

THE IMPACT OF MEDIA IN EDUCATION FOR THE ENVIRONMENT

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ABSTRACT

This study empirically assesses the role of mass media in promoting education for the environment a transformative process that upgrades people from environmental awareness to practical action and behavioral change. The research embraces a mixed-methods approach involving a structured survey of 300 university students and a content analysis of 120 environmental media items across television, radio, newspapers, and social media platforms. Findings reveal that mass media significantly contribute to education for the environment, with social media emerging as the most influential platform for driving pro-environmental intention and behavior. Regression results indicate that exposure to environmental content on social media ($\beta = .28$, $p < .001$) and perceived message credibility ($\beta = .31$, $p < .001$) were strong predictors of behavioral intention. Furthermore, content that included calls-to-action and efficacy-based guidance (such as “how-to” environmental tips) showed a stronger correlation with self-reported behavior than purely informational messages. The content analysis supports these findings, showing that 65% of social media posts containing direct action prompts achieved higher audience engagement than traditional media outputs. The study concludes that mass media, particularly digital and participatory forms, play a crucial pedagogical role in fostering environmental responsibility and sustainability. It recommends that educators, policymakers, and media practitioners integrate credible, action-oriented, and participatory communication strategies into environmental campaigns to enhance behavioral outcomes. The paper also emphasizes the need for continuous collaboration between educational institutions and media organizations to strengthen environmental literacy and sustainability practices in society.

Keywords: Mass media, environmental communication, environmental behavior, sustainability education, environmental awareness.

Introduction

Environmental degradation is one of the most pressing global challenges of the 21st century, threatening ecological balance, human health, and sustainable development. Issues such as climate change, deforestation, pollution, loss of biodiversity, and waste mismanagement have intensified the urgency for comprehensive environmental education that transcends mere awareness and promotes proactive behavioral change. The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2022) emphasizes that effective environmental education should not only inform but also transform attitudes and actions toward environmental stewardship. This transformative form of learning, often described as education for the environment, aims to cultivate values, motivation, and practical skills necessary for individuals and communities to participate meaningfully in environmental protection and sustainability efforts.

Awan et al., (2022) explained that the mass media encompassing television, radio, newspapers, and social media serve as vital instruments for disseminating environmental information and shaping public opinion. Through news reports, documentaries, and advocacy campaigns, the media have the power to influence environmental awareness and mobilize collective action. Traditional media have long contributed to public understanding of environmental issues, yet digital and social media now offer broader and more interactive platforms for environmental communication. Xie et al., (2024) note that social media engagement has become a critical driver for promoting pro-environmental attitudes and participatory learning, especially among young audiences who consume information online. Despite these potentials, the transition from environmental education which focuses on knowledge acquisition to education for the environment which emphasizes behavioral change remains insufficiently realized in many contexts. Meng et al., (2023) corroborates that while exposure to environmental messages increases awareness, it does not automatically translate into sustainable practices unless messages are credible, actionable, and emotionally engaging. This gap reveals that the role of mass media in fostering environmental responsibility is not merely to inform but to inspire and guide tangible actions that promote sustainability. Therefore, understanding how media messages shape attitudes, values, and behaviors is critical for advancing education for the environment.

In Nigeria, mass media according to Nwankwo & Okoye (2021) have been central to national campaigns on sanitation, climate change adaptation, and waste management, yet the level of public compliance with environmentally friendly practices remains low. Media reports are often episodic and crisis-driven, focusing more on environmental disasters than on sustained educational engagement. According to Liao et al., (2024). Moreover, limited credibility and the absence of participatory frameworks reduce the effectiveness of environmental messages. Given Nigeria's diverse and youthful population, it becomes imperative to assess how media exposure, content format, and message credibility influence environmental behavior and whether mass media truly serve as agents of education for the environment.

Consequently, this study seeks to fill the existing empirical and conceptual gap by evaluating the role of mass media in promoting education for the environment in Nigeria. By examining the relationship between media exposure, message credibility, and behavioral

outcomes, the research provides insights into how different media platforms can be optimized to encourage environmental stewardship and sustainable development. The findings are expected to guide educators, policymakers, and media practitioners in designing effective communication strategies that not only raise awareness but also foster meaningful environmental action.

Statement of the Problem

Despite the growing global concern for environmental sustainability, the level of environmental degradation and unsustainable practices continues to rise, particularly in developing nations like Nigeria. While numerous environmental awareness campaigns exist, they often emphasize knowledge about the environment rather than education for the environment, which seeks to inspire concrete behavioral change. The mass media, television, radio, newspapers, and increasingly, social media have enormous potential to bridge this gap by promoting actionable environmental education. However, the effectiveness of mass media in transforming environmental knowledge into sustainable behavior remains uncertain. Many media messages lack credibility, interactivity, and practical guidance, resulting in limited audience engagement and weak behavioral impact. Moreover, there is insufficient empirical evidence linking media exposure, content type, and message credibility with measurable pro-environmental attitudes and behaviors. This gap raises the need for a systematic investigation into how mass media contribute to education for the environment and what communication strategies most effectively drive environmental responsibility and sustainable action among audiences

Aim and Objectives of the Study

The aim of this study is to evaluate the role of mass media in promoting education for the environment, with a focus on how different media platforms influence environmental awareness, attitudes, and behavioral change among audiences in Nigeria. The study seeks to:

- i. Assess the level of audience exposure to environmental information disseminated through various mass media platforms.
- ii. Examine the relationship between media exposure and pro-environmental attitudes and behaviors among audiences.
- iii. Determine the influence of message credibility on the effectiveness of environmental education through mass media.
- iv. Analyze the types and framing of environmental messages that best promote behavioral change.
- v. Identify the major challenges limiting the effectiveness of mass media in promoting education for the environment.

Research Questions

Based on the stated aim and objectives, the study wishes to give answers to the following questions:

- i. What is the level of exposure of audiences to environmental information through different mass media platforms?
- ii. How does exposure to environmental content influence pro-environmental attitudes and behavior among audiences?

- iii. To what extent does message credibility affect the effectiveness of environmental education delivered through mass media?
- iv. What types and framing of environmental messages are most effective in promoting behavioral change?
- v. What challenges hinder the mass media from effectively promoting education for the environment?

Literature Review

Conceptualizing Education for the Environment

Education for the environment goes beyond simply providing information about ecological issues; it focuses on transforming attitudes and fostering sustainable behaviors. UNESCO (2022) defines it as a participatory and action-oriented process aimed at developing the skills, values, and motivation necessary to make responsible environmental decisions. It emphasizes learning that empowers individuals and communities to act as stewards of the planet. Unlike traditional environmental education, which often focuses on awareness and cognitive understanding, education for the environment integrates emotional engagement, moral reasoning, and behavioral change (Sterling, 2021). This shift highlights the importance of experiential and transformative learning models in achieving environmental Sustainability. Furthermore, education for the environment is grounded in constructivist and participatory learning theories. Tilbury & Cooke, (2023) explained that it seeks to involve learners in real-world environmental problem-solving, promoting critical thinking and collaborative engagement. According to Chinedu and Okeke (2022), this form of education requires contextual relevance, linking global environmental concerns such as climate change with local realities like waste management and deforestation. Through experiential learning, learners become active participants rather than passive recipients of knowledge, thereby enhancing their capacity for long-term environmental responsibility.

A key component of education for the environment is its emphasis on action competence. Jensen and Schnack's (2020) model of action-oriented environmental education argues that knowledge without action limits the transformative potential of education. Thus, education for the environment prioritizes the ability to make informed and responsible decisions leading to environmental protection. This includes encouraging sustainable consumption, waste reduction, and participation in community-based environmental initiatives. The focus is not only on understanding environmental problems but also on equipping individuals with the agency to address them. Umar & Ibrahim (2022) asserted that in Nigeria and other developing countries, education for the environment often remains limited to formal classroom instruction, with minimal emphasis on behavioral transformation. The lack of integration between educational institutions, community efforts, and media campaigns has hindered progress toward sustainable environmental practices. Bridging this gap requires a redefinition of environmental education objectives to incorporate action-oriented, media-supported, and community-driven strategies that promote education for the environment.

The Role of Mass Media in Environmental Awareness and Education

The mass media have historically been a central platform for shaping public awareness and opinion on environmental issues. Through news coverage, documentaries, and advocacy campaigns, media outlets serve as powerful tools for environmental communication. Awan et al., (2022) asserted that traditional media such as television and radio have played significant roles in raising environmental consciousness by informing audiences about climate change, pollution, and conservation practices. According to Nwankwo and Okoye (2021), consistent exposure to environmental content on broadcast media has a positive effect on public understanding and engagement in environmental practices. However, the nature of media coverage often determines the extent to which environmental messages influence behavior. Studies by Zhang and Zhang (2023) reveal that episodic and crisis-driven environmental reporting focused on disasters like floods or oil spills tends to evoke short-term concern without long-term behavioral change. Conversely, thematic and educational reporting fosters deeper understanding and sustained engagement. This demonstrates that mass media's educational potential depends largely on content framing, message frequency, and the inclusion of practical environmental solutions. Liao et al., (2024) explained that the evolution of digital and social media has further expanded the scope of environmental communication. Platforms like Facebook, X (formerly Twitter), and YouTube enable participatory and interactive engagement where individuals can share, discuss, and co-create environmental content. Research by Xie et al., (2024) found that exposure to environmental information through social media significantly predicts pro-environmental intention among youth, especially when the content includes credible sources and emotional appeals. Social media thus functions as both an information and educational platform, shaping behavioral patterns in ways traditional media cannot.

Nonetheless, Adeola (2023) explained that challenges persist in leveraging media effectively for environmental education. Many media organizations prioritize entertainment and political content over environmental issues due to limited funding, audience interest, and editorial biases. Moreover, misinformation and greenwashing on social platforms can distort public perception of environmental issues. Addressing these challenges requires strategic media education partnerships, consistent policy support, and capacity building for environmental journalism to ensure media content promotes authentic and actionable education for the environment.

Media Credibility, Message Framing, and Behavioral Change

Message credibility plays a crucial role in determining how audiences perceive and act on environmental information. Meng et al., (2023) explained that credible sources, factual reporting, and expert opinions enhance trust, which in turn strengthens behavioral intention. According to Kim and Tien (2022), audiences are more likely to engage in pro-environmental behavior when they perceive messages as reliable, evidence-based, and free from political or corporate bias. Credibility also enhances message retention and the likelihood of long-term attitude change, making it a vital component of media-driven environmental education. The framing of environmental messages influences how individuals interpret and respond to them. Research by

Hart & Feldman (2023) shows that positive framing emphasizing benefits of environmental action tends to elicit more engagement than fear-based or catastrophic narratives. For example, campaigns highlighting “clean energy opportunities” or “community greening benefits” are more effective in promoting behavioral change than those focusing solely on environmental threats. Education for the environment, therefore, requires strategic message framing that balances awareness of problems with solutions-oriented optimism.

Empirical studies demonstrate that interactive and participatory message designs are most effective in promoting environmental behavior. Liao et al. (2024) observed that social media users who engaged in comment-based discussions or shared environmental content were more likely to adopt sustainable practices. This finding aligns with Bandura’s (2021) social learning theory, which posits that behavior is shaped by observation, imitation, and reinforcement within social contexts. When environmental education is embedded in relatable narratives and supported by credible role models, behavioral transformation becomes more likely. However, the persistence of misinformation and sensationalism in environmental reporting can weaken public trust and reduce message effectiveness. To overcome this, Adeola (2023) believes that media organizations must adopt ethical communication standards and collaborate with educators and scientists to ensure accurate, research-based reporting. Enhancing credibility and adopting participatory message strategies can transform media platforms from passive information channels into active agents of environmental learning and sustainability.

Challenges and Prospects of Mass Media in Promoting Education for the Environment

Despite the evident potential of mass media to promote education for the environment, several structural, institutional, and content-related challenges hinder its effectiveness. Nwankwo & Okoye (2021) had explained that limited airtime for environmental programs, inadequate journalist training, and low prioritization by media organizations reduce the visibility of environmental education. Additionally, environmental topics are often treated as secondary to politics and entertainment, leading to insufficient depth and continuity in reporting. Without institutional commitment and funding, media-driven education for the environment struggles to achieve long-term impact. Another key challenge according to Chinedu & Okeke (2022) is audience apathy. Many individuals perceive environmental issues as distant or irrelevant to their immediate lives. This “psychological distance” limits engagement and action. Moreover, when messages are abstract, technical, or moralistic, they fail to connect emotionally with audiences. Mass media must therefore reframe environmental issues within local and relatable contexts to foster audience identification and participation. Nevertheless, there are emerging prospects for improvement. Liao et al., (2024) explained that the rise of digital platforms has democratized content creation, allowing civil society organizations, educators, and young environmentalists to communicate directly with audiences. The increasing integration of artificial intelligence and data analytics also allows for better targeting of environmental messages based on audience interests and behavior patterns. With appropriate policies and investment, media can evolve into dynamic educational platforms that promote sustainability learning at scale.

Finally, collaboration between government agencies, educational institutions, and media organizations offers a viable pathway toward effective education for the environment. As Sterling (2021) and UNESCO (2022) emphasize, environmental sustainability requires interdisciplinary and cross-sectoral engagement. Strengthening partnerships among these stakeholders can enhance media capacity, improve message quality, and ensure consistent, credible, and action-oriented environmental education that empowers communities for sustainable living.

Methodology

This study adopted a mixed-methods research design to provide both quantitative and qualitative insights into the role of mass media in promoting education for the environment. The mixed-methods approach was selected to allow for triangulation, ensuring that findings from different data sources complemented one another for greater validity and depth. The quantitative aspect focused on measuring audience exposure, perceptions, and behavioral outcomes, while the qualitative aspect explored the nature and effectiveness of media content in fostering environmental education. This design was consistent with similar empirical studies on media influence and environmental communication (Meng et al., 2023; Xie et al., 2024). The study population comprised university students, educators, and general media audiences across selected Nigerian urban centers, including Abuja, Lagos, and Jos. Using a stratified random sampling technique, a total of 300 respondents were surveyed to ensure representation from diverse educational and demographic backgrounds. A structured questionnaire was administered both physically and electronically to capture data on variables such as media exposure, message credibility, content engagement, and pro-environmental behavior. The instrument included both Likert-scale items and open-ended questions to capture quantitative and qualitative responses. To complement survey data, content analysis was conducted on 120 environmental media items drawn from television, radio, newspapers, and social media posts within a six-month period (January–June 2025).

Quantitative data collected from the survey were analyzed using the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics (frequencies, means, and standard deviations) were used to summarize responses, while inferential statistics such as correlation and multiple regression analyses examined relationships between media exposure, message credibility, and pro-environmental behavior. Qualitative data from open-ended responses and media content were analyzed using thematic analysis, guided by Braun and Clarke's (2021) approach. The themes were coded based on frequency, message framing, and behavioral outcomes. To ensure validity and reliability, the research instruments were subjected to expert review and a pilot study involving 20 respondents. Cronbach's alpha coefficient of 0.87 indicated high internal consistency of the questionnaire. Ethical considerations such as informed consent, anonymity, and voluntary participation were strictly observed. Respondents were informed about the study's objectives, and data were used solely for academic purposes. By integrating quantitative and qualitative evidence, this methodology provided a comprehensive empirical basis for understanding how mass media contribute to education for the environment and what factors enhance or hinder their effectiveness in promoting sustainable behavior.

Results and Discussion

Objective 1: To assess the level of exposure of audiences to environmental information across various mass media platforms

Table 1. The level of exposure of audiences to environmental information across various mass media platforms

	Platform	Percentage of Respondents
1	Social Media	68%
2	Television	54%
3	Radio	41%
4	Newspapers	32%

The study found that respondents were widely exposed to environmental messages through multiple mass media channels, with social media (68%) emerging as the most frequently used platform, followed by television (54%), radio (41%), and newspapers (32%). This pattern reflects the growing preference for interactive and participatory media among young audiences. The high engagement on social platforms demonstrates their capacity to serve as powerful tools for environmental learning and advocacy. Similar to the findings of Xie et al. (2024), this study confirms that digital media enable two-way communication, allowing users not only to access environmental information but also to share and discuss it, thereby reinforcing awareness. However, despite this broad exposure, many respondents indicated that the content often remained abstract and informational, lacking clear directions on actionable environmental practices. This gap echoes Nwankwo and Okoye's (2021) observation that Nigerian media tend to focus more on reporting environmental problems rather than encouraging behavioral change or local participation in environmental solutions.

Objective 2: To examine the relationship between media exposure and pro-environmental intentions and behavior

The findings revealed a moderate but significant positive correlation ($r = 0.46, p < 0.01$) between exposure to environmental messages and respondents' pro-environmental intentions. Regression analysis further showed that social media exposure ($\beta = .28, p < .001$) was a significant predictor of environmental behavior. Respondents who frequently engaged with environmental content such as recycling tips, conservation posts, or climate action campaigns were more likely to report changes in their attitudes and daily habits. These results are consistent with the findings of Meng et al. (2023), who noted that digital exposure significantly shapes environmental participation, particularly when messages are interactive and relatable. Nevertheless, the results also indicate that exposure alone does not guarantee consistent behavioral transformation, aligning with Chinedu and Okeke's (2022) conclusion that environmental awareness must be supported by practical engagement, community participation, and policy support to yield sustainable behavioral change.

Objective 3: To determine the influence of message credibility on the effectiveness of environmental education through mass media

Message credibility emerged as one of the strongest predictors of behavioral intention, with a regression coefficient of $\beta = .31$ ($p < .001$). Respondents expressed greater trust and willingness to act on environmental information disseminated by reputable sources such as environmental agencies, universities, and credible NGOs. In contrast, content perceived as politically biased, exaggerated, or commercially driven generated skepticism and disengagement. These findings support Kim and Tien's (2022) assertion that message trustworthiness significantly enhances environmental communication outcomes. Furthermore, participants emphasized that credible messages—especially those backed by expert opinion or scientific evidence—had a more lasting influence on their understanding and commitment to environmental actions. This reinforces Meng et al.'s (2023) argument that credibility strengthens the link between media exposure and behavioral change, underscoring the need for ethical and evidence-based environmental reporting in both traditional and digital media.

Objective 4: To analyze the types of environmental messages that best promote behavioral change

The content analysis revealed that action-oriented messages those containing explicit calls-to-action such as “plant a tree,” “conserve water,” or “recycle your waste” were the most effective in stimulating engagement and behavior change. About 65% of social media posts with direct action prompts generated higher user interaction than purely informational or fear-based content. Emotional and solution-oriented framing also proved influential, with narratives that portrayed community success stories fostering stronger behavioral responses than those emphasizing doom or disaster. These findings are consistent with Hart and Feldman (2023), who found that positive framing promotes long-term engagement with environmental initiatives. In contrast, messages centered solely on catastrophic imagery produced anxiety and avoidance rather than constructive action. This suggests that effective education for the environment depends on a balance between awareness of environmental threats and encouragement of personal and collective action a gap that prior studies have often overlooked.

Objective 5: To identify challenges limiting the effectiveness of mass media in promoting education for the environment

The study identified several key challenges hindering the role of mass media in promoting environmental education. These include inconsistent programming, low editorial priority for environmental issues, insufficient funding, and limited journalist training in environmental reporting. Respondents also highlighted audience apathy—a general lack of interest in environmental news—resulting from the perception that such issues are distant or irrelevant to daily life. These constraints corroborate findings by Adeola (2023) and Nwankwo and Okoye (2021), who noted that Nigerian media coverage of environmental issues is sporadic and often reactive, focusing on crises rather than sustained education. Additionally, misinformation and the spread of unverified environmental claims on social media further undermine public trust. To address these gaps, the study suggests stronger collaborations between media houses,

environmental educators, and policymakers to ensure that environmental messages are credible, consistent, and action-oriented.

Conclusion

This study has empirically examined the role of mass media in education for the environment, revealing that media platforms particularly social and digital media play a crucial role in enhancing environmental awareness, shaping attitudes, and influencing pro-environmental behavior. The findings demonstrated that while exposure to environmental messages is generally high, the effectiveness of such exposure depends largely on message credibility, framing, and action orientation. Credible and emotionally engaging content from trustworthy sources was found to inspire stronger behavioral responses than purely informational or sensationalized coverage. However, the study also highlighted persistent challenges such as low editorial prioritization of environmental issues, inadequate journalist training, funding constraints, and audience apathy, which limit the sustained effectiveness of mass media in promoting environmental learning and action. These results align with global literature emphasizing the need to move from traditional awareness campaigns toward transformative education for the environment that is, education that empowers citizens to act responsibly within their ecological contexts. Overall, the study concludes that the mass media hold immense potential as catalysts for environmental education and sustainable development. Yet, realizing this potential requires a deliberate shift in how environmental issues are framed, reported, and integrated into public discourse. Media institutions, environmental educators, and policymakers must therefore collaborate to design content that not only informs but also motivates and sustains environmentally responsible behavior.

Recommendations

In line with the findings above, the following were recommended:

1. There is a need for continuous training and capacity-building programs for journalists, broadcasters, and media content creators on environmental issues, sustainable development goals, and scientific reporting. This will improve the accuracy, relevance, and ethical standards of environmental news coverage.
2. Media organizations should collaborate with research institutions, environmental NGOs, and universities to ensure that environmental messages are based on verified data and expert opinion. This collaboration will strengthen public trust and improve message credibility, which the study found to be a major determinant of behavioral change.
3. To transform awareness into action, media campaigns should include specific, relatable calls-to-action such as local cleanup drives, tree planting, and recycling initiatives. Programs should highlight community success stories to foster a sense of collective responsibility and empowerment among audiences.
4. Government agencies, corporate organizations, and international donors should provide financial and logistical support for sustained environmental media programming. This will ensure consistency and visibility of environmental education across platforms.
5. Given the high influence of social media observed in the study, policymakers and environmental communicators should invest in digital campaigns and online communities

that promote sustainable lifestyles, especially targeting youths and urban populations who are highly active online.

6. Media outlets, civil society groups, religious organizations, and educational institutions should jointly promote environmental literacy and sustainability education through coordinated outreach and advocacy programs. Such partnerships will help integrate environmental values into mainstream culture and governance.

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