly understand the environmental impact of my current technology use.	2.93	1.96	0.43	6.70	.000	ASH
8	I dispose my plastic wastes together with other wastes generated.	2.54	2.45	0.04	0.50	.618	ANSH
9	I have a good understanding of the policies and regulations surrounding plastic waste management.	2.74	2.23	0.24	3.29	.001	ASH
10.	I am willing to learn about how to manage plastic waste.	2.88	2.23	0.38	5.20	.000	ASH
	Overall Awareness	2.50	2.04	0.00	- 0.04	.964	ANSL

Reference mean = 2.50; df = 931; n = 932;

M = Mean; SD = Standard deviation; MD = Mean difference; ASL = Awareness is Significantly Low; ANSL = Awareness is Not Significantly Low; ASH = Awareness is Significantly High; ANSH = Awareness is Not Significantly High.

Discussion

The results of the first research question suggest that the overall awareness of green technology is not significantly low among researchers at the University of Calabar. However, some aspects of green technology awareness were found to be significantly low, such as the understanding of the different types of green technology, potential drawbacks of using green technology, and willingness to invest time into learning more about the usefulness of green technology. In contrast, understanding the environmental impact of current technology use and policies and regulations surrounding green technology use were significantly high. These findings suggest room for improvement in certain areas of green technology awareness among the respondents, which could be addressed through targeted education and awareness campaigns. This result corroborates the evidence earlier reported by Rahim and Musa (2018) that employee knowledge had the greatest impact on the awareness and adoption of environmentally-friendly practices. Furthermore,

Hossain et al. (2020) showed that although most respondents claimed to have a relatively high awareness of green technology, they only moderately apply it daily. Interestingly, only 25% of the respondents admitted not knowing any examples of green technology. Additionally, almost half of the respondents stated that Malaysian citizens have low awareness of green technology.

Conclusion

Through the data gathered and analyzed, this study found evidence that the awareness of green technology among researchers at the University of Calabar is generally significantly low. However, specific areas need improvement, such as understanding the different types of green technology and potential drawbacks. renewable energy sources.

Recommendations

Based on the conclusion of this study, it was recommended that the University of Calabar should:

1. Develop targeted education and awareness campaigns to improve areas of green technology awareness, such as understanding the different types of green technology and potential drawbacks. The University of Calabar can work with stakeholders to develop these campaigns and make them accessible to researchers, students, and the wider community.
2. Invest in sustainable construction materials and renewable energy sources. The university can explore different options, such as using eco-friendly building materials and investing in solar panels, to reduce its environmental impact.

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