

Analysis of the Level of Exposure to Environmental Content in University Facebook Pages in Kenya

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ABSTRACT

This research examined the frequency of environmental content and which type had the most likes, shares, and comments to ascertain the level of exposure to environmental content on university Facebook pages in Kenya. The study did content analyses for a period of three months (February – May 2023) of environmental content posted on the official Facebook pages of eight universities (four public and four private universities) that were sampled from 68 universities in the country using simple random sampling. The main objective of the study was to examine the level of exposure to environmental content on university Facebook pages. The research used desktop research methodology to gather freely accessible data. The research focused on two specific objectives: to investigate the frequency at which environmental content was posted on the university Facebook pages in Kenya and to ascertain the level of engagement with the environmental content posted on the university Facebook pages in Kenya. The research used a quantitative content analysis design to determine the frequency and types of environmental content universities disseminate on their official Facebook pages. A thorough content analysis code was devised to classify environmental content by types such as climate change, sustainability programs, conservation efforts, and environmental awareness campaigns. The research examined how often environmental content was posted on the official university Facebook pages in Kenya compared to other themes. Additionally, it assessed engagement metrics for environmental posts including likes, comments, and shares, which revealed the degree of user engagement and possible influence of such content. The research provided insights into how prevalent and widely known environmental issues became through postings on university social media pages.

Keywords: Environmental content; climate change communication; exposure to environmental issues; Facebook and environmental awareness

INTRODUCTION AND BACKGROUND TO THE STUDY

Universities play a crucial role in promoting environmental awareness and sustainability among their students and larger communities since they are important institutions of higher learning (Rehman et al., 2019). Studies have demonstrated how social media may spread environmental awareness, shape attitudes, and motivate behaviour change (Liu et al., 2019). Social media platforms are important for environmental communication because they have changed how information is shared, consumed, and discussed (Moran et al., 2020). The presence of universities on social media, especially on popular sites like Facebook, presents a special chance to interact with audiences and efficiently spread environmental content i.e. information about ecological, sustainability, and environmental topics.

Different types of organizations in the world, including universities, have recently given environmental issues more consideration due to the public's significance placed on them (Wang & Wang, 2019). Universities are important sources of information and research, making them be counted among the best organizations to spearhead environmental Education and advocacy initiatives. Many universities and universities have adopted sustainability efforts, green campuses, and research programs concerned with

climate change and conservation (Nelson et al., 2020). Their stance on environmental concerns can be inferred from the prominence and visibility of such activities on their Facebook sites. Platforms like Facebook enable universities to express their beliefs, initiatives, and accomplishments to a wide audience thanks to their huge reach and interaction potential (Pavelle & Wilkinson, 2020).

Without question, the environment is a topic that receives much public attention. Numerous public opinion surveys have demonstrated a definite rise in environmental consciousness (Jannah, 2023). It is evident from research done on green advertising that the public's environmental consciousness could directly impact the organization's bottom line (Li et al., 2020). The impact has resulted in a rise in environmental consciousness in the marketplace; for instance, many businesses have developed socially responsible practices to address the environmental concerns of diverse stakeholders. However, they must convey this to their stakeholders to foster positive impressions if they want to be commended for their efforts (Thomas et al., 2019). As a result, many organizations, such as universities, try to show the public that they are responsible corporate citizens who care about the environment and promote their environmental initiatives and policies online (Ardoin & Bowers, 2020). This tendency should be reflected on the organization's website as one of the most significant corporate communications tools. According to scholarly studies, businesses worldwide use their websites to showcase socially responsible actions (Feng et al., 2019).

Given that websites may target various audiences and are a reasonable method for such uses, the results from these studies are justified. Organizations can show their dedication to the environment by outlining their environmental initiatives or policies on various pages of their websites. Environmental issues should be presented at a higher level rather than a lower one by organizations such as universities that emphasize projecting a more environmentally friendly image to the public (Thomas et al., 2019).

It is against this backdrop, that this study was done so as to examine the level of exposure to environmental content on university Facebook pages in Kenya. Through this research, questions that shed light on how universities now communicate their corporate environmental strategies were addressed including: What significant environmental issues do universities want to communicate to their stakeholders, and how frequently do they publicly communicate these environmental issues? The research intended to fill a knowledge gap on how much environmental content is exposed on university Facebook pages.

Therefore, determining the frequency and types of environmental content universities provide on their official Facebook pages was one of the research's main goals. The study offered insightful information about how universities used Facebook for environmental communication to fulfil these goals. The study results shall help universities as well as other types of institutions to determine whether their efforts are beneficial, direct the creation of better plans, and contribute to a larger conversation on environmental sustainability in the digital age.

Statement of Problem

Although there is a global campaign to increase awareness towards environmental issues such as climate change, there is a dearth of research on how much has so far been achieved by different states that ascribe to international bodies such as United Nations Framework Convention on Climate Change

(UNFCCC) and United Nations Environmental Programme (UNEP). Kenya is one such nation. Based on this glaring research gap, the problem this study sought to address was whether university Facebook pages are effective at increasing awareness of sustainability and the environment by examining the level of exposure to environmental content. According to research submitted by G Usha and Rajnarayan, 40% of college students need to be made aware of environmental issues, forming the basis of this research (Hamrokulova, 2022). The main objective of the research is to examine the extent of environmental content exposure on university Facebook pages and how audiences engaged with the content. The research aimed to

investigate whether Facebook as a platform successfully engaged students and increased awareness and action toward environmental issues by looking at how universities used their Facebook pages to communicate environmental content. The research sought to offer insights that could guide initiatives for boosting environmental education and engagement on social media platforms within the university by assessing the present amount of exposure to environmental information and its impact.

Study Objectives

Main Objective

The main objective of the study was to examine the level of exposure to environmental content on university Facebook pages in Kenya.

Specific Objectives

The study was guided by the following three specific objectives:

1. To assess the frequency at which environmental content is posted on the university Facebook pages in Kenya
2. To examine the differences between universities in exposure levels to environmental content on university Facebook pages in Kenya from positngs
3. To examine the level of engagement with the environmental content posted on the university Facebook pages in Kenya.

THEORITICALFRAMWEWORK AND LITERATURE REVIEW

Agenda Setting Theory

The research was anchored on the agenda-setting theory. According to the Agenda-Setting Theory, media can affect how much weight the public gives to particular concerns (McCombs, 2018). The theory proposes that media influences the importance placed on issues in the public's mind. The premise behind thisresearch contends that the information posted on university Facebook sites may influence how much emphasis the campus community places on environmental issues. It relates to setting an agenda for how university Facebook pages prioritize and frame environmental issues by conducting a content analysis of the environmental content on university Facebook pages. The research examined environmental content posts' engagement, volume, and prominence.

The theory was used as the basis of this research to evaluate how Facebook sites help establish the environmental agenda within the university community (Wang et al., 2023). The research examined whether environmental issues get more attention on university Facebook pages. This analysis can show how the university's Facebook pages influence how students, staff, and other community members view and comprehend environmental issues and the significance that particular topics have in the public's view. The premise of this research contends that the information posted on university Facebook sites may influence how much emphasis the campus community places on environmental issues. Issue salience in agenda setting was specifically calculating the proportion of environmental posts relative to non-environmental posts. Framing in agenda setting was used to analyze the frequency of specific keywords in environmental posts.

Literature Review

In recent years, social media platforms have emerged as important venues for communication and interaction among various user groups, including college students (Dolan et al., 2019). Universities increasingly use social media platforms to promote their environmental programs and events as they

understand the value of environmental consciousness and sustainability (McLure & Seock, 2020). The level of exposure and potential effects on students' environmental awareness and conduct are the main topics of this review of the literature on environmental content on university Facebook pages. Research that looked at the Facebook pages of universities revealed that these organizations utilize these sites to communicate information on environmental sustainability activities such as recycling programs, renewable energy projects, and campus sustainability initiatives (Ramadhan et al., 2019). However, more research must be done to systematically evaluate how important environmental content is at universities and how students are exposed to it. In order to assess how well these platforms work as educational resources for developing environmental consciousness, it is essential to comprehend the extent of exposure to such content.

Studies examining how social media use affects environmental awareness and conduct have mainly concentrated on platforms devoted to environmental issues or general social media use (Dabbous & Barakat, 2020). These studies have shown contradictory results; while some have found minimal or insignificant effects, others have discovered positive associations between social media use and pro-environmental beliefs and behaviours (Sahoo & Gupta, 2021). There needs to be more studies, particularly looking at the impact of exposure to environmental content on university Facebook sites.

According to Ansari & Khan (2020), social media has developed into a significant factor in consumer decision-making regarding increasing awareness, disseminating information, forming opinions and attitudes, making purchases, and evaluating the post-purchase experience. Social networking technology's promise has reportedly been welcomed by many organizations, including those in the education sector. Social media focuses on allowing customers to simultaneously publish their stories by allowing them to engage with the content and interact through commenting and sharing environmental content (Wilson et al., 2018). Because of this, educational institutions need to create effective social media usage plans to promote environmental content. Facebook is the most widely used social networking site. Facebook is currently the website with the most visitors and where users spend the most time online (Shahbaznezhad et al., 2021).

Many companies now update their pages with content from other social media sites and add Facebook's like and share buttons to their websites. Some companies even permit users to check in to their websites or leave comments using their Facebook credentials. Whenever a user likes, shares, or comments on content using their Facebook credentials, a Like, Share, or comment update is posted to the user's wall. Audiences may readily share information inside their Facebook networks, which can be used to spread environmental messages (Rahim et al., 2019). As a result, organizations must carefully watch how Facebook users react to the communications they send over Facebook. How many Facebook users agree with the messages could be a crucial indicator of the success of its social media content.

As one of the most prominent social media platforms, Facebook has drawn significant academic attention from various fields. Since the early 1970s, there has been a research stream in corporate environmental citizenship, environmental orientation, and green marketing (McClure & Seock, 2020). The consumer side of environmental issues was the focus of early research, including environmental awareness, environmentally conscious activities like recycling, and attitudes toward environmental problems like pollution (Clark et al., 2020). Later, managerial viewpoints such as sustainable marketing, legislation, and energy saving were introduced (DeSilva et al., 2021). Therefore, there has been a development in how organizations view the significance of environmental challenges. The public's demand for more environmentally friendly legislation may have prompted organizations to act. Due to this development, a new emphasis on incorporating sustainability and environmental considerations into Education has emerged (Olekan et al., 2019).

Addressing the public's environmental concerns through an organization's marketing and public relations efforts is one way to address emerging concerns regarding environmental issues. Such initiatives aid stakeholders in learning more about the environmental policies and practices of the organization. According to Jannah (2023), this information is crucial because knowledge and behaviour have a definite positive link. Due to the variances in size, technology, the magnitude of an organization's environmental impact, global

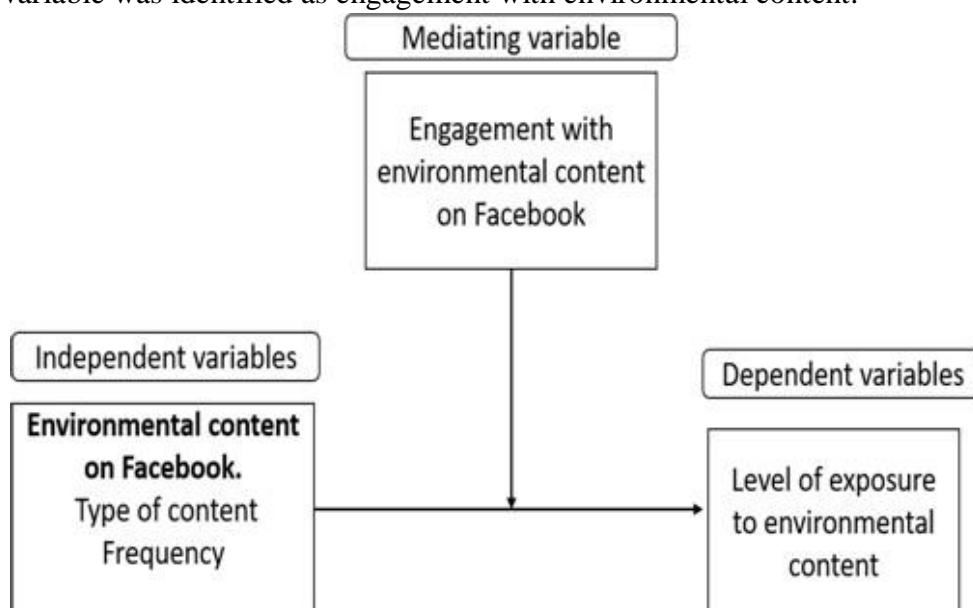
reach, and other considerations, there are numerous ways to reach an audience, including social media. As a breeding ground for future generations, learning institutions are motivated to share information about these initiatives with the public, especially through communications (Rehman et al., 2029). Environmental content communicating particular environmental attributes and substantive environmental claims improves audience attitudes (Liu et al., 2019). These concerns or activities include energy efficiency, reducing environmental effects, renewable energy, greenhouse emissions, environmental management systems, conservation, recycling, environmental Education, energy savings, managing energy demand and supply, and environmental awards.

In related research, organizations displayed any corporate social responsibility, including environmental concerns (Nelson et al., 2020). Additionally, businesses with greater performance displayed more eco-friendly activities on their websites. A different research demonstrated a positive correlation between corporate social responsibility and earnings for a sample of Canadian businesses (Clark et al., 2020). This correlation was demonstrated through the use of company websites. Businesses are interested in establishing a link between environmental regulations and business performance. Consumers who care about the environment are more likely to purchase goods from environmentally conscious businesses because they feel good about purchasing goods that do not harm the environment (Garcia et al., 2020). If so, increasing a firm’s exposure to greener environments would benefit its performance. This analysis shows that there are still a lot of unanswered questions regarding how to communicate environmental issues to stakeholders. Online communication is crucial in today’s corporate environment.

There needs to be more connection between how businesses use their social media pages and comprehension of the motivations behind those activities regarding environmental communications (Ramadhan et al., 2019). This research is a start toward bridging that gap. The research findings shed light on how well institutions are doing in encouraging environmental awareness among their student bodies and larger online communities. The findings may improve environmental communication strategies, direct universities in maximizing their social media presence, and facilitate well-informed environmental decision-making. This research contributes to a deeper knowledge of how educational institutions participate and contribute to the global debate on environmental sustainability by evaluating the degree of exposure to environmental information on university Facebook pages.

Conceptual Framework

The research identified environmental content type and frequency on Facebook pages as the independent variables of the study. The level of exposure was identified as the dependent variable. The level of exposure to environmental content is affected by the research’s independent and mediating variables. The mediating variable was identified as engagement with environmental content.



Label the Figure: Source

RESEARCH DESIGN AND METHODOLOGY

The research used a quantitative design to analyze the environmental content exposure level. The research used quantitative content analysis as a data collection method by analyzing freely available content posted on Facebook to evaluate the quantity of environmental content that users are exposed to on the Facebook pages of universities in Kenya. Simple random sampling was used to select eight universities, four from the category of public universities and four private universities, for analysis. This was considered a sufficient sample because according to Statistica.com, as of 2022, Kenya listed 68 universities, 35 being public and 33 private. The research’s objectives were accomplished by the content of the openly available internet pages, which were identified employing the desktop research method. The retrieved data was examined manually. By keeping an eye on the Facebook sites of eight Kenyan universities, data for this research was gathered. The total number of posts on each page was counted, and they were divided into posts about environmental conservation, climate change, and sustainability, as well as postings about workshop meeting announcements. The information was gathered for three months, from March to May 2023, and the findings were tallied for examination.

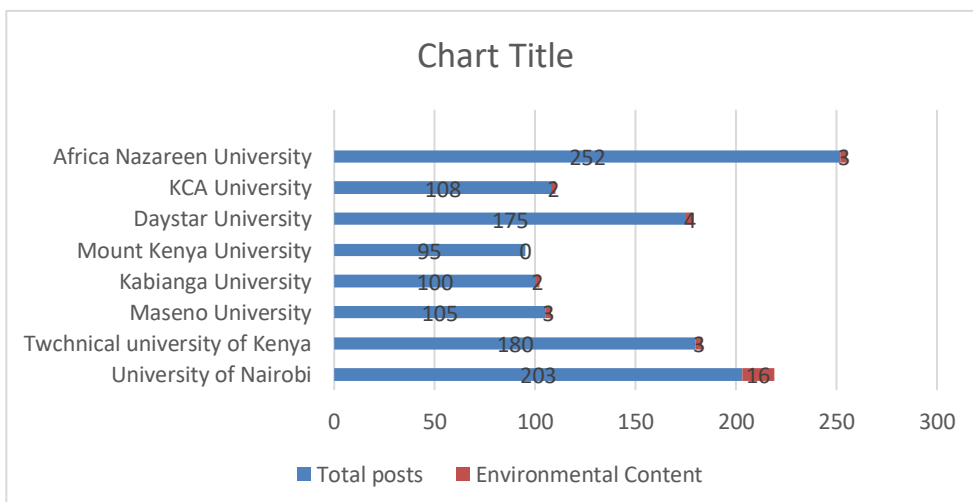
Content analysis from resources obtained via desktop review approach was cost-effective for the researchers. The research design also took less time and used data that was readily available. During the data collection, the researcher used the Google Search Engine to search the Internet using search terminologies of phrases derived from the independent and dependent variables of the study to obtain data. For this research, quantitative content analysis provided a methodical and impartial way to classify and examine the environmental information posted on university Facebook pages. Researcher quantified the level of exposure by identifying trends, frequencies, and engagement metrics linked to environmental posts using a thorough coding scheme. Particular attention was paid to articles that dealt with environmental issues such as sustainability, climate change, conservation, and eco-friendly programs. Every post underwent a thorough evaluation based on its content, engagement metrics such as likes, comments, and shares, and the message’s overall reach.

DATA ANALYSIS AND DISCUSSION OF RESEARCH FINDINGS

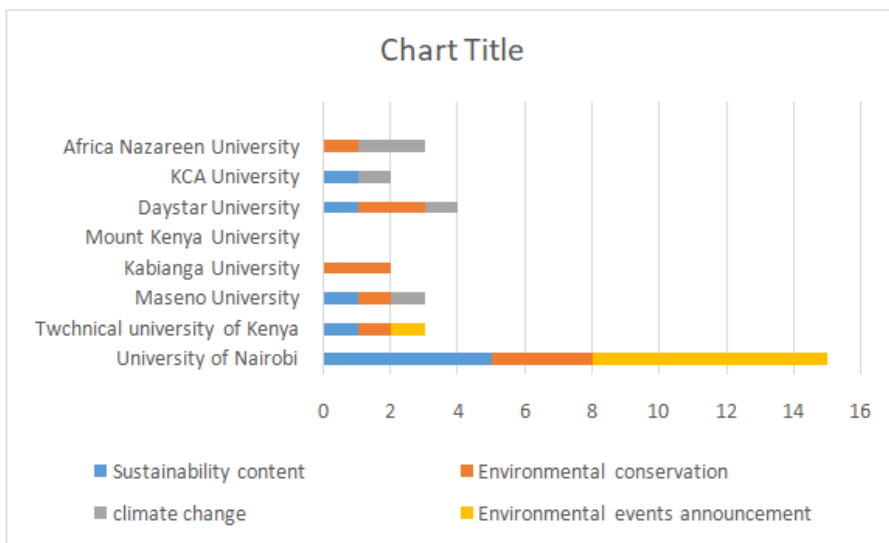
This section analyses the level of exposure to environmental content on Kenyan university Facebook pages from March 2023 to May 2023. The research used quantitative content analysis, and results were presented using graphs and explained using text.

4.1 Redo the entire of this section onwards. Order as per objective – streamline your objectives; you abstract talk of two, section 1.3 has a different number; in this section it is not clear which objective you are analysing after which. After streamlining this section, also streamline the discussions, summaries and other sections as per objectives

The results of the analysis of the data showed that there were variable degrees of exposure to environmental content on the Facebook pages of various Kenyan universities.



The results of the data analysis showed that different Kenyan university Facebook pages had variable amounts of exposure to contents involving the environment. The results focused on the total Facebook Posts on university pages showed that the overall amount of Facebook posts differed considerably between the universities analyzed. With 252 total posts, Africa Nazarene University had the highest number of posts on Facebook over the three months. By contrast, Mount Kenya University had 95 total posts over three months, making it the lowest engagement among the universities chosen. The results above show that some universities are more active on Facebook as a channel for audience interaction and communication than others. The universities with the highest engagement had an average posting of between three to four posts per day, while those on the lowest side had between one and two posts daily, with some days going without any posting.



The universities had varied total numbers of postings on Facebook regarding environmental content. According to the collected data, there were few postings overall on environmental topics on all the universities' Facebook pages. The University of Nairobi had the most posts on environmental themes, with 13 posts in the three months analyzed. Followed by Daystar University with four posts, Technical University of Kenya, Maseno University and African Nazareen with three posts, followed by the University of Kabianga. Unfortunately, Mount Kenya University had no posts on environmental subjects during the observational period, regarding the posts on Sustainability and Climate Change. The University of Nairobi once again led the way among the universities that published environmental content, with five posts on sustainability and climate change. With two articles apiece, Daystar University and Africa Nazarene University made a noteworthy effort to address sustainability issues. Results on announcements for environmental workshop meetings and environmental protection postings: With eight postings, the University of Nairobi had the most announcements for workshops and environmental protection. Maseno University and KCA University each had one post in this category, while Daystar University and the University of Kabianga each had two.

An analysis of the likes, comments, and shares received by the various posts on official university Facebook pages showed that likes on sustainability and climate change were the highest, with an average of 33 likes per post and an individual post garnering up to 338 likes, articles on sustainability and climate change received the most likes. Posts about conservation and workshop announcements averaged 21 likes, making it the topic with the fewest likes, while the post with the highest likes gathered 179 likes. An analysis of comments showed that sustainability and climate change topped the comment section with a post having 33 comments and an average of 6 comments per post; thus, the topics on sustainability and climate change attracted the most reader interaction. Topics on conservation and announcements on environmental workshops had the post with the highest comments at 11, averaging three comments per post. Lastly, an

analysis of the number of shares received on each post showed that sustainability and climate change had a post garnering the highest shares at seven while averaging at three per post. Conservation and announcement posts also obtained three average shares per post.

Discussion of Research Findings

The research highlights the importance of universities as leaders in promoting environmental awareness and action on social media, with campus sustainability initiatives frequently featured on University Facebook pages (Garcia et al., 2020). Although some Kenyan institutions actively interact with environmental content on their Facebook pages, this research shows that there is still space for growth regarding general exposure to environmental issues. With many posts on sustainability, climate change, environmental conservation, and workshop gatherings, the University of Nairobi is a pioneering institution in addressing environmental concerns online. The fact that some universities, like Mount Kenya University, have yet to publish any material on environmental issues over the studied period is troubling. The above results mark a lost chance for these organizations to influence the environmental conversation and encourage sustainable behaviour among their stakeholders. By examining the content of university Facebook pages, we uncovered a trend toward increased emphasis on environmental conservation and eco-friendly practices, signalling a positive shift in environmental communication strategies. The results show that most universities in Kenya engage with environmental content on their Facebook pages. Africa Nazarene University and Daystar University are the next-highest number of institutions with posts on environmental topics, respectively, behind the University of Nairobi. However, Mount Kenya University did not post any environmental content during the monitored period.

Overall, the findings show that, with a sizable number of likes, comments, and shares, sustainability and climate change issues receive the highest amount of exposure and engagement on Kenyan University's official Facebook pages. Conversely, topics about conservation and news of workshops attracted less interest. Universities and other organizations trying to enhance their environmental content strategy and better comprehend the interests of their audience may find this material useful. The data presented in this paper illustrate the potential for university Facebook pages to be influential platforms for advancing environmental literacy and mobilizing students and staff toward sustainable behaviours (Wilson et al., 2018). It is crucial to remember that the analysis is only based on data from official university Facebook pages and might not accurately reflect the engagement with environmental information on all platforms and sites. While some universities made a big effort to share posts about sustainability and climate change, others emphasized environmental preservation and workshop meeting notices. In order to spread awareness and promote a sustainability culture among their communities, institutions must step up their engagement with environmental issues on social media platforms.

The study implications are that the sharing of environmental content by Kenyan universities on Facebook contributes to raising awareness among their student bodies and the wider public. This can lead to a more environmentally conscious population, with individuals taking steps to reduce their ecological footprint. It also shows that Facebook provides a platform for universities to share valuable information about environmental issues, solutions, and opportunities. By doing so, they can enhance the knowledge and understanding of their students and the general public about environmental challenges and their potential solutions and that through the sharing of environmental content, universities can engage their students and local communities in discussions about sustainability, fostering a sense of responsibility and collective action towards protecting the environment.

SUMMARY AND CONCLUSIONS

Analyzing data from official university Facebook pages in Kenya from February to April 2023 provides valuable insights into the level of exposure and engagement with environmental content. Sustainability and

climate change articles were the most popular, while conservation-related posts and workshop announcements garnered comparatively lower engagement. To increase user engagement with conservation topics and workshop announcements, universities should consider refining their content strategies, leveraging trending environmental issues, and incorporating multimedia elements to attract a broader audience. By addressing these findings, universities in Kenya can enhance their environmental outreach efforts and foster a greater sense of environmental responsibility among their social media followers.

RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH.

The research analyzed the data, drew conclusions, and developed recommendations and suggestions for further research. Kenyan universities should leverage sustainability and climate change content. Universities should continue to prioritize and generate high-quality content in this area, given that articles on sustainability and climate change garnered the most likes, comments, and shares. By doing this, they may take advantage of the present interest and promote more conversations and shares, broadening the appeal of their environmental projects. While postings about conservation saw lesser engagement than posts about sustainability and climate change, they nonetheless attracted much attention, suggesting room for improvement. Universities should concentrate on telling engrossing tales of conservation, highlighting triumphs, and stressing the significance of protecting regional biodiversity. Include visual components like photos or infographics to make the text more appealing. Workshops are crucial resources for promoting environmental Education and awareness. Universities could adjust their messaging to emphasize the useful advantages and distinctive learning opportunities these workshops offer to boost engagement with workshop announcements. It can be interesting and credible for the posts to include testimonials from prior attendees or guest speakers.

Timing and frequency of posts are another factor to take into account. Universities may make the most of their posting schedules by researching when their audience is most engaged on Facebook. The audience's involvement must be maintained by regular blogging. Universities can keep their followers interested and informed about ongoing environmental activities by following a regular publishing schedule. On social media, interactive and visual content tends to garner greater attention. Universities should consider including movies, pictures, infographics, and interactive content in their environmental posts. These multimedia components have a higher possibility of grabbing users' attention, which raises the likelihood of likes, comments, and shares.

By collaborating with influential or well-known environmental activists, Kenyan environmental content can reach a wider audience. Influencers can aid in amplifying university posts so they can reach new audiences and expand the environmental conversation. Universities should routinely measure the impact of their posts in order to gauge the success of their communication efforts. One component is keeping track of the number of likes, comments, and shares. Universities can benefit from knowing how these engagements convert into practical activities, such as involvement in environmental events or advocacy campaigns.

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