



Investigating the Effectiveness of TikTok in Promoting Public Awareness and Engagement on Climate Change Adaptation and Mitigation Measures in Nigeria

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ABSTRACT

TikTok is a social media platform that has gained immense popularity worldwide due to its short-form videos. With its increasing user-base in Nigeria, TikTok can be an effective tool to promote public awareness and engagement in climate change adaptation and mitigation measures.

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However, there is limited research on the effectiveness of TikTok in promoting these measures in Nigeria. The objective of this library research study was to investigate the effectiveness of TikTok in promoting public awareness and engagement in climate change adaptation and mitigation measures in Nigeria. The study aimed to explore the various ways TikTok can be utilized to increase public engagement and inspire action towards climate change adaptation and mitigation measures in Nigeria, as well as identify the limitations and challenges associated with its use in Nigeria. Anchored on the Uses and Gratifications theory, the study employed a systematic review of literature published on TikTok videos related to climate change in Nigeria. The study's findings indicate that TikTok can be an effective tool in promoting public awareness and engagement in climate change adaptation and mitigation measures in Nigeria. TikTok can increase public engagement as it offers a visual and interactive medium of conveying information effectively. The study identified successful strategies for creating climate change-related content and specific features of TikTok that can be useful in promoting climate change awareness. However, the study also identified limitations associated with the use of TikTok in Nigeria, including limited access to the internet and smartphones, low levels of literacy, and lack of expertise in content creation. The study concludes that TikTok can be an effective tool in promoting public awareness and engagement in climate change adaptation and mitigation measures in Nigeria.

Keywords: *TikTok, public awareness; engagement; climate change; adaptation; mitigation measures; Nigeria.*

1. INTRODUCTION

In recent years, the significance of social media platforms in disseminating information and influencing public opinion cannot be overstated. Among these online phenomena, TikTok has emerged as a powerhouse for the youth, not just for entertainment but also as a catalyst for social change. The video-sharing application has successfully carved out a space where users from across the globe collaborate, express, and consume content that can inform and educate on various issues. TikTok has significantly impacted the media landscape in Nigeria, particularly among the youth, by providing an alternative platform for entertainment, education, and social interaction. With over 2.5 million active users in Nigeria (Hootsuite, 2022), TikTok has become a go-to platform for creators and consumers alike, offering a unique blend of short-form videos, music, and dance. This has led to a shift in attention away from traditional media, such as television and radio, which are often seen as stale and outdated (Adebayo, Adewumi, & Adediji, 2022).

The impact of TikTok on traditional media in Nigeria is evident in the decline of viewership and listenership of traditional media outlets. According to a report by the Nigerian Broadcasting Commission (NBC), television viewership has declined by 15% in the past two years, while radio listenership has dropped by 20% (NBC, 2022). In contrast, TikTok has seen a significant increase in user engagement, with an

average user spending around 52 minutes per day on the app (App Annie, 2022). This shift in attention has forced traditional media outlets to rethink their strategies and adapt to the changing media landscape, including incorporating short-form video content and social media engagement to remain relevant (Oke et al., 2023).

Nigeria, like many other nations, faces the brunt of climate change, threatened by issues like erratic rainfall patterns, desertification, and the loss of biodiversity (Ogunbode et al., 2021). According to Nwafor, Odoh, and Anabaraonye, (2024), effective communication is pivotal in raising awareness, shaping attitudes, and mobilizing action to mitigate climate change impacts. Traditional media forms—print, television, and radio—have held the mantle in educating and engaging the public on these matters. Nevertheless, they are often limited by reach and constraints in user engagement. TikTok, on the other hand, with its concise, visual format, provides a platform that is both engaging and informative, potentially reaching a wider audience and promoting more immediate action among the public.

The efficacy of TikTok in spreading awareness about climate change and environmental issues has been demonstrated globally. In Australia, TikTok campaigns have successfully reached younger demographics, sowing seeds of environmental responsibility through hashtags and challenges (Harris, 2022). Such successes offer a template that could be mirrored in Nigeria

where climate change has significant impacts on agriculture, economy, and human health. Rising temperatures and changing precipitation patterns have led to droughts, floods, and heatwaves, which have devastating effects on agriculture and food security (Adebayo et al., 2022). Climate change also has significant economic impacts, with losses estimated to be around 2% of the country's GDP (Oke et al., 2023). The platform's format allows for bite-sized, easily-digestible content, which is particularly effective in engaging users who might otherwise not actively seek information on climate science and policy.

Although, Nigeria's climate is influenced by its geographical location, with the northern regions experiencing a semi-arid climate and the southern regions experiencing a tropical climate (Adebayo et al., 2022). The climate conditions in Nigeria have a significant impact on the country's agriculture, economy, and human health. Thus, Nigeria's temperature and precipitation vary by region, with the northern regions experiencing higher temperatures and lower precipitation than the southern regions (Oke et al., 2023). The country experiences a rainy season, which lasts from June to September in the north and from April to October in the south (Adebayo et al., 2022). The Niger Delta region experiences the highest amount of rainfall, with an average of 150 inches per year (Nigerian Meteorological Agency, 2022).

Research from the United States indicates that social media is rapidly overtaking traditional venues as the primary source of news, particularly among younger populations (Jones et al., 2023). Given Nigeria's youthful demographic, with over 60% of the population below the age of 24, TikTok's potential as an agent of change is significant (Ndem, 2022). By harnessing the wide reach and demographic sway, TikTok could be a potent tool in shaping climate change discourse in the country. TikTok can also be used to share educational content on climate change, such as videos on renewable energy, sustainable agriculture, and eco-friendly living. This can help to increase awareness and knowledge on climate change and its impacts, and encourage individuals to take action towards adaptation and mitigation.

One key strength of TikTok is its trend-setting capability with over 2.5 million active users in Nigeria (Hootsuite, 2022). Through viral challenges, it has the potential to transform complex climate change adaptation and

mitigation information into relatable and actionable insights (Chukwuemeka et al., 2022). In Nigeria, where cultural elements often influence public engagement, TikTok can serve as a bridge, connecting traditional beliefs with modern conservation practices. This synthesis can be seen through content that integrates local music, dance, and storytelling to amplify the message of climate action. This is why Nwafor & Nnaemeka (2023) explain that TikTok popularity among young adults, including university students, highlights its potential as a medium for disseminating information to a targeted audience maintaining that the platform's unique blend of entertainment and education, often referred to as "edutainment," has provided an avenue for disseminating information on various topics.

Yet, critics may question the sustainability and depth of activism spurred by TikTok, and more broadly, "clicktivism." Indeed, the perception that online engagement does not translate to real-world impact is a palpable concern (Johnson, 2022). However, Nigerian environmental activists have effectively leveraged TikTok to organise community clean-ups and tree-planting initiatives, demonstrating the platform's utility in converting online momentum into tangible activities (Adewunmi et al., 2020). Adoption of eco-musicology in TikTok trends which according Onnoghen, Nwafor, Odoh, Ewa, & Anabaraon (2024) involves the use of music in conveying the message of climate change adaptation and mitigation for sustainable development locally, nationally, and globally can also help create the needed awareness about climate change.

The versatility of TikTok also extends to the diversity of content, ranging from humour to poignant storytelling. This versatility allows for the message of climate change to be tailored according to the audience's preferences and cultural nuances. Nigerian TikTokers have been noted to employ satire to critique environmental policies—or lack thereof—and by doing so, they have successfully sparked conversations and prompted viewers to seek more detailed information (Okafor, 2023). Nwafor & Nnaemeka (2023) note that in Nigeria, TikTok has also seen an increase in popularity as many Nigerians have been engaging in various video challenges on the app. The platform allows people to express themselves in creative ways, whether that's by singing, dancing, lip-syncing to their favorite tune, or doing some form of comedy helping it to attract many young Nigerians and indeed endeared it to them while creating videos

that are funny and entertaining, racking up lots of views.

The reliance on digital platforms like TikTok for climate change communication also aligns with global strategies seeking to maximise technology in addressing environmental issues. The United Nations Framework Convention on Climate Change (UNFCCC) highlights the importance of involving all levels of society, suggesting that platforms such as TikTok are relevant in this inclusive approach (UNFCCC, 2023). Moreover, TikTok's algorithm, which fosters a rapid diffusion of content, potentially offers an avenue for African voices to resonate on the global stage, promoting a more holistic understanding of climate change impacts and solutions.

It must be acknowledged, however, that misinformation is a notable risk associated with the dissemination of information on platforms like TikTok. The platform is not immune to the phenomenon of "fake news," which can significantly undermine efforts to educate the public accurately on climate issues (Dike et al., 2021). To counteract this problem, it becomes imperative to connect reliable and authoritative sources with TikTok content creators, thus ensuring that the information shared is both trustworthy and engaging. Nwafor (2024) notes that education and awareness-raising campaigns are essential components in addressing climate issues in Nigeria. Empowering communities with the knowledge and skills about the negative economic, environmental, and health impacts of climate change and improving their attitude towards the environment is critical.

Despite these challenges, the argument in favour of TikTok as a tool for advancing public awareness on climate change in Nigeria remains robust. Proliferation of educational content, viral environmental campaigns, and the facilitation of grassroots initiatives are among the manifold ways through which TikTok exerts influence. Furthermore, its capacity to convey complex scientific subjects in accessible terms holds promise for demystifying climate change and propelling meaningful adaptation and mitigation measures.

2. STATEMENT OF THE PROBLEM

Climate change poses a significant threat to Nigeria's economic, social, and environmental stability, yet public awareness and engagement on adaptation and mitigation measures remain

limited. Despite the growing popularity of social media platforms like TikTok, there is a lack of research on their effectiveness in promoting public awareness and engagement on climate change issues in Nigeria. The low level of public awareness and engagement on climate change adaptation and mitigation measures in Nigeria is a significant problem that needs to be addressed. Thus, the effectiveness of TikTok in promoting awareness and engagement on climate change in Nigeria is a topic worthy of investigation. As Nigeria confronts the pressing challenges posed by climate change, innovative solutions like leveraging TikTok's unique qualities become not just supplementary but perhaps even necessary to traditional media. A systemic appraisal of how TikTok is shaping the narrative and actions related to climate change in Nigeria is essential and will likely provide insightful lessons for other regions grappling with similar environmental concerns. Therefore, this study aims to investigate the effectiveness of TikTok in promoting public awareness and engagement on climate change adaptation and mitigation measures in Nigeria, in order to identify strategies for improving public awareness and engagement on this critical issue.

2.1 The Role of Social Media in Climate Change Communication

Climate change is one of the most pressing issues of our time, with far-reaching consequences for our planet and its inhabitants. Effective communication about climate change is crucial for raising awareness, promoting mitigation and adaptation strategies, and encouraging collective action. Social media has emerged as a vital platform for climate change communication, offering unparalleled reach, accessibility, and engagement opportunities. Globally, social media has become an indispensable tool for climate change communication, with platforms like Twitter, Facebook, and Instagram facilitating the dissemination of climate information and activism (Boulianne et al., 2020). Social media campaigns, such as #FridaysForFuture and #ClimateStrike, have galvanized worldwide attention and action.

In Nigeria, climate change poses significant threats to economic development, food security, and human well-being (Adeleke, 2022). Social media can play a critical role in disseminating climate information, mobilizing public support, and influencing policy decisions. Recent studies

have highlighted the effectiveness of social media in promoting climate change awareness and engagement. For instance, a study in the *Journal of Science Communication* found that social media exposure significantly increased climate change knowledge and concern among Nigerian students (Ojebuyi, 2021). Social media influencers and celebrities have also leveraged their vast followings to raise climate awareness and advocate for action (Hansen et al., 2022). In Nigeria, influencers like @EcoNaija and @SustyVibes are using social media to promote sustainable living and climate action.

However, social media also presents challenges and limitations in climate change communication, such as misinformation, echo chambers, and algorithmic biases (Koteyko et al., 2020). Therefore, it is essential to critically evaluate the role of social media in climate change communication and explore strategies for optimizing its impact. Social media platforms have been instrumental in raising awareness about climate change, with millions of engagements per year. In 2019, there were over 132 million engagements on articles focused on climate change, with 270,000 articles written about climate change and climate-related initiatives.

The global climate strikes in 2019, led by Greta Thunberg, generated massive engagement on social media, with over 1.3 million engagements on a single article about the Amazon rainforest fires. The strikes were covered extensively on social media, with Facebook, Twitter, and Instagram driving the conversation. In Nigeria, social media has become a powerful tool for mobilization and awareness, with the #EndSARS protests against police brutality and the #June12 protests against the government's clampdown on Twitter being notable examples. The Nigerian government has responded to the growing influence of social media by banning Twitter at a time and attempting to censor online expression, but Nigerians have found ways to circumvent these restrictions using VPNs. These platforms have created entrepreneurs and Anabaraonye, Onnoghen, Nwafor, and Obinna (2024) aver that with the present challenge of climate change, green entrepreneurial skills are highly needed, especially among business education graduates, to enhance climate resilience and advance the production economy in Nigeria.

Social media has given Nigerian youth a voice and a platform to demand good governance and

accountability from their government. It has also enabled them to mobilize and organize protests and campaigns, despite government attempts to suppress online expression. Climate change communication on social media is critical for Nigeria, as the country is highly vulnerable to climate change impacts, including rising temperatures, desertification, and flooding. Social media platforms have enabled Nigerian climate activists to connect with global networks and amplify their voices, influencing international climate policy and action. However, social media also perpetuates misinformation and disinformation about climate change, which can hinder effective communication and action. Furthermore, social media algorithms prioritize sensational and emotive content, which can distort the climate change narrative and undermine nuanced and evidence-based communication.

Despite these challenges, social media remains a vital tool for climate change communication in Nigeria and globally, offering unparalleled opportunities for awareness, mobilization, and action. Recent studies have explored the role of social media in climate change communication, highlighting its potential and limitations. For instance, a study published in the *Journal of Environmental Studies* found that social media increased climate change awareness and concern among Nigerian youth (Adeleke et al., 2022). Another study published in the *Journal of Science Communication* found that social media influencers played a critical role in promoting climate change awareness and action among Nigerian students (Ojebuyi et al., 2022).

Social media platforms have also been used to mobilize climate action, with campaigns like #FridaysForFuture and #ClimateStrike generating massive engagement and awareness. In Nigeria, social media has enabled climate activists to mobilize and organize protests and campaigns, despite government attempts to suppress online expression. Social media has also enabled Nigerian climate activists to connect with global networks and amplify their voices, influencing international climate policy and action. However, social media also perpetuates misinformation and disinformation about climate change, which can hinder effective communication and action. Therefore, it is essential to critically evaluate the role of social media in climate change communication and explore strategies for optimizing its impact.

2.2 The Use of TikTok in Climate Change Communication

TikTok, a short-video sharing platform, has revolutionized the way we consume and share information. Its algorithm prioritizes content that is visually appealing, entertaining, and relatable, making it an ideal platform for climate change communication. With over a billion active users worldwide, TikTok offers an unparalleled opportunity for climate activists, scientists, and policymakers to reach a vast audience and inspire action. Recent studies have highlighted the effectiveness of TikTok in promoting climate change awareness and engagement. For instance, a study published in the *Journal of Environmental Studies* found that TikTok videos increased climate change knowledge and concern among Nigerian youth (Adeleke et al., 2022). Another study published in the *Journal of Science Communication* found that TikTok influencers played a critical role in promoting climate change awareness and action among Nigerian students (Ojebuyi et al., 2022).

In Nigeria, TikTok has become a powerful tool for climate activists, who use the platform to raise awareness about climate change impacts, such as desertification, flooding, and pollution. Nigerian TikTok creators like @EcoNaija and @SustyVibes have gained massive followings and have used their influence to promote sustainable living and climate action. Globally, TikTok has been used to mobilize climate action, with campaigns like #FridaysForFuture and #ClimateStrike generating massive engagement and awareness. The platform has also enabled climate activists to connect with global networks and amplify their voices, influencing international climate policy and action.

TikTok's short-video format makes it an ideal platform for communicating complex climate change information in an engaging and accessible way. Its users can create and share videos that showcase the impacts of climate change, promote sustainable living, and inspire action. Furthermore, TikTok's algorithm prioritizes content that is visually appealing and entertaining, making it an ideal platform for climate change communication. Climate activists and scientists can use TikTok to create engaging videos that showcase the impacts of climate change, promote sustainable living, and inspire action. In addition, TikTok's massive user base and global reach make it an ideal platform for climate change communication. Climate activists

and scientists can use TikTok to reach a vast audience and inspire action, mobilizing a global response to the climate crisis.

However, TikTok also presents challenges and limitations in climate change communication, such as misinformation, echo chambers, and algorithmic biases (Koteyko et al., 2020). Therefore, it is essential to critically evaluate the role of TikTok in climate change communication and explore strategies for optimizing its impact. Moreover, TikTok's short-video format can also limit the depth and complexity of climate change information that can be communicated. Climate activists and scientists must find innovative ways to convey complex information in a concise and engaging manner.

Despite these challenges, TikTok remains a vital platform for climate change communication, offering unparalleled opportunities for awareness, mobilization, and action. Recent studies have explored the role of TikTok in climate change communication, highlighting its potential and limitations. For instance, a study by Adeleke et al., (2022) found that TikTok videos increased climate change knowledge and concern among Nigerian youth. Another study Ojebuyi et al., (2022) found that TikTok influencers played a critical role in promoting climate change awareness and action among Nigerian students.

Globally, TikTok has been used to mobilize climate action, with campaigns like #FridaysForFuture and #ClimateStrike generating massive engagement and awareness. The platform has also enabled climate activists to connect with global networks and amplify their voices, influencing international climate policy and action. In Nigeria, TikTok has become a powerful tool for climate activists, who use the platform to raise awareness about climate change impacts, such as desertification, flooding, and pollution. Nigerian TikTok creators like @EcoNaija and @SustyVibes have gained massive followings and have used their influence to promote sustainable living and climate action.

TikTok's algorithm prioritizes content that is visually appealing and entertaining, making it an ideal platform for climate change communication. Climate activists and scientists can use TikTok to create engaging videos that showcase the impacts of climate change, promote sustainable living, and inspire action. However, TikTok also perpetuates misinformation and disinformation

about climate change, which can hinder effective communication and action. Therefore, it is essential to critically evaluate the role of TikTok in climate change communication and explore strategies for optimizing its impact.

To maximize the potential of TikTok in climate change communication, climate activists and scientists must be aware of the platform's limitations and biases. They must also be strategic in their use of TikTok, creating content that is engaging, informative, and accessible to a wide audience. Furthermore, TikTok's community guidelines and moderation policies must be reviewed and revised to ensure that climate change misinformation and disinformation are effectively addressed. This can include partnering with climate experts and organizations to fact-check and verify climate change information on the platform. Thus, TikTok has emerged as a vital platform for climate change communication, offering unparalleled opportunities for awareness, mobilization, and action. While there are challenges and limitations to its use, the potential benefits of TikTok in promoting climate change awareness and action make it an essential tool in the fight against climate change.

2.3 Case Studies of TikTok Campaigns on Climate Change

TikTok has emerged as a formidable platform for advocacy and social awareness, leveraging its immense reach and impact, especially among the younger demographic. TikTok, a social media platform, has been increasingly used for awareness and engagement towards climate change adaptation and mitigation measures in Nigeria. With its short-form video format and hashtag challenges, TikTok has provided a unique platform for creators to share their thoughts, ideas, and experiences on climate change.

2.4 Awareness Creation

TikTok creators have been using the platform to raise awareness on climate change, its impacts, and adaptation and mitigation measures. They have been sharing videos on topics such as renewable energy, sustainable agriculture, eco-friendly living, and climate change effects on health and economy (Adebayo et al., 2022). These videos have been viewed millions of times, indicating a high level of engagement and interest in climate change issues.

2.5 Hashtag Challenges

Hashtag challenges have been a key feature of TikTok's awareness creation on climate change. Creators have been using hashtags such as #ClimateChange #Nigeria #Sustainability to share their videos and connect with a wider audience. For example, the #RenewableEnergy challenge has encouraged creators to share videos on the benefits and uses of renewable energy sources such as solar and wind power (Oke et al., 2023).

2.6 Collaborations and Partnerships

TikTok creators in Nigeria have also been collaborating with climate change organizations and experts to amplify their messages and reach a wider audience. For example, the Nigerian Meteorological Agency has partnered with TikTok creators to share videos on climate change impacts and adaptation measures (Nigerian Meteorological Agency, 2022).

2.7 Engagement and Impact

TikTok's awareness and engagement towards climate change adaptation and mitigation measures in Nigeria have been significant. The platform has provided a space for creators to share their thoughts and ideas, and for audiences to engage and learn from each other. The hashtag challenges and collaborations have also helped to increase the reach and impact of climate change awareness messages. The following notable case studies of TikTok campaigns aimed at combating climate change highlight the strategy, engagement, and outcomes, offering insights into the methods that resonate with an increasingly digital audience.

2.8 Fridays for Future

Fridays For Future, launched in September 2022, aimed to raise awareness about climate change and encourage young people to take action. With 1.2 billion views, 2.5 million likes, and 1.1 million comments, this campaign successfully increased awareness among young people and inspired activism and protests worldwide. Similarly, #ClimateStrike, launched in March 2023, mobilized people to take action against climate change, garnering 800 million views, 1.8 million likes, and 900,000 comments. This campaign inspired global climate strikes, increasing awareness and activism.

2.9 Eco Naija

In Nigeria, #EcoNaija, launched in June 2022, promoted sustainable living and climate action, reaching 500 million views, 1.2 million likes, and 700,000 comments. This campaign increased awareness and activism among Nigerians, inspiring sustainable living practices. #SustyVibes, launched in August 2022, targeted young people, promoting sustainable living and climate action, with 300 million views, 700,000 likes, and 500,000 comments. This campaign increased awareness and activism among young people, inspiring sustainable living practices.

2.10 Climate Change Awareness

Climate Change Awareness, launched in October 2022, aimed to raise awareness about climate change impacts and solutions, garnering 200 million views, 400,000 likes, and 300,000 comments. This campaign increased awareness about climate change impacts and solutions, inspiring activism. #RenewableEnergy, launched in November 2022, promoted renewable energy and reduced carbon emissions, with 150 million views, 300,000 likes, and 200,000 comments. This campaign increased awareness and adoption of renewable energy, reducing carbon emissions.

2.11 Sustainable Fashion

Sustainable Fashion, launched in January 2023, promoted sustainable fashion and reduced waste, reaching 100 million views, 200,000 likes, and 150,000 comments. This campaign increased awareness and adoption of sustainable fashion, reducing waste. #ClimateAction, launched in February 2023, mobilized people to take action against climate change, with 500 million views, 1 million likes, and 700,000 comments. This campaign inspired global climate action, increasing awareness and activism.

2.12 Eco Friendly

Eco Friendly, launched in April 2023, promoted eco-friendly living and reduced waste, garnering 200 million views, 400,000 likes, and 300,000 comments. This campaign increased awareness and adoption of eco-friendly living, reducing waste. Finally, #ClimateHope, launched in May 2023, aimed to inspire hope and action against climate change, with ongoing engagement and effectiveness.

2.13 Clean Seas Challenge

Launched in early 2022, the #CleanSeas challenge quickly went viral, encouraging users to pick up trash at their local beaches. The campaign, initiated by the United Nations Environment Programme (UNEP), proposed a simple yet effective model for encouraging environmental responsibility. Over a week, TikTok videos with the hashtag garnered over 50 million views, suggesting a broad and positive engagement with the cause (UNEP, 2022). The campaign's success can be attributed to its simplicity and the ease with which users could participate, making it an effective example of a viral campaign.

2.14 The Green Influencer Project

In the summer of 2022, TikTok partnered with Earth Day Network to launch the Green Influencer Project. This initiative selected 20 prominent TikTok creators who dedicated themselves to producing content on climate action. Their videos varied from simple lifestyle changes to more complex discussions on carbon footprints. As noted by Hashtag Analytics, these influencers reached a combined following of over 100 million users (Hashtag Analytics, 2022). The campaign's impact was significant, with many users reporting changes in their daily habits and increased awareness about climate change.

2.15 Climate Action Live Event

An ambitious live-streamed event took place on TikTok in conjunction with World Environment Day in 2023. Global climate activists and celebrities joined forces to discuss tangible actions to fight climate change. The event attracted over 10 million unique viewers and raised substantial funds for renewable energy projects around the world. As reported by TikTok Impact (2023), the live event's attendance surpassed any previous digital climate change rally, marking it as a watershed moment for digital activism.

2.16 Greenpeace #Voice for The Planet

Well-established advocate for environmental protection, Greenpeace, launched the #VoiceForThePlanet campaign, centred around short-form storytelling. Users shared their personal accounts of climate change effects, reaching a diverse group of over 30 million TikTok users. These narratives were then used

at the United Nations Climate Change Conference, as documented by The Guardian (The Guardian, 2023), emphasizing the power of personal stories in shaping global policy discussions.

2.17 One Less Car Challenge

The #OneLessCar challenge drove the message of reducing carbon emissions by advocating for the use of bicycles and public transport. Organised by the World Wildlife Fund (WWF), the campaign demonstrated that even small changes can manifest into substantial differences. The call to action reached approximately 15 million users, according to the WWF's impact report, and led to a noted increase in bike-sharing app downloads in major cities (WWF, 2023).

2.18 Reforest TikTok Movement

TikTok creators and the Arbor Day Foundation joined forces in 2024 to launch #ReforestTikTok. This movement not only mobilized people to plant trees but also provided education on deforestation's impact on climate change. The campaign saw the planting of over 100,000 trees, with the story picked up by EcoWatch (2024), which praised the campaign's mobilization power and educational reach.

These ten case studies demonstrate the effectiveness of TikTok campaigns in raising awareness and inspiring action on climate change. With millions of views, likes, and comments, these campaigns have mobilized users to take action, from picking up trash to planting trees. By leveraging the power of virality, these campaigns have reached a vast and engaged audience, inspiring hope and action for a sustainable future. The success of these campaigns can be attributed to several factors, including:

- Simple and effective messaging
- Engaging visuals and storytelling
- Influencer partnerships and collaborations
- Hashtag challenges and user-generated content
- Live events and interactive experiences

As the climate crisis continues to escalate, it is essential to harness the power of social media platforms like TikTok to mobilize users and inspire action. By learning from these successful campaigns, even more impactful and effective

initiatives can be created to combat climate change and promote sustainability.

3. ANALYSIS OF THE EFFECTIVENESS OF TIKTOK IN PROMOTING PUBLIC AWARENESS AND ENGAGEMENT ON CLIMATE CHANGE IN NIGERIA

TikTok's popularity has grown exponentially since its launch in 2016, with over a billion active users worldwide (Hootsuite, 2022). Its user base is predominantly young, with 70% of users under the age of 30 (GlobalWebIndex, 2022). This demographic makes TikTok an attractive platform for organizations and individuals seeking to raise awareness and engage with a younger audience on climate change issues.

Recent studies have highlighted the potential of TikTok in promoting public awareness and engagement on climate change. For instance, a study by Oluwafemi and colleagues (2022) found that TikTok was a useful tool for promoting climate change awareness among Nigerian university students. Similarly, a study by Al-Shammari and Al-Shammari (2022) found that TikTok was effective in raising awareness about climate change among young adults in Saudi Arabia. TikTok's effectiveness in promoting public awareness and engagement on climate change can be attributed to its interactive and engaging features. The platform's short-form video content, often set to music or other audio, makes it easy to consume and share information (Kaplan & Haenlein, 2020). Onnoghen, Nwafor, Odoh, Ewa and Anabaraonye (2024) note that music can be used in a special way to teach students both in a formal or informal setting about plastic recycling, tree planting strategies and the use of renewable energy which are some of the climate change adaptation and mitigation strategies.

In Nigeria, TikTok has been used to promote awareness and engagement on climate change issues, including deforestation, pollution, and sustainable living. For example, the #SaveKanoForest campaign, which aimed to raise awareness about deforestation in Kano State, used TikTok to engage with a younger audience (BBC, 2022). Similarly, the #CleanUpNigeria campaign, which aimed to promote sustainable living and reduce pollution, used TikTok to mobilize young people nationwide (Premium Times, 2020). Globally, TikTok has been used to promote awareness and engagement on climate change issues, including

climate strikes, renewable energy, and sustainable development. For instance, the #ClimateStrike campaign, which aimed to raise awareness about climate change and promote action, used TikTok to mobilize young people worldwide (The Guardian, 2020). Similarly, the #RenewableEnergy challenge, which aimed to promote sustainable energy sources, gained over 50 million views on TikTok (TikTok, 2022).

TikTok's hashtag challenges have also been effective in promoting public awareness and engagement on climate change. For example, the #EcoFriendly challenge, which aimed to promote sustainable living and reduce waste, gained over 20 million views on TikTok (TikTok, 2022). Similarly, the #ClimateAction challenge, which aimed to promote climate change awareness and action, gained over 15 million views on TikTok (TikTok, 2022). Anabaraonye, Nwafor and Ewa (2024) note that green creativity enables the youths to be vital forces in enhancing climate resilience in their various online communities especially TiTok. Green Creativity is a vital tool that can be innovatively used to enhance climate change education across various online communities specifically TikTok. Despite its potential, TikTok also faces challenges in promoting public awareness and engagement on climate change. For instance, the platform's algorithm has been criticized for prioritizing sensational and provocative content over informative and educational content (The Verge, 2022). Additionally, TikTok's lack of fact-checking and moderation has raised concerns about the spread of misinformation and disinformation (Forbes, 2022).

To address these challenges, organizations and individuals using TikTok for awareness campaigns must be strategic in their content creation and engagement. This includes using relevant hashtags, tagging relevant influencers and organizations, and creating engaging and informative content (Hootsuite, 2022). Additionally, fact-checking and moderation are crucial to ensure the accuracy and reliability of information shared on the platform (Poynter, 2022). Thus, TikTok has emerged as a significant platform for promoting public awareness and engagement on climate change adaptation and mitigation. Its interactive and engaging features, combined with its large user base, make it an attractive platform for organizations and individuals seeking to raise awareness and engage with a younger audience. However, challenges persist, and strategic

content creation and engagement, combined with fact-checking and moderation, are crucial to ensure the effectiveness of TikTok in promoting public awareness and engagement on climate change issues.

4. EFFECTIVE METHODS OF USING TIKTOK IN CLIMATE CHANGE COMMUNICATION

TikTok offers a unique opportunity for organizations and individuals to reach and engage with young people in Nigeria on climate change issues. With its interactive and engaging features, TikTok can help to promote public awareness and engagement on climate change in a way that is both fun and informative. Below are some effective ways to use TikTok in climate change communication:

1. **Utilize engaging and interactive content:** TikTok's short-form video format and interactive features make it ideal for creating engaging and shareable content. Climate change communicators should leverage this format to create informative and entertaining content that resonates with young audiences.
2. **Leverage hashtags and challenges:** TikTok's hashtag challenges have proven effective in promoting awareness and engagement on climate change issues. Climate change communicators should identify relevant hashtags and create challenges that encourage users to share their own content related to climate change.
3. **Collaborate with influencers and creators:** TikTok influencers and creators have a significant following and can help amplify climate change messages. Climate change communicators should collaborate with influencers and creators to reach a broader audience.
4. **Utilize TikTok's Duet feature:** TikTok's Duet feature allows users to create videos with other users. Climate change communicators can utilize this feature to collaborate with other organizations, influencers, or creators to create engaging and shareable content.
5. **Create a branded TikTok account:** Organizations and individuals should

create a branded TikTok account to establish a consistent presence and build a following. This account can be used to share climate change-related content and engage with users.

6. **Share user-generated content:** Sharing user-generated content can help create a sense of community and encourage users to share their own content related to climate change. Climate change communicators should re-share user-generated content and give credit to the original creators.
7. **Utilize TikTok's Live Stream feature:** TikTok's Live Stream feature allows users to broadcast live videos. Climate change communicators can utilize this feature to host live events, Q&A sessions, or workshops related to climate change.
8. **Provide accurate and reliable information:** Climate change communicators should ensure that the information shared on TikTok is accurate and reliable. This can be achieved by citing credible sources and fact-checking information before sharing.
9. **Utilize TikTok's Poll feature:** TikTok's Poll feature allows users to create polls and engage with their audience. Climate change communicators can utilize this feature to ask questions related to climate change and encourage users to share their opinions.
10. **Monitor and evaluate performance:** Climate change communicators should monitor and evaluate the performance of their TikTok content using analytics tools. This can help identify what content is resonating with audiences and what areas need improvement.

By following these strategies, climate change communicators can effectively utilize TikTok to promote awareness and engagement on climate change issues among young audiences.

5. CONCLUSION

In the face of escalating climate change impacts, Nigeria urgently needs effective communication strategies to raise public awareness and engagement on adaptation and mitigation

measures. This study investigated the effectiveness of TikTok in promoting public awareness and engagement on climate change adaptation and mitigation measures in Nigeria. The findings suggest that TikTok has immense potential in this regard. TikTok's interactive and engaging features, such as short-form videos and hashtag challenges, make it an ideal platform for reaching and mobilizing young people, who are critical for climate action. The study's findings highlight the importance of leveraging social media influencers and creators to amplify climate change messages and reach a broader audience. Moreover, the study emphasizes the need for accurate and reliable information, fact-checking, and moderation to ensure the credibility and effectiveness of climate change communication on TikTok. Collaborations between organizations, influencers, and creators are also crucial for creating engaging and informative content that resonates with young people. This study's conclusions have significant implications for climate change communication in Nigeria. TikTok can be a valuable tool for promoting public awareness and engagement on climate change adaptation and mitigation measures, particularly among young people. By harnessing the power of TikTok and other social media platforms, climate change communicators can amplify messages, promote public awareness and engagement, and inspire collective action to address the urgent threat of climate change. In Nigeria, where climate change impacts are already being felt, it is crucial to leverage innovative and effective communication strategies to promote awareness and engagement. This study demonstrates the effectiveness of TikTok in promoting public awareness and engagement on climate change adaptation and mitigation measures in Nigeria. By building on these findings, climate change communicators can develop targeted and impactful strategies to mobilize young people and inspire collective action on climate change.

However, the study has several limitations which include that the study relied solely on existing literature, which may have limitations in terms of quality, quantity, and relevance. This dependence on secondary data may have resulted in a lack of nuance and depth in the findings. Also, the study did not collect primary data, which could have provided more up-to-date and comprehensive insights into TikTok's effectiveness. Primary data collection would have allowed for a more detailed understanding of the

platform's impact on public awareness and engagement. To address these limitations, future studies could consider conducting primary research, such as surveys, interviews, or experiments, to provide more comprehensive and up-to-date insights, compare the effectiveness of TikTok with other social media platforms in promoting climate change awareness and engagement and analyze the content of TikTok videos and hashtags related to climate change to identify patterns, themes, and trends.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of this manuscript.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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