Original Article

Youth, Media Habits, and Sustainability Engagement in India: Digital Pathways to the SDGs

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Abstract

India's growing digital ecosystem has become a powerful medium for connecting youth with science, innovation, and sustainability. This study examines how digital media platforms such as Instagram, YouTube, and WhatsApp influence the awareness and participation of young Indians in sustainability-related initiatives. Based on a quantitative survey of 50 respondents aged 18 to 29 from varied socio-economic backgrounds, the research explores patterns of media use, exposure to sustainability content, and its impact on behavior and attitudes. The findings reveal that digital platforms are increasingly shaping young people's understanding of environmental issues and motivating them to adopt sustainable practices such as reducing plastic use, recycling, and supporting online climate campaigns. While the digital space offers vast opportunities for communication and learning, several challenges remain. Misinformation, biased algorithms, and unequal access to technology continue to limit meaningful participation, particularly among rural and marginalized groups. The study argues that digital innovation must be combined with educational initiatives and localized communication strategies to enhance inclusiveness and credibility. Strengthening digital literacy, promoting vernacular science communication, and encouraging collaboration among educators, media professionals, and policymakers are essential steps toward engaging youth effectively. By integrating technology, scientific knowledge, and youth-driven communication, India can build a stronger foundation for sustainable development. Such efforts align with the vision of Viksit Bharat 2047 and the United Nations Sustainable Development Goals, emphasizing the role of informed and responsible youth in shaping a sustainable and equitable future for the nation.

Keyword - Digital innovation, Youth engagement, Sustainability, Socia media, Viksit Bharat 2047, SDGs

Introduction

India, with the world's largest youth population, is at the center of a profound digital transformation. Affordable smartphones, low-cost mobile data, and state-driven initiatives such as Digital India and Skill India have created a dynamic ecosystem where young people increasingly depend on digital platforms for information, entertainment, and social engagement (Srivastava & Gupta, 2022). For many, platforms like Instagram, YouTube, and Twitter are not only avenues of leisure but also spaces for activism, education, and civic participation.

At the same time, the United Nations' Sustainable Development Goals (SDGs) emphasize the need to mobilize youth in addressing global challenges, including climate change, environmental degradation, and social inequities. Research indicates that digital platforms can enhance awareness, stimulate debate, and encourage youth-led advocacy for sustainability (Kumar & Padhy, 2023; Rajan & Sinha, 2021). Through interactive formats—short videos, infographics, gamification, and influencer-led campaigns—digital media has the capacity to translate abstract sustainability concepts into actionable behaviors.

Yet, opportunities coexist with challenges. The digital landscape is often shaped by algorithmic biases that prioritize sensational over substantive content, potentially marginalizing sustainability discourse (El Khoury, 2024). Moreover, the persistence of the rural–urban digital divide limits equitable access to information, particularly for youth from marginalized communities (Jha & Sharma, 2023).

The prevalence of misinformation further complicates the reliability of sustainability communication (Sinclair & Baglioni, 2024). In such a context, studying how Indian youth interact with digital platforms for sustainability engagement becomes not only relevant but urgent.

Research Objectives

This study aims to examine the intersection of youth media habits and sustainable development in India. Specifically, it seeks to:

1. Analyze the media consumption patterns of Indian youth on digital platforms.
2. Assess the prevalence and quality of sustainability-related content in their digital ecosystems.
3. Investigate the relationship between media habits and awareness of the SDGs.
4. Identify structural challenges—such as misinformation, algorithmic bias, and the digital divide that shape engagement.
5. Propose strategies to enhance the role of digital platforms in promoting sustainability among youth.

Research Questions

To address these objectives, the study is guided by the following questions:

- How do Indian youth use digital platforms to engage with sustainability topics?
- What factors influence their interaction with sustainability-related content?
- What barriers exist in using digital media to promote sustainable development among youth?
- How can digital platforms be optimized for effective youth engagement in sustainability initiatives?

While global literature has examined the influence of digital platforms on sustainability communication, India-specific studies remain limited (Mahapatra & Mishra, 2021). Much of the existing scholarship emphasizes general patterns of media consumption, without adequately considering how socio-economic disparities, platform algorithms, and misinformation intersect to shape youth engagement. By situating the analysis within India's unique demographic and digital landscape, this study contributes to three areas: it provides contextual insights into how Indian youth consume sustainability-related digital content; critically evaluates barriers including digital inequities and misinformation that limit meaningful engagement; and offers actionable recommendations for policymakers, media practitioners, and educators seeking to align youth participation with national and global sustainability goals. Ultimately, the study underscores the transformative potential of digital platforms in fostering a sustainability-oriented youth culture, while highlighting the strategic interventions required to overcome structural challenges.

Literature Review

Youth Media Habits in India

India's young population more than 50% of its citizens under 29 has emerged as the most active digital demographic worldwide. Studies show that Indian youth spend between three to five hours daily on social media and video-sharing platforms, with Instagram, YouTube, and WhatsApp dominating usage patterns (Chattopadhyay, Banerji, & Palit, 2024; Srivastava & Gupta, 2022). These platforms are not only sites of entertainment but also avenues where youth encounter civic and sustainability-related discourses.

Short-form content, such as Instagram Reels and YouTube Shorts, has proven particularly effective in capturing youth attention, though often for brief durations (Das & Mishra, 2024). Scholars argue that the brevity and visual nature of such content increases engagement but may also risk superficial understanding of complex sustainability issues (Rajan & Sinha, 2021).

Digital Platforms and Sustainability Advocacy

Digital media platforms have demonstrated increasing potential in driving sustainability-related awareness. Parmaxi, Nicolaou, and Constantinou (2024) highlight the role of gamification and interactive features in enhancing knowledge retention, particularly when content is presented in engaging, relatable formats. Similarly, Ramesh and Swami (2024) found that visual storytelling campaigns on environmental issues led to measurable **behavioural** change among Indian youth.

Further, Lahiri and Ahmad (2024) emphasize that initiatives under *Digital India* have created new opportunities for youth to access sustainability-related knowledge and participate in online advocacy. For instance, campaigns around renewable energy adoption, waste management, and climate action have gained traction through hashtags and influencer-led initiatives, positioning digital platforms as catalysts for grassroots sustainability movements.

Barriers to Effective Engagement

Despite these opportunities, multiple challenges hinder youth engagement with sustainability content. Algorithmic biases represent a significant barrier: recommendation systems on platforms such as YouTube and Instagram often prioritize entertainment and sensational content over sustainability-oriented messages (El Khoury, 2024). As a result, sustainability communication competes for visibility against clickbait-driven media.

The digital divide also persists, particularly between urban and rural youth. While urban populations benefit from affordable smartphones and faster networks, rural communities face infrastructural deficits that restrict meaningful participation (Jha & Sharma, 2023; Swetha & Rathnam, 2024). These inequities exacerbate socio-economic disparities in access to credible sustainability information.

Another critical issue is misinformation. Sinclair and Baglioni (2024) note that misinformation erodes trust and creates confusion around sustainability initiatives, particularly on topics such as climate change and renewable energy. Youth often encounter conflicting narratives that complicate their ability to distinguish credible information from falsehoods, thereby weakening the effectiveness of sustainability advocacy campaigns.

Global Perspectives on Youth, Media, and SDGs

Globally, research shows that digital platforms have amplified youth voices in climate movements, from #FridaysForFuture in Europe to plastic-free campaigns in Southeast Asia (Schafer & Maryl, 2024). These studies underline the transnational nature of youth activism and the

ability of digital platforms to build solidarity across borders. However, Rajan and Sinha (2021) caution that while global youth campaigns generate momentum, the cultural specificity of sustainability challenges requires localized communication strategies.

Although valuable insights exist on youth, digital platforms, and sustainability communication, three critical gaps remain in current scholarship. First, most studies emphasize global or generalized youth behaviors, with limited empirical attention to India's distinct socio-economic and infrastructural realities (Swetha & Rathnam, 2024). Second, little is known about the long-term behavioural impact of sustained exposure to sustainability content, particularly whether online engagement translates into lasting lifestyle changes among Indian youth. Finally, the intersectionality of barriers such as misinformation, digital inequities, and algorithmic filtering and their combined influence on youth engagement remain underexplored in the Indian context (Kumar & Padhy, 2023).

This study advances existing scholarship by providing an India-specific analysis of youth digital media habits and their relationship to sustainability engagement, addressing a gap in predominantly global or generalized research. It investigates how algorithmic dynamics and misinformation shape perceptions of sustainability content, while also examining socio-economic disparities—including rural–urban divides—that influence access to and participation in sustainability communication. In addition, the study offers actionable recommendations for policymakers, educators, and digital practitioners, highlighting ways to optimize digital platforms as effective tools for advancing sustainable development goals.

Methodology

This study employed a quantitative survey-based research design to investigate the relationship between youth media habits and sustainability engagement in India. A cross-sectional approach was chosen to capture diverse perspectives within a single time frame, allowing for both descriptive and inferential analysis of media usage patterns, exposure to sustainability-related content, and behavioural responses.

A total of 50 respondents were surveyed between January and April 2025 using stratified random sampling to ensure balanced representation. The sample reflected India's digital divide with 60% urban and 40% rural participants, while all respondents were aged 18–29 in line with youth definitions by the United Nations and the Government of India. Gender distribution was nearly equal (52% male, 47% female, and 1% non-binary), capturing gendered nuances of media use. Participants also represented diverse socio-economic backgrounds in terms of income and education, ensuring that the findings reflected a wide range of perspectives.

Data were collected via a structured questionnaire administered both online and offline. Online surveys (Google Forms) targeted youth in metro and semi-urban regions, while offline surveys in rural areas were facilitated by enumerators. The questionnaire covered demographics, media habits, exposure to sustainability content, and behavioural responses. Reliability was established through a pilot study, and content validity was ensured via expert review.

Data Analysis

Survey responses were analysed to identify patterns in youth media habits and their engagement with sustainability content. The analysis included a breakdown of demographic factors such as age, gender, and location, alongside daily media use and preferred platforms. Responses on exposure to sustainability content were examined to understand frequency, sources, and credibility, while reported behaviours were reviewed to assess changes in attitudes, eco-friendly practices, and civic participation. Open-ended responses were also studied thematically, providing deeper insights and illustrative examples that complemented the broader trends observed in the survey data.

Findings & Discussion
Media Habits of Indian Youth

The survey revealed that Indian youth spend an average of 3.8 hours daily on digital platforms. Instagram (78%), YouTube (72%), and WhatsApp (69%) emerged as the most used platforms, followed by Twitter/X (35%) and regional short-video apps like Moj and Josh (22%). Urban respondents reported higher platform diversity, while rural participants relied heavily on WhatsApp due to affordability and accessibility. These findings align with Chakraborty and Bose (2022), who noted that Indian youth show strong preferences for visual and interactive formats. The dominance of short-form videos, while engaging, risks oversimplifying complex sustainability topics (de Meyer et al., 2021).

Exposure to Sustainability-Related Content

A majority (61%) reported encountering sustainability content at least once a week, often via influencer-led campaigns on Instagram and YouTube. Topics included climate change (45%), plastic reduction (38%), and renewable energy (27%). Rural youth primarily encountered sustainability through WhatsApp forwards and NGO-driven initiatives, showing how platform choice shapes credibility. This echoes Banerjee and Chaturvedi (2019), who emphasized the role of digital storytelling in awareness-raising, though visibility gaps remain as 39% of respondents reported rare or no exposure.

Behavioural Impact of Media Exposure

About 64% of respondents reported adopting at least one eco-friendly practice after engaging with digital sustainability content, such as reducing single-use plastics (41%), adopting waste segregation (29%), or joining online petitions (18%). These findings resonate with Skoric and Zhu (2020), who highlighted how digital activism can influence offline behavior, and reinforce that interactive content enhances uptake (Parmaxi et al., 2021).

Barriers to Engagement

Despite positive outcomes, barriers persist. More than half (54%) struggled to distinguish credible content from misinformation, especially on climate change and energy, consistent with Scheufele and Krause (2019). Algorithmic bias was another barrier: sustainability content was often overshadowed by entertainment-driven feeds, echoing Eslami et al. (2019). Rural participants cited data

costs and poor connectivity as major obstacles, aligning with Robinson et al. (2020), who note persistent digital inequalities.

Gendered and Socio-Economic Differences

Female respondents engaged more actively with sustainability content (68%) compared to males (58%), particularly in eco-friendly shopping and waste segregation. Socio-economic status also mattered: higher-income youth were more exposed to international campaigns, while lower-income groups relied on vernacular content circulated via WhatsApp. This reinforces the call for localized, inclusive strategies (Bhatia & Gaiha, 2020).

Indian youth are highly engaged with digital platforms, but exposure to sustainability content remains inconsistent. Influencer-led campaigns are effective in promoting eco-friendly practices, but barriers such as misinformation, algorithmic bias, and the digital divide reduce impact. Gender and socio-economic differences highlight the importance of inclusive and localized approaches.

Conclusion

This study examined how Indian youth engage with sustainability through digital platforms, revealing both opportunities and challenges. Findings highlight that youth are deeply embedded in digital ecosystems, spending nearly four hours daily across platforms like Instagram, YouTube, and WhatsApp. These platforms are not just spaces of entertainment but emerging channels for sustainability communication.

Exposure to sustainability-related content was found to have tangible behavioural effects, with many youth reporting eco-friendly practices such as reducing single-use plastics and adopting waste segregation. Importantly, frequency of exposure strongly correlated with action**,** affirming that consistent digital messaging can foster meaningful change.

Yet, significant barriers persist**.** Misinformation undermines trust**,** algorithmic bias limits visibility of sustainability content, and digital inequities restrict rural and lower-income youth from equal participation. Gender and socio-economic disparities further complicate patterns of access and engagement, underscoring that sustainability communication cannot adopt a one-size-fits-all model.

Overall, this study demonstrates that while digital platforms have strong potential to advance youth-driven sustainability engagement, realizing this potential requires structural interventions, inclusive strategies, and sustained efforts**.**

Recommendations

Policymakers should prioritize strengthening digital inclusion by expanding affordable internet access and infrastructure in rural areas to bridge the digital divide (Jha & Sharma, 2023). Equitable access is essential to ensure that sustainability discourse reaches youth across all socio-economic groups, not just urban elites. Additionally, there is a pressing need to promote media literacy by integrating digital and sustainability education into national curricula. Such initiatives would equip young people with the critical skills to evaluate online content and counter misinformation. Policymakers should also support localized campaigns by encouraging sustainability communication in regional languages, making content more accessible to rural and lower-income youth.

Educators play a crucial role in shaping sustainable practices. Schools and colleges should embed sustainability into curricula, with an emphasis not only on awareness but also on practical actions such as waste segregation, energy conservation, and climate adaptation strategies aligned with local realities. Learning should be participatory, with institutions encouraged to incorporate social media projects into sustainability education so that youth can create and share digital content that resonates with their peers. Finally, educators should foster critical thinking, encouraging students to question the credibility of digital content and bridge the gap between online exposure and informed decision-making.

Digital media professionals can amplify impact by leveraging influencers and content creators, whose relatability and reach make them powerful messengers for sustainability. To maximize visibility, platforms should experiment with algorithmic nudges that bring sustainability content into trending feeds, countering the dominance of entertainment-driven recommendations. Furthermore, practitioners should adopt interactive formats including gamified challenges, quizzes, and short-form storytelling to move audiences from passive viewing to active participation (Parmaxi et al., 2024).

Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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