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From Likes to Lifestyle: Exploring the Gap Between Online Environmental Advocacy and Offline Sustainable Practices

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***Abstract*— Digital platforms are considered influential for advocacy, awareness, and collective action on environmental issues through hashtags and online campaigns. However, in everyday life, this digital environmental activism does not always translate into environmentally responsible behavior. This discrepancy raises an important question: why do people endorse environmental causes online but struggle to adopt sustainable habits offline? To explore this, the study adopted an integrative review methodology to synthesize existing evidence on sustainable behavior change in everyday life initiated by digital campaigns and engagement on global environmental issues such as plastic pollution, water conservation, recycling, sustainable consumption, and biodiversity protection. To capture multidisciplinary evidence, literature was searched from 2015 to 2026 across The Directory of Open Access Journals (DOAJ), Google Scholar, Semantic Scholars, and other publicly available and published policy reports on the portals of national ministries and UN agencies. A thematic synthesis grounded in moral licensing and the theory of planned behavior was conducted to study what psychological and social factors contribute to the gap between online advocacy and offline behavior. Our findings are discussed in three interrelated themes to study this disconnect: a) convenience over commitment, b) digital participation in environmental campaigns as symbolic participation, and c) can awareness alone change behavior? The study suggested the significance of moving beyond awareness-driven campaigns towards behavior-change communication (BCC), as online environmental activism may foster awareness and symbolic engagement temporarily; yet, to translate the initiatives into meaningful and sustainable ways, the review proposed that a BCC-informed LIFE pathway may help future empirical evidence to study how digital environmental activism embedded with BCC principles can support persistent behavioral change in real-life settings.**

Keywords: Behavior Change Communication (BCC), Digital Environmental Activism, Behavioral Psychology, Sustainable Living

I. Introduction

Anecdotes of previous digital environmental efforts prove that social media campaigns can foster awareness and collective actions; however, individuals struggle to adopt environmentally responsible habits offline or in their everyday lives. In recent years, digital platforms have transformed environmental advocacy through hashtags, online campaigns, petitions, and virtual communities, enabling users to express support for climate action, minimize their carbon footprints, reduce plastic use, conserve water, and recycle waste in more sustainable ways [1]. Undoubtedly, these platforms have increased the sense of collective expression of environmental concern through facilitated information sharing [2]. However, environmental sustainability ultimately depends not only on what we endorse online but also on the choices we make offline as a "persistent behavior change"[3]. To promote such behaviors in everyday life, sustained effort, commitment, and behavioral adjustments are required, which can promote actions such as using reusable bags, conserving and recycling potable and non-potable water, upcycling and recycling household and industrial waste, minimizing the carbon footprint, and making conscious decisions when purchasing new things. Successful online campaigns run on sustainable environmental practices often fail when results are hard to observe in day-to-day individual behavior[4], [5], [6]. This apparent disconnection raises an important concern: "Can digital advocacy move individuals beyond symbolic participation and inspire meaningful lifestyle changes?

Solely, digital environmental activism does not guarantee achieving sustainable environmental change; it requires more effort beyond temporary awareness or symbolic expressions of support [5], [7], [8], [9]. As advocated by the United Nations Sustainable Development Goals (SDGs)_ particularly SDG 12, responsible consumption and production, SDG 13, climate action, and SDG 6, clean water and sanitation. SDGs 14 & 15, life below water and on land, explain how crucial it is to emphasize collective behavioral

actions in addressing environmental challenges and bring sustainable and persistent behavior change [10]. This change implicitly relies on individuals' willingness to adopt and act on these environmentally responsible practices in their day-to-day lives.

Nevertheless, the transition from digital spaces to real-life practices on sustainable environmental issues has not always been successful. Reposting a post or using a hashtag while supporting an online campaign against plastic pollution would be easier than carrying reusable alternatives, which often require repeated decisions and personal inconvenience at times, with long-term commitments [11]. Despite having an orientation of environmental consequences, why does the majority of us always end up purchasing fast fashion, relying on disposable products, or, at times, ignoring conservation practices? The answer is that these digital environmental activists are creating environmentally informed audiences, or they are merely equipping individuals with general knowledge on sustainable actions without any defined practical pathways.

Digital environmental activism has emerged as a contemporary avenue that allows individuals to participate in sustainability activities with unprecedented ease, such as liking, sharing, signing a petition, joining an online community, or participating in any online challenge supporting and saving planet Earth against environmental issues [11]. This collective awareness and participation are credited with increasing public visibility of environmental concerns and with fostering conversations around environmental issues, climate concerns, and sustainable living [3]. Nevertheless, these digital environmental activists are getting hyped now, yet these are often only symbolic engagements with limited or negligible influence on everyday behaviors around the slogan of "save the earth". Why is that? A study states that these online campaigns require little or no effort in recording one's support for sustainable environmental changes; however, adopting practical measures in favor of them is rarely seen, as it requires long-term commitment and continuous self-regulation [12].

Theoretically, several psychological theories offer nuanced explanations for the underlying behavioral and psychological patterns behind this discrepancy, helping to thoroughly understand this paradox. The theory of planned behavior explains that behavioral intentions are mainly influenced by attitudes, perceived behavioral control, and subjective norms, explaining that individuals may adopt favorable attitudes or behavioral patterns and perceive other sustainable practices as inconvenient or difficult to maintain, which requires long-term commitment or extra effort to maintain [12], [13]. At the individual level, those who perceive environmentalism as an important aspect of their identity or existence are more likely to engage in pro-environmental behavior [7], [14], [15]. However, these environmental identities do not always translate into a "persistent behavior," which remains a puzzle to be solved. Another alternative perspective, through the lens of moral licensing theory, suggests that symbolic online accreditation towards issues related to sustainable environmental issues may reduce the motivation for recurring this positive behavior in offline practices [3], [16]. Overall, these theoretical insights do offer a unique perspective on human behavior in online spaces, but little is explained about how digital environmental advocacy may influence the transition from awareness to sustainable behavioral change on environmental causes.

The scholarship around digital activism, climate change communication, and the factors involved in bringing sustainable behavioral change has been saturated with existing empirical evidence [3], [11]. However, this factor remains relatively understudied when it comes to synthesizing multidisciplinary evidence to understand why various environmental advocacy campaigns die down when it comes to producing meaningful and persistent lifestyle change in everyday life. Existing literature largely focuses on how to generate awareness campaigns and how to increase their online reach to make the campaign effective towards the sustainable environmental change attitude, while comparatively less focus is being devoted to understanding what psychological mechanisms are involved, which contribute to the disconnection between symbolic online participation and long-term sustainable behavior change in everyday life. The coexistence of infrastructural constraints and daily life priorities in attaining an environmental awareness attitude.

Further exploration of these factors provides a deeper insight for developing an environmental initiative that moves beyond just online awareness towards actionable and sustained behavior change patterns in offline spaces [11], [14], [17]. Therefore, the present review seeks to synthesize multidisciplinary evidence examining the psychological and social factors associated with the discrepancy between digital environmental campaigns and offline sustainable practices, drawing upon existing theories (Theory of Planned Behavior, Environmental Identity Theory, Moral Licensing Theory) [14], [15], [16], [17]. The review proposed a LIFE (Learn, Internalize, Facilitate, and Embed) framework based on the principles of behavior change communication (BCC) to explain the digital advocacy and offline behavioral pattern discrepancies in acquiring a pro-environmental lifestyle. The review synthesis revolved around a) convenience over commitment, b) digital participation in environmental campaigns as symbolic participation, and c) can awareness alone change behavior? Overall, the study aimed to contribute to the discussion surrounding community engagement and environmental education by offering sustainable and easy-to-adapt practical pathways that can translate

online environmental concerns into meaningful behavioral outcomes.

II. Methodology

A. Study Design and Rationale

The study revolved around the central question: why do individuals who actively endorse environmental causes in digital spaces often struggle to adopt responsible services in offline practices? To answer the question, the psychological, social, and communicative processes need to be studied, which might contribute to creating the apparent disconnection. Therefore, an integrative qualitative narrative review approach was adopted to conduct this study by collecting empirical evidence, theoretical discussions, and communication literature from digital databases such as The Directory of Open Access Journals (DOAJ), Google Scholar, Semantic Scholar, and other publicly available and published policy reports at National Ministries and UN agencies portals to develop a broader understanding of this complex behavioral phenomenon followed by an inclusion and exclusion criteria (Table 1) and keyword search string (Table 2). This study aims to gather emerging and interdisciplinary literature that is dispersed across various fields such as behavioral sciences, sustainability, environmental psychology, communication studies, and digital engagements, which is why an integrative narrative review approach is considered appropriate to capture this evidence in identifying recurring patterns within the existing published literature and reports.

Table 1. Inclusion and Exclusion Criteria

Criterion	Inclusion Criteria	Exclusion Criteria
Publication Years	2015–2026	Published before 2015
Language	English	Non-English
Publication Type	Empirical studies, review articles, conceptual/theoretical papers, policy reports, UN reports, NGO/INGO reports, ministry publications, implementation reports, and evaluations	Editorials, opinion pieces lacking evidence, news items without analytical content, conference advertisements, promotional materials
Study Focus	Digital environmental activism, environmental psychology, sustainable behavior, communication and behavior change interventions, environmental identity, moral licensing, social media campaigns	Studies focused solely on technological innovations, engineering interventions, ecological modeling, or natural science assessments without behavioral, psychological, or communicative dimensions
Environmental Domains	Plastic pollution, recycling behavior, water conservation, biodiversity protection, sustainable consumption, carbon footprints, climate action	Environmental topics not related to individual or community behavior or sustainability practices
Population/Context	Individuals, communities, online users, digital campaign participants, citizens	Laboratory simulations with no relevance to sustainability behavior in real-life settings
Evidence Type	Scholarly publications, government/UN documents, organizational reports, documented initiatives, practical examples, case studies	Commercial blogs, promotional websites, social media posts without documented evidence, unsupported claims or media content
Behavioral Relevance	Studies addressing psychological, behavioral, social, or communicative aspects of environmental engagement or behavior	Studies with no explicit discussion of human behavior, psychology, communication, or social factors
Digital Engagement Focus	Studies that explore online/digital advocacy, engagement, or campaigns and their influence on offline behavior	Studies unrelated to digital platforms, online engagement, or environmental advocacy

Table 1. Study Inclusion & Exclusion Criteria

B. Mapping Conversations Around Environmental Engagement

The search was undertaken between January 2026 and June 2026 in published databases, including DOAJ, Google Scholar, and Semantic Scholar, as well as a few websites and portals to retrieve real-world examples through implemented projects around environmental sustainability available on United Nations agencies, environmental national and international organizations, and ministry portals. The selected evidence was from the years 2025 to 2026 on sustainable behavior, digital environmental engagement, and the communication projects around promoting an environmentally responsible lifestyle in offline spaces. The search terms included the combination of different word strings ("digital environment activism, online environmental advocacy, environmental identity, water conservation and recycling behavior, social media campaigns, plastic pollution, carbon footprints, moral licensing of sustainable behavior) as well as the Boolean operators (AND/OR). Backward citation and reference citation search was also being included to gather thorough, diverse, and practical evidence from policy documents, empirical studies, review papers, influential blogs, reports, and articles to investigate the emerging debate on how digital participation may shape, hinder, or facilitate sustained pro-environmental behaviors in day-to-day life practices instead of just "like" "share" and comment in the virtual world (Table 2).

Table 2. Search Strategy and Keyword Search String

Concept / Theme	Keyword / Phrasal Search String	Boolean Operators	Databases / Sources	Additional Search Techniques
Digital Environmental Engagement	"digital environmental activism" OR "online environmental advocacy" OR slacktivism OR "social media campaigns" OR "online environmental engagement" OR "digital activism"	OR between synonyms AND across concepts	• DOAJ • Google Scholar • Semantic Scholar	• Backward citation search • Reference list search • Citation chaining
Sustainable Behaviors	"sustainable behavior" OR "pro-environmental behavior" OR recycling OR "water conservation" OR "plastic pollution" OR "sustainable consumption" OR "carbon footprints" OR "green lifestyle"	OR between synonyms AND across concepts	• DOAJ • Google Scholar • Semantic Scholar	• Backward citation search • Reference list search • Citation chaining
Psychological Mechanisms	"environmental identity" OR "moral licensing" OR "behavioral intentions" OR "environmental concern" OR "attitude toward environment" OR "psychology of sustainability" OR "value-belief-norm"	OR between synonyms AND across concepts	• Google Scholar • Semantic Scholar	• Backward citation search • Reference list search • Citation chaining
Communication and Interventions	"behavior change communication" OR BCC OR "nudge theory" OR "communication interventions" OR "community engagement" OR "environmental communication campaigns" OR "social marketing"	OR between synonyms AND across concepts	• DOAJ • Google Scholar • Semantic Scholar	• Backward citation search • Reference list search • Citation chaining
Environmental Domains (Examples)	"plastic pollution" OR "plastic waste" OR "recycling behavior" OR "water conservation" OR "biodiversity protection" OR "climate action" OR "carbon emissions" OR "waste management"	OR between synonyms AND across concepts	• DOAJ • Google Scholar • Semantic Scholar	• Backward citation search • Reference list search • Citation chaining
Search Expansion (Comprehensive Coverage)	All key concepts combined across themes using broader and narrower terms	AND/OR as appropriate	All above databases + UN agencies, national ministries, NGO/INGO web portals, policy repositories	• Backward citation search • Reference list search • Citation chaining • Hand-searching of key reports and policy documents

Table 2. Study Search Strategy and Keyword Search String

C. Looking for Patterns Rather Than Papers

The studies were considered eligible based on the predefined inclusion criteria. For instance, it discusses the psychological, social, and communication factors associated with environmental engagement in a digital context. Studies were exclusively excluded if they focused on technological innovations, engineering interventions, and ecological assessments, while overlooking behavioral, psychological, and human aspects. Instead of organizing the literature according to methodological design, geographical settings, and sample design, the focus remained on recurring ideas, patterns of convergent findings, and contrasting perspectives that may be helpful to understand the discrepancy exist between the disconnection between

the online-digital advocacy on environmental causes and offline pro-environmental actions, symbolic engagements, behavioral intentions, and convenience-related hindrances in adopting these behavioral patterns in a more consistent way to promote health an sustainable lifestyle.

D. Enhancing Analytical Rigor and Trustworthiness

To enhance the transparency and rigor of the included evidence, the synthesis process emphasized conceptual relevance rather than publication frequency. To minimize the potential selection and inclusion bias, literature was sourced from multiple databases and web portals of different INGOs, NGOs, and government official entities. To ensure that the interpretation remained grounded and aligned with the study's guiding central question, the discussion was organized into selected themes. However, the integrative narrative review is supposed to be an interpretive approach, and the researcher's subjectivity chances are high, though an effort was made to minimize the biases and enhance the transparency to strengthen the credibility, trustworthiness, and analytical depth of the review findings. Guided by existing theories (theory of planned behavior, moral licensing theory, environmental identity theory, and principles of behavior change communication, BCC), four integrated themes were developed to better understand the digital advocacy and offline behavior gap. Subsequently, these themes have informed the proposed conceptual framework of LIFE, based on the principles of behavior change communication BCC.

III. RESULT

A. Study findings & thematic synthesis

While synthesizing the existing literature, one of the most consistent observations was how effectively digital campaigns raised awareness of global sustainability issues and encouraged participation. Additionally, environmental sustainability public awareness is no longer a concern, as many successful digital campaigns mobilize public awareness and generate widespread online engagement on global environmental issues. Substantially, across the globe, the government, development, corporate, and civil agencies have initiated numerously on digital environmental sustainability campaigns. Despite these efforts, the existing evidence suggests that translating these efforts and sustaining the momentum in offline behavior face persistent challenges. There are large-scale global social media initiatives that have collectively remained successful and reached millions of people, such as Plastic Free July, World Environment Day, which encourages individuals to pledge against a more sustainable lifestyle in support of reducing plastic waste, conservation & recycling of potable water at the household level, and adopting a more responsible and sustainable lifestyle [18], [19]. However, recent arguments have been developed on how effective these online campaigns are in real-world offline behavior change capacity, and the effectiveness of these campaigns should not only be measured through likes, re-shares, and reposts. Instead, to the extent that these changes can contribute to the long-term and sustainable behavioral change towards sustainable environmental cause behaviors [19]. Hence, the critical question is no longer associated with how we raise public awareness of environmental issues, but rather, how to translate these patterns into community practices, which remains challenging. Evidence from various behavioral and communication literature suggests that the transition from digital advocacy to offline actions is influenced by psychological, socio-economic, religious, and behavioral factors. Therefore, rather than identifying a single explanation, the review suggests that there are various factors that are shaped by a series of interconnected behavioral processes. To understand this interconnected phenomenon, the following sections of the review identify four recurring themes, followed by a central research question _ rooted in existing theories, i.e., the theory of planned behavior, moral licensing theory, environmental identity theory, and principles of behavior change communication (BCC).

B. Theme 1: Convenience over Commitment

RQ1: Can Environmental Concerns Withstand Everyday Inconveniences?

Findings revealed during the literature synthesis that one of the strongest patterns and concerns is "resistance" to adopting sustainable actions in offline spaces. Because change requires additional efforts, time, resources, and, in certain settings __ change in already established routines. Notably, various large-scale digital campaigns on sustainable environmental causes remained successful in generating a positive response; however, the lasting behavioral impact is negligible due to multiple factors associated with convenience and resources. For reference, a large-scale digital campaign named "Plastic Free July" reportedly increased awareness and volunteer response towards the reduction of single-use plastic bag consumption during the campaign. However, the project report acknowledged that the persistent behavior change depends on participants' ability to integrate these practices into their daily routine instead of treating them as a short-term "share," "click," and "repost [19].

Another successful project was "India's Swachh Bharat Mission," which remarkably promoted sanitation and hygiene practices and encouraged millions of users towards smart and healthier choices. The substantial findings of the report highlighted the need to develop a holistic execution plan to sustain these practices in offline capacity [20], [21]. Another piece of evidence from Pakistan suggests that environmental concerns have increased, so the civic responsibility to adopt sustainable behavioral practices, in addition to grappling with environmental issues, should also be put into practice. The associated factors are linked to weak

governance, fragmented implications, and institutional constraints in making real change possible in offline capacity [22].

Overall, these projects executed in different regions and contexts converge on common findings that remain the same: a) digital campaigns can bring about change in behavioral change, yet to sustain these environmental practices deeply rely on various other components, such as enabling state-driven policies, community active participation in offline spaces, and individual willingness and motivation to bring a persistent behavior change on this account without any physical nudging. This convergence suggests that the concern is not limited to raising and creating campaigns around environmental change, but also to supporting the environmental and behavioral circumstances necessary to sustain this change, driven by digital environmental advocacy.

Across various geographical, cultural, and socioeconomic contexts, the review synthesizes and suggests that environmentally responsible decisions are negotiated within the realities of everyday activities, financial constraints, available facilities, prevailing community norms, and competing personal priorities, which eventually influence the choice one makes in response to environmental concerns. Therefore, the collective efforts and examples explain why it is crucial to synchronize the suitability of these campaigns as per the cultural, societal, and personal norms to enhance the feasibility and adoptability of permanent behavior change so that the environmental change does not feel less practical and more difficult to maintain [8], [9], [17].

What psychological and behavioral patterns work against such actions can be studied through the "theory of planned behavior"[13]. The theory proposes that the favorable attitude towards environmental protection only represents one aspect of the behavior change; these determinants further explain the conservativeness of actionable patterns in individual behavior, particularly in offline capacity. The theory of planned behavior proposes that behavior is determined by an individual's own intention and motivation to learn new things, which is considered to be the strongest predictor of whether they will act or not [13]. These intentions are further shaped by three main components:

a) Attitude

b) Subjective Norms

c) Perceived Behavioral Control (PBC)

According to the theory of planned behavior, change occurs with these three determinants [6], [13]. First, an individual's attitude asks the question What benefit do I get out of this behavior change, meaning, "Do I think this behavior is good or beneficial for me?" For example, attitude is grounded in the notion "recycling can protect the environment".

The second determinant in the behavior change is subjective norms, where individuals ask the question, "Will my significant others support me in this?" This also strengthens the norms by showing that respected and important people do support me in this behavior change. For example, subjective norms could be "Do my neighbors or family recycle?"

The third determinant in defining the behavior change is "perceived behavioral control", where an individual asks the question "Do I have faith I would actually be able to do this?" while considering their skills, resources, time, and available opportunities. For example, the recycling bins are nearby, and I do have an idea of how to recycle. Collectively, these factors create a change loop in developing and sustaining the change [13].

The study findings suggest that environmentally responsible behavior occurs and is being adopted where supportive social environments, intrinsic motivation, and favorable state policies are available, which enable individuals to act upon their pro-environment intentions and attitudes [1], [12], [14], [15], [22]. Conversely, a positive attitude towards environmental change cannot prove the effectiveness of any persistent behavior change; these choices only work beyond personal choices, requiring additional effort, an external environment, and financial cost to make the change sustainable [6], [14], [17].

The synthesis suggests that convenience in behavior change should not be interpreted merely as an individual's personal preference or behavioral weakness; instead, the change occurs while catering to all three determinants in a loop to develop a long-term sustainable practice. The proposed LIFE framework suggests that when these digital environmental advocacies became obsolete in the offline world, everyday environmental choices are merely based on your personal choices _ it is rather a holistic process that keeps intrinsic and extrinsic components involved in making behavior change persistent.

C. Theme 2: Digital participation in environmental campaigns as symbolic participation

RQ2: Does Symbolic Participation (Digital Environmental Activism) Replace Sustainable Action?

Digital environmental participation has substantially changed the way individuals perceive environmental issues and raises a critical question: "whether digital participation does provide psychological satisfaction without pushing towards long-term sustainable behavior change, action, and commitment"[2], [3], [11]. In digital spaces, one has to express solidarity and support towards environmental causes through minimal efforts such as "likes, shares, hashtags, profile picture changes, or campaign post shares." _ gestures represent support and active participation, and, to some extent, appear to be meaningful as they show solidarity, signal awareness, and identity alignment [3], [17]. These digital advocacies create millions of outreach participants and engagement for global issues such as plastic pollution,

climate change, biodiversity, water conservation, and recycling for sustainable change[1].

Nevertheless, the theoretical perspective through the lens of moral licensing theory explains that such symbolic participation may satisfy the individual's moral self while reducing the urgency to take practical actions in supporting environmental advocacy campaigns offline [7], [8], [9]. Reportedly, evidence from large-scale online environmental campaigns suggests limited impact on creating sustainable behavioral change in offline spaces. For example, global initiatives on World Environment Day, Green Earth Day, Save Water Day, etc., generate reach and extensive online engagement. But, regardless of the massive outreach and participation, the evaluation of the reports says that digital engagement is easier to achieve than long-term behavioral commitment in practice [9]. What factors are associated with such behavior could be better understood through the moral licensing theory, which explains how individuals get engaged in a morally rewarding act [7]. In the context of digital environmental behavior, according to the MLT, the online symbolic participation may create a sense of "I have done enough on my end" feeling, even though there is no practical action being followed in the real world. The theory provides a nuanced understanding of whether digital engagement substitutes for pro-environmental behavior and responsibility, or it just weakens the deeper urge to acquire sustainable behavior change in offline spaces. Digital advocacy on environmental issues through social media can play a vital role in spreading awareness and engagement. Yet, in many instances, this will also increase the expression of symbolic participation as the endpoint rather than the beginning of an action towards a practical solution. Such online behavior can be explained through slacktivism, which refers to the low-cost online actions that require less effort and resources but allow individuals to feel socially, ethically, and morally involved in such social causes [5], [8], [9], [16], [17]. Similarly, this mechanism is amplified by hashtag activism, which converts each concern into a visible digital expression and often develops a rapid wave of attention on environmental issues in online spaces. This behavior works in a loop, where a like, a share, and a comment reinforce the belief that one has already contributed enough to the cause, meaningfully. Over time, these identities give more acknowledgment and satisfaction to the individual for being creative and active than actual environmental practices, particularly when users start seeing themselves as "environmentally conscious" through their digital space presence. Eventually, moral satisfaction becomes a psychological reward when an individual feels good about supporting the cause without entailing concerted behavioral commitment. Necessarily, these symbolic participations are not harmful; however, they become a concern when they are considered to be the only act one is responsible for. For many, this participation may serve as a first step towards a deeper commitment, but in most cases, the visibility an individual receives from these platforms is more rewarding than the real-world responsibility and moral obligation. Presumably, the symbolic participation in the digital world may increase awareness and outreach to millions, yet it might also reduce the motivation and behavioral commitment to carry on the learned behavior in offline spaces. Since the practical change requires sacrifice, resources, inconvenience, and persistence, the environmental actions remained limited to the "click" and "share".

D. Theme 3:

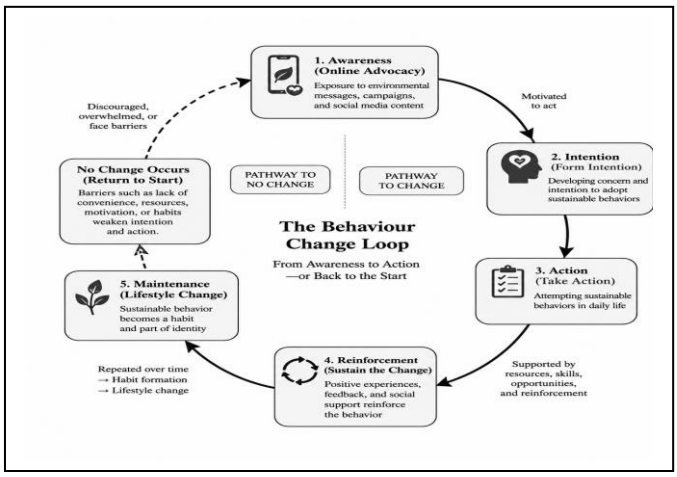
Can awareness alone change behavior?

RQ3: Why does digital environmental advocacy not create sustainable offline-behavior change?

As discussed in themes 1 and 2, environmental behavior becomes weakened at two points: first, when sustainable actions and behavior become inconvenient and demand more resources to be practiced; second, when digital participation creates an illusion of "symbolic contribution" requiring no further actions [4], [23]. No, in the third theme, the study tried to investigate "what factors and mechanisms might help individuals to adopt sustainable behavior change in offline capacity?" Findings from empirical studies indicate that these environmental campaigns are meant to create sustainable change beyond just "information sharing" through behavior-centered communication strategies [6], [7], [17]. These campaigns and information that is shared through these platforms may explain why someone should conserve water, care about plastic pollution, be sensitive enough towards their carbon footprints, or take other climate actions; however, they often fail to communicate how to practice this online-learned behavior in their daily lives within their communities, groups, families, or religious and cultural centers. That is why various development and public health programs are using social behavior change communication (SBCC) and Behavior Change Communication (BCC) frameworks to make the behavior persistent and make individuals learn how they can practice, repeat, and normalize new behaviors [6]. Practically, a successful implementation of these techniques can be observed in Sri Lanka's recent project led by the Asian Development Bank (ADB) on WASH initiatives [24], [25]. Where they did not rely simply on the awareness campaign and messages, instead they used "nudges" in the form of cues, redesigned handwashing places, and soap placement to make the desired behavior more involuntary to adopt. Reportedly, the handwashing frequency has increased since these small changes were implemented [24]. This practical example demonstrates how behavior change communication (BCC) techniques can make communication and awareness more practical with some practical cues, enabling facilities and repeated

practices, which eventually help in the formation of a habit [24], [26].

Figure 1. Behavior Change Communication (BCC) Pathway from Awareness to Habit



As depicted in the figure above, behavior change communication (BCC) approaches provide practical implications to develop habit loops in pursuit of sustainable behavior change on environmental concerns, which can go beyond mere awareness to sustainable practices [6], [23], [26]. In most instances, knowledge and relevance play a central role, where individuals ask whether this issue feels relevant to their own lives. They do understand the environmental concern and urgency, although behavior change begins when they internalize these concerns in their daily living. The second question is to understand how individuals adopt behavioral patterns with the help of BCC techniques, which come under motivation and self-efficacy, where they ask, "Can we actually perform this behavior in real life outside this digital world"? An individual may support pro-environmental causes, yet they do not understand how to apply this knowledge to the practical ground, such as water recycling or plastic disposal. And in some scenarios, the motivation and confidence become obsolete when people think about how such small actions of mine can bring change in the global cause; therefore, BCC approaches work systematically in building confidence, skill, and practical ability to learn and sustain new behavior [6]. The third question arises while working with BCC approaches: Does the surroundings support my behavior, or is my community doing the same? It is observed that behaviors are easier to adopt and sustain when families, communities, neighbors, religious groups, local communities, and organizations reinforce the same practice. That is why, when organizations use the BCC approach, it treats this change as a social process, not as an individual process or decision to be made; eventually, the results are more long-term and lasting. Then the question arises: how does the learned behavior become a routine habit? Sustainable behavior needs continuous nudging, repetition, recognition, feedback, and a supporting external environment to make the behavior sustainable. This is another reason why digital environment advocacy becomes just a paradox and dies down without bringing any visible change in people's lifestyles and in society on environmental issues, regardless of its extensive outreach and online participation [17].

The success of any digital advocacy campaign relies on its meaningfulness when it empowers individuals from awareness to repeated practices through embedding communication mechanisms such as BCC/SBCC approaches [24], [26]. These approaches define the pathway of environmental advocacy from one-way information sharing towards dialogues, self-efficacy, and community participation, along with social reinforcement and behavior maintenance. Thereby, the objective is to make people not only aware of certain environmental concerns but to create social and practical conditions where they can practice, repeat, and sustain learned behavior, making it a routine in their everyday life beyond the digital world.

IV. Future Directions

As a way forward, through the synthesis of existing literature and theories, three themes were identified. The review suggests that future digital environment advocacy may benefit from a suggestive structured behavior change communication habit loop, which helps to move beyond online visibility and short-term awareness goals towards long-term sustainable behavior change. Conclusively, the review proposed a possible future direction through the development of the LIFE framework;

L - Learn

I_ Internalize

F_ Facilitate

E_ Embedding

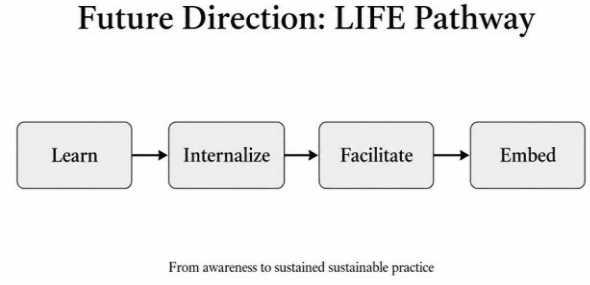


Figure 2. Behavior Change Informed (BCC)-LIFE Pathway as a Future Course of Action

Through this framework, sustainable behavior is understood through a gradual process of learning,

internalizing, facilitating, and embedding these practices into their day-to-day life. In this framework, L-learning refers to the role that digital advocacy plays through awareness programs, campaigns, and social media ads in increasing knowledge of environmental issues. The third component in the framework focuses on F-Facilitating the environmental cues we can embed to make the behavior easy to adopt, such as social support, community engagement, and repeated opportunities to practice the required behavior change. Eventually, the fourth component of the framework, E-Embedding, refers to the phase when these learned behaviors become actions, routines, and a sustainable part of their lives. The proposed LIFE framework offers a future direction for empirical testing, informed by the theory of behavior change, moral licensing theory, and behavior change communication, of how a behavior change pathway can be developed, and how these environmental digital advocacies can lead to long-term, offline, sustainable behavior practices.

V. Conclusion

The review examined the existing literature on the digital environmental activism paradox to explore the question "why do individuals who actively endorse environmental causes in digital spaces often struggle to adopt the responsible services in offline practices? Findings revealed that spreading online awareness is significant in creating urgency around global environmental issues; however, it is not sufficient to foster long-term, persistent behavior change that can be practiced in everyday life. For sustainable behavior change, the review discusses the discrepancies that exist between digital awareness and offline practices and concludes that there are psychological, social, and environmental factors associated with strengthening the habit loop. Convenience over commitment, aligned with the theory of planned behavior, suggests that pro-environmental attitudes often weaken when it requires additional resources, time, effort, and inconvenience or disruption in existing life patterns. Symbolic digital participation, grounded in moral licensing theory, explains that online participation in such campaigns creates an illusion of satisfaction that we have done our part without practicing the behavior in our everyday lives. Lastly, the integrative review discusses why awareness alone cannot bring any tangible change in changing behaviors and habits, and how it can become effective with the help of Behavior Change Communication (BCC) principles, which help to frame the change as a gradual and socially supported process through practical cues, nudges, enabling conditions, and community reinforcers. The success of these digital environmental campaigns cannot be measured through "likes," "shares," pledges," and massive outreach responses on social media posts; the real essence and value depend on how people move from awareness to responsibility and intention to practice and from the temporary illusion of participation to sustainable lifestyle changes. The proposed BCC-informed LIFE pathway may help future empirical evidence to study how digital environmental activism embedded with BCC principles can support persistent behavioral change in real-life settings.

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