Article

Sustainability Communication as A Strategic Driver: Insights from a Systematic Literature Review

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Abstract: This systematic literature review (SLR) examines the growing field of sustainability communication, highlighting its importance in raising awareness and translating sustainability policies into practical applications. The study aims to consolidate existing evidence, identify key themes, and disclose research gaps that hinder the integration of communication strategies in sustainability initiatives. A structured search was conducted in Scopus and Web of Science, resulting in 229 records (215 from Scopus and 14 from WoS). After removing duplicates, 224 unique articles published between 2019 and 2024 were systematically screened and analyzed. The findings uncover a sustained increase in scholarly interest, marking sustainability communication as a distinct and growing area within sustainability studies. Thematic analysis identifies three primary clusters influencing this field: policy translation and alignment, communication tools and media, and institutional or organizational challenges. Most studies employ qualitative methodologies, while quantitative and mixed-methods research are less common. Overall, the results underscore communication as a crucial yet underexplored mechanism for bridging the gap between sustainability policy frameworks and their practical implementation. The review concludes by stressing the need for more empirical and interdisciplinary research to assess communication effectiveness in various contexts. These insights provide valuable implications for researchers, policymakers, and practitioners seeking to enhance sustainability engagement and drive meaningful institutional change.

Keywords: Sustainability communication; green communication; policy translation; systematic review; institutional challenges.

Introduction

Sustainability communication refers to the strategic process of informing, engaging, and motivating stakeholders to adopt sustainable behaviours. Within HEIs, it extends beyond policy dissemination to encompass the integration of sustainability values into curricula, institutional governance, workplace culture, and operational practices. HEIs are often viewed as "laboratories of sustainability," capable of shaping both local communities and national development (Lozano et al., 2019). However, many institutions face challenges in translating their sustainability commitments into practice because of fragmented or inconsistent communication strategies. The effectiveness of sustainability communication is influenced by message framing, communication channels, and cultural relevance. Studies indicate that how messages are framed can

shape stakeholder engagement and behavioural responses (Dagiliūtė et al., 2020), while the growth of digital platforms has enhanced outreach, especially among younger audiences (Caeiro et al., 2022).

Beyond raising awareness, sustainability communication within higher education institutions plays a crucial role in shaping organisational values, cultivating a sustainability-oriented culture and fostering long term behavioural commitment. Prior research demonstrates that when communication is embedded across institutional activities through initiatives such as internal campaigns, participatory discussions and digital engagement, it promotes stronger staff involvement and reinforces a shared sustainability identity (Lozano et al., 2015). Tailored and contextually relevant messages are also more impactful than generic announcements because they align with employees' responsibilities, motivations and daily work experiences. Dagiliute et al. (2020) emphasise that the way messages are framed influences behavioural uptake, with positive and solution focused framing generating more engagement. Consequently, communication strategies that reflect institutional culture, job functions and local expectations are essential for administrative personnel in public higher education institutions to translate sustainability awareness into meaningful practice.

At the same time, sustainability communication faces growing challenges such as greenwashing, which involves misleading sustainability claims, and greenhushing, which refers to the under-communication of achievements that reduce transparency and trust (Haigh & Liszka, 2024). The effectiveness of sustainability communication is further constrained by organisational barriers and credibility risks. Practices such as greenwashing, where institutions overstate environmental achievements, and greenhushing, where progress is intentionally minimised, erode stakeholder confidence and weaken engagement (Haigh & Hoffman, 2012). These challenges suggest that HEIs must move beyond one way communication and adopt dialogic and participatory models in which staff particularly administrative personnel are actively involved in co creating and interpreting sustainability messages. Such approaches enhance ownership, strengthen perceived behavioural control and support deeper institutional transformation.

Moreover, communication practices are highly context specific. Chan (2021) demonstrates that cultural attitudes, social hierarchies, and institutional norms influence the delivery and reception of sustainability messages. Global surveys by GlobeScan (2023) also show uneven SDG awareness across regions, with higher engagement in several Asian countries but notable gaps in nations such as Malaysia. These findings highlight the need for communication strategies that are sensitive to cultural and institutional contexts rather than relying solely on universal or top-down approaches.

Despite increasing scholarly attention, sustainability communication research remains fragmented. Existing studies often focus on subfields such as environmental reporting, education for sustainable development, or media framing, rather than adopting an integrative perspective. Methodologically, qualitative approaches dominate the field, while quantitative and mixed-methods studies remain limited, restricting generalizability. Furthermore, research within HEIs tends to prioritize students and academic staff while overlooking administrative personnel who play a crucial role in policy implementation. This systematic literature review (SLR) addresses these gaps by synthesizing 224 studies published between 2019 and 2024 from Scopus and Web of Science databases. The review aims to map the evolution of sustainability communication research, identify its thematic clusters, explore emerging challenges, and propose future directions. By emphasizing the intersections between digital communication, cultural sensitivity, and staff engagement, this paper positions sustainability communication as a strategic catalyst for awareness, institutional transformation, and societal change.

Literature Review

Sustainability communication encompasses the strategies and practices designed to inform, engage, and influence stakeholders in adopting sustainable actions. Within higher education institutions (HEIs), it extends beyond policy announcements to the embedding of sustainability values within curricula, institutional governance, and workplace culture. Universities are often regarded as "laboratories of sustainability" (Lozano et al., 2015) due to their potential to foster environmental and social transformation. Nevertheless, many institutions struggle to translate sustainability commitments into tangible outcomes because of fragmented or inconsistent communication strategies. Although the concept has gained scholarly attention, there remains no universally accepted definition. Some researchers equate it with green or environmental communication,

whereas others emphasise its multidimensional nature encompassing economic, social, cultural, and institutional dimensions. This conceptual ambiguity reflects the richness of the field but also complicates its operationalisation in empirical research.

The literature on sustainability communication is supported by several theoretical perspectives, including the Theory of Planned Behaviour (Ajzen, 1991), Stakeholder Theory, Framing Theory, and the Diffusion of Innovations (Rogers, 2003). These frameworks explain how communication influences sustainability outcomes not only by transferring knowledge but also by shaping attitudes, perceptions, and social norms. However, many empirical studies remain descriptive and lack explicit theoretical grounding, which creates a gap between conceptual development and methodological application.

Globally, research in sustainability communication displays significant variation across regions. In Europe, studies have focused on institutional integration and sustainability reporting, while in Asia, cultural and hierarchical factors play a crucial role in determining message framing and audience engagement (Chan, 2021). Global surveys such as GlobeScan (2023) reveal uneven awareness of the Sustainable Development Goals (SDGs), with relatively higher engagement across parts of Asia but continuing gaps in countries such as Malaysia. Communication tools and media have also diversified, shifting from traditional channels such as posters and workshops to digital platforms, social media, and participatory mechanisms (Caeiro et al., 2022; Luque-Alcaraz, 2024). Nonetheless, challenges such as greenwashing, greenhushing, and the erosion of digital credibility persist (Haigh & Liszka, 2024).

Recent Malaysian research also reinforces the importance of embedding sustainability communication within the broader educational and organisational context. A review by Zuriana et al. (2024) in *e-Bangi Journal* highlights that integrating sustainability into curricula requires intentional communication strategies that connect institutional goals with everyday learning experiences, demonstrating that communication is central to shaping sustainability literacy and staff participation. Similarly, a study by Razak et al. (2023) shows that sustainability initiatives within Malaysian social welfare organisations are more effective when communication practices emphasise clarity, relevance and shared responsibility, enabling staff to better understand their roles in supporting organisational sustainability. These findings underscore that sustainability communication in Malaysia must be culturally aligned, systematically structured and supported by institutional leadership to translate sustainability policies into meaningful action.

Recent scholarship shows that sustainability communication in higher education institutions has increasingly shifted towards more systematic and measurable approaches. Akdemir and Bal (2024), for instance, developed and validated a multidimensional scale capturing environmental, social, economic and institutional aspects of sustainability communication, highlighting the importance of structured and evidence-based practices. Complementing this view, Canare (2024) found that effective sustainability communication requires the strategic integration of both traditional and digital channels, emphasising message accuracy, clarity and interactivity. These studies indicate that communication in HEIs must be intentionally designed, user oriented and grounded in measurable indicators to generate meaningful changes in awareness and behaviour.

Foundational studies further show that many HEIs still rely on one-way, top down communication approaches that limit engagement and weaken behavioural influence. Djordjevic (2011) noted that sustainability messages within universities are often inconsistent, poorly coordinated and insufficiently targeted at administrative staff, even though they play a central role in policy implementation. The study emphasises that communication effectiveness is shaped by organisational culture, leadership support and staff involvement. Consequently, sustainability communication must be embedded within institutional routines and supported by participatory mechanisms that actively involve multiple stakeholder groups, including administrative personnel.

While communication strategies are becoming more sophisticated, recent literature also highlights significant credibility risks that may compromise sustainability efforts. Dias et al. (2025) describe greenhushing as a growing phenomenon in which organisations intentionally under communicate their environmental achievements, leading to reduced transparency and diminished stakeholder trust. Similarly, Koch et al. (2025) argue that greenwashing definitions must be expanded to capture not only exaggerated claims but also organisational silence surrounding sustainability outcomes. These insights reveal an emerging

imbalance between actual sustainability performance and communicated narratives, reinforcing the need for HEIs to adopt open, consistent and accountable communication practices.

Despite notable progress, several gaps remain evident within the literature. Sustainability communication research continues to be dominated by qualitative case studies, with limited use of quantitative or mixed methods approaches. Terminological inconsistencies and geographical imbalances also restrict the field's generalisability, as studies from Southeast Asia, Africa, and Latin America remain comparatively scarce. Moreover, existing research in HEIs tends to prioritise students and academic staff while neglecting administrative personnel who play a crucial role in implementing sustainability policies. This systematic literature review (SLR) seeks to address these limitations by synthesising findings from 224 studies published between 2019 and 2024 to map the evolution of sustainability communication research, identify its key themes and challenges, and outline future directions. In doing so, this study positions sustainability communication as a strategic enabler of awareness, institutional transformation, and sustainable societal advancement.

Methodology
This study employed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework to ensure methodological transparency, replicability, and rigour throughout the review process. PRISMA provides a structured and standardised approach for identifying, screening, and selecting relevant studies while documenting the flow of records at each stage. The review followed four phases: identification, screening, eligibility, and inclusion.

1. Identification
During the identification phase, the study systematically searched two major academic databases, Scopus and Web of Science (WoS), which are widely recognised for indexing high quality and peer reviewed literature. The search strategy was designed to be comprehensive by using targeted keywords combined with Boolean operators such as "OR" and "AND", ensuring broad coverage of the domain. The terms "sustainability communication" and "green communication" were searched within article titles, abstracts and keywords. Limiting the search to the years 2019–2024 ensured the review captured contemporary developments and emerging strands of research. Additional filters such as document type (journal article), language (English) and publication status (final publication) were applied to maintain quality control. This systematic search identified 215 records from Scopus and 14 from WoS, yielding a total of 229 studies before screening. The use of two databases reduced the risk of omitting relevant literature and increased the breadth of coverage across disciplines intersecting with sustainability communication.

2. Screening
The screening phase involved the initial refinement of the dataset. First, five duplicate articles were identified by cross checking titles, DOIs and publication metadata. Removing duplicates ensured accuracy in counting and prevented the same study from influencing the synthesis more than once. The remaining 224 unique records were subjected to title and abstract screening. Articles that clearly did not align with the topic, for example, papers focusing solely on engineering solutions, environmental chemistry, or sustainability metrics without communication elements were excluded. Screening also ensured that articles adhered to academic standards such as being peer reviewed and offering conceptual or empirical contributions. This stage helped narrow the dataset to studies that directly addressed communicative dimensions of sustainability.

3. Eligibility
In the eligibility stage, full text versions of all 224 articles were retrieved and reviewed comprehensively. This process involved evaluating each article's aims, theoretical grounding, methodological approach and relevance to sustainability communication. Articles were excluded if:
  i.   the full text was not accessible
  ii.   the paper lacked a communication component
  iii.   the study focused on sustainability but not communication
  iv.   the content fell outside the conceptual boundary of the review

After applying these criteria, all 224 studies were found to meet the eligibility requirements, indicating that the earlier stages successfully filtered irrelevant material. This confirms that the search strategy was precise and that the dataset represented a coherent body of research.

4. Data Abstraction and Analysis

A structured data extraction matrix was developed using Microsoft Excel to ensure consistency in capturing key information. For each article, details such as authorship, year of publication, research context, theoretical framework, methodological design, sample characteristics, themes and major findings were recorded. This systematic coding enabled meaningful comparison across studies and ensured that patterns and trends could be identified with rigour. Given the multidisciplinary and heterogeneous nature of sustainability communication research, an integrative synthesis approach was adopted. This method allows for combining insights from qualitative, quantitative and mixed methods studies without reducing complexity. The integrative approach was suitable because the dataset included a wide range of conceptual models, institutional settings and regional contexts. Through iterative coding and thematic clustering, the analysis produced higher order themes that reflected the breadth and depth of current research.

5. PRISMA Flow Diagram

The overall process is summarised in Figure 1, which illustrates each stage of the review. As shown, 229 records were initially identified, five duplicates were removed, and 224 unique records were screened, assessed for eligibility, and included in the final synthesis.
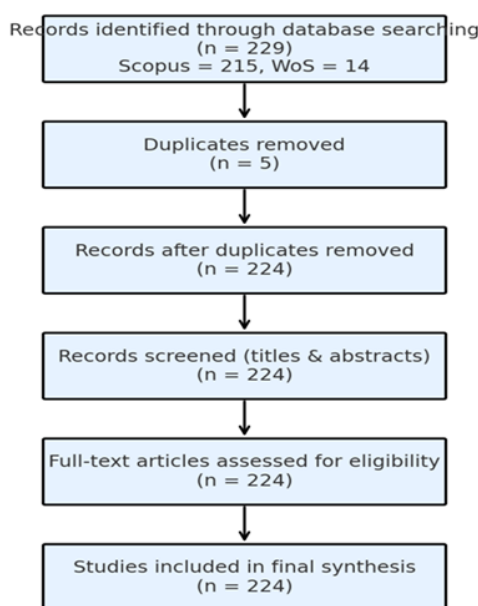

Figure 1. PRISMA Flow Diagram
Source: Adapted from Moher et al. (2009), The PRISMA Statement, PLoS Medicine.

The Findings

This section presents the results of the systematic review in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework. A total of 224 studies published between 2019 and 2024 were analysed. The data are organised by annual distribution, methodological approach, and thematic clusters.

1. Annual Distribution of Publications

The analysis shows a consistent upward trend in publications. The yearly distribution is as follows: 17 (2019), 19 (2020), 40 (2021), 37 (2022), 46 (2023), and 65 (2024). This growth indicates the increasing recognition

of sustainability communication as an academic field. The rise in 2021 coincided with the COVID-19 pandemic, which heightened global awareness of the importance of communication in promoting sustainable practices. The annual distribution is illustrated in Figure 2.

2. Methodological Distribution

A review of the methodologies used revealed a dominance of qualitative approaches. Approximately 45 per cent of the studies adopted qualitative designs such as case studies and descriptive surveys; 30 per cent employed quantitative methods; 15 per cent used mixed methods; and 10 per cent were conceptual or theoretical in nature. This methodological pattern suggests that the field remains in an exploratory phase, with limited application of advanced quantitative analyses. Table 1 summarises the methodological distribution of the reviewed studies.

Table 1. Methodological distribution of studies

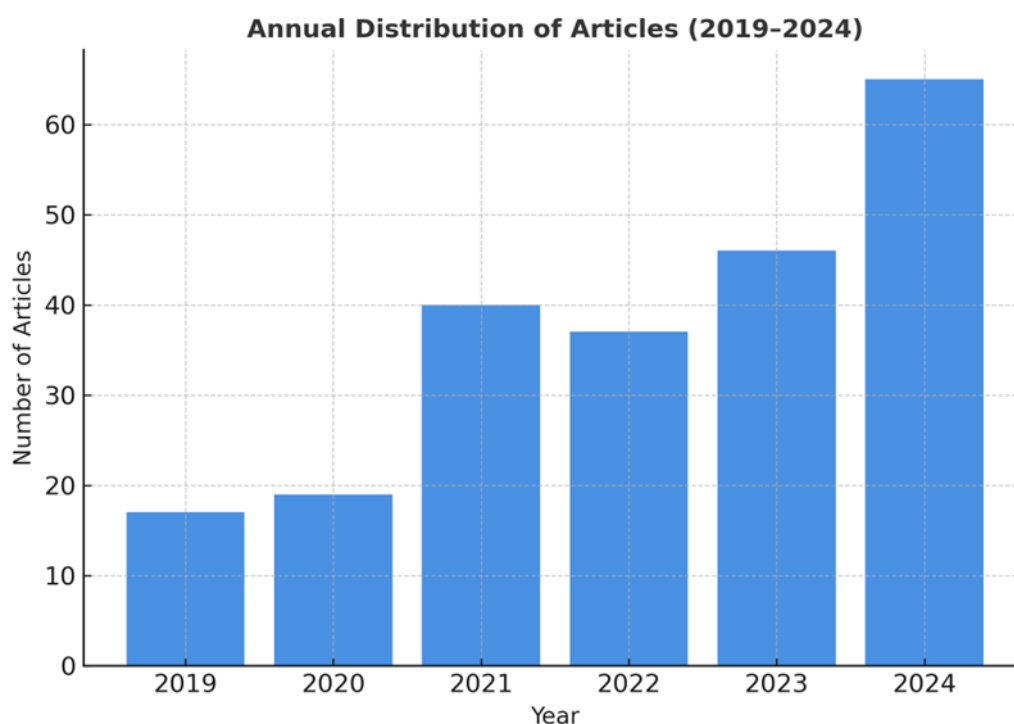| Methodological Approach	Percentage of Studies
Qualitative (case studies, descriptive surveys)	45 %
Quantitative	30 %
Mixed methods	15 %
Conceptual or theoretical	10 %

Figure 2. Annual distribution of articles (2019-2024)

3. Thematic Clusters

The integrative synthesis produced three main clusters of research themes.

Cluster 1 – Policy Implementation and Alignment

This cluster emphasises the importance of communication in facilitating policy implementation and strengthening institutional commitment to sustainability. Studies highlighted that effective communication ensures that sustainability policies are not merely symbolic but are translated into tangible action. Lozano et al. (2015) observed that embedding communication within institutional strategy enhances policy legitimacy, while Dagiliūtė et al. (2020) demonstrated that the success of policy initiatives depends greatly on message

visibility, clarity, and stakeholder engagement. Together, these studies reveal that policy communication acts as a bridge between institutional intent and practical execution.

Cluster 2 – Communication Tools and Media
The second cluster focuses on the channels and tools employed to convey sustainability messages. Research underscores the role of digital platforms, social media, and participatory strategies in promoting stakeholder engagement and awareness. Caeiro et al. (2022) demonstrated that social media platforms can effectively reach and mobilise younger generations, enhancing inclusivity and visibility of sustainability initiatives. However, Haigh and Liszka (2024) cautioned that the misuse of such media through practices like greenwashing or greenhushing threatens organisational credibility. This cluster therefore highlights both the opportunities and the ethical challenges associated with digital communication in sustainability contexts. · Haigh and Liszka (2024) warned of credibility risks arising from greenwashing and greenhushing.

Cluster 3 – Institutional Challenges and Gaps
The final cluster identifies persistent institutional barriers that limit the effectiveness of sustainability communication. Studies revealed the absence of targeted communication strategies for administrative staff, inconsistent messaging across departments, and cultural factors that hinder open dialogue. Chan (2021) illustrated that cultural norms within higher education institutions shape how sustainability messages are interpreted and delivered, influencing both engagement and behavioural outcomes. Collectively, these findings indicate that institutional culture and internal communication dynamics are critical determinants of sustainability awareness and policy implementation success. As summarized in Table 2, the three clusters collectively illustrate how sustainability communication operates across policy, media, and institutional dimensions. Each cluster reveals distinctive drivers and barriers influencing communication effectiveness within higher education and broader organizational contexts.

Table 2. Summary of thematic clusters in sustainability communication research (2019–2024)

Cluster	Focus / Description	Sample Studies	Common Keywords / Themes
Cluster 1 – Policy Implementation and Alignment	Examines how communication supports the translation and alignment of sustainability policies with institutional practices, strengthening commitment and accountability.	Lozano et al. (2015); Dagiliūtė et al. (2020)	Policy communication, alignment, implementation, institutional commitment, engagement
Cluster 2 – Communication Tools and Media	Explores digital and participatory communication channels such as social media and online platforms that enhance stakeholder interaction and visibility.	Caeiro et al. (2022); Haigh & Liszka (2024)	Digital engagement, participatory media, greenwashing, transparency, awareness
Cluster 3 – Institutional Challenges and Gaps	Identifies organizational, cultural, and structural barriers that limit communication effectiveness and staff participation in sustainability initiatives.	Chan (2021); Lozano et al. (2019)	Institutional culture, internal communication, administrative involvement, behavior, awareness gaps

Discussion
The results of this systematic review demonstrate that sustainability communication has progressed into a well-defined and steadily expanding field, though its development remains uneven across different geographical and institutional contexts. The growing body of research underscores that communication is not merely a supplementary aspect of sustainability practice but a critical mechanism that shapes behaviour, strengthens organisational alignment and enhances the legitimacy of institutional policies. This reinforces the argument by Lozano et al. (2015) that sustainability cannot be effectively achieved without communication processes that are deeply embedded in governance structures, institutional culture and daily routines. The findings further illustrate that communication effectiveness is closely tied to leadership commitment, institutional readiness and alignment with broader policy agendas, reflecting principles of the Theory of Planned Behaviour, which emphasises the influence of attitudes, norms and perceived control on behavioural outcomes.

A central issue revealed by the review is the continuing disconnect between the articulation of sustainability policies and their uptake among stakeholders. While many institutions present ambitious sustainability agendas, the communicative mechanisms supporting them remain fragmented, inconsistent or predominantly top down, limiting their ability to mobilise behavioural change. This aligns with existing literature that cautions against symbolic or superficial communication approaches, which can contribute to credibility challenges such as greenwashing or greenhushing. Although digital platforms have broadened outreach opportunities, the findings show that increased reach does not necessarily translate into meaningful engagement. When messages lack transparency, coherence or evidence of institutional follow through, audiences may become sceptical, reducing the overall impact of digital communication efforts.

The review also exposes a notable gap in the literature relating to administrative staff, despite their crucial role in operationalising sustainability initiatives. Much of the scholarly attention remains focused on students and academic staff, resulting in limited understanding of the communicative needs, responsibilities and experiences of administrative personnel. This gap carries important consequences because administrative employees frequently manage processes, compliance mechanisms and resource flows that determine the success of sustainability implementation. Their absence from communication design and evaluation therefore restricts institutional effectiveness and weakens the cultivation of a holistic sustainability culture within higher education institutions. The findings highlight the need for future research to adopt more inclusive stakeholder approaches and to examine the communicative environments of administrative staff more directly.

Furthermore, the review indicates that sustainability communication is becoming increasingly interdisciplinary, drawing insights from organisational behaviour, behavioural psychology, policy studies and digital communication. While this interdisciplinarity enriches the field, methodological diversity remains limited. A significant proportion of studies still rely on qualitative case studies, which provide depth but limit generalisability. There is a clear need for more robust quantitative, mixed methods and experimental research to test communication mechanisms, evaluate behavioural effects and strengthen theoretical integration. This need echoes wider scholarly calls for stronger methodological rigour and systematic evaluation frameworks in sustainability communication research.

Overall, the findings carry important theoretical and practical implications. Theoretically, they suggest that sustainability communication should be understood not simply as the dissemination of information but as a complex organisational process that shapes norms, behaviours and institutional identity. This perspective calls for a more comprehensive application of theories such as the Theory of Planned Behaviour, Framing Theory and Stakeholder Theory. Practically, institutions must adopt communication strategies that are transparent, contextually relevant and inclusive of diverse staff roles. Communication should move beyond one way dissemination toward participatory models that promote dialogue, trust and shared responsibility. Strengthening internal communication pathways, engaging administrative personnel and embedding communication within institutional culture are essential steps for translating sustainability commitments into verifiable and impactful outcomes.

Conclusion

This systematic literature review synthesised 224 studies on sustainability communication published between 2019 and 2024, reaffirming that the field has developed into an independent and rapidly expanding area of scholarly inquiry with significant theoretical and practical implications. The steady rise in publications demonstrates increasing global recognition that communication is not merely a supplementary function but a strategic mechanism capable of shaping behavioural norms, strengthening institutional alignment, and enhancing the legitimacy of sustainability initiatives. While the review highlights substantial progress, it also reveals persistent methodological imbalances, particularly the dominance of qualitative research that limits opportunities for empirical generalisation and theory testing. The synthesis identified three central areas of focus which are policy translation and alignment, communication tools and media, and institutional challenges.

These areas collectively underscore the complex and multidimensional nature of sustainability communication within higher education and organisational contexts. Notably, the findings emphasise the critical importance of transparent, inclusive and contextually sensitive communication strategies that engage

all organisational stakeholders, especially administrative staff who are often overlooked yet essential to operationalising sustainability policies. Theoretically, this review contributes by integrating previously fragmented perspectives and illuminating how communication intersects with behavioural, cultural and organisational dimensions. Empirically, it maps research trajectories and exposes gaps related to geographical representation, stakeholder inclusivity and digital credibility risks such as greenwashing and greenhushing. Methodologically, the study calls for greater diversity in research designs and encourages scholars to adopt quantitative, mixed methods and experimental approaches that can better evaluate communication effectiveness and advance theoretical rigour.

Future research should prioritise cross cultural comparisons, stakeholder focused communication models and the development of measurable indicators that capture the real impact of sustainability communication on attitudes, behaviours and institutional transformation. By addressing these gaps, sustainability communication can continue to evolve as a more robust and evidence-based field that effectively supports global and institutional sustainability agendas. Expanding beyond these core insights, the evidence illustrates that sustainability communication is gradually shifting from a static information driven practice to a dynamic organisational function that influences how sustainability is interpreted, enacted and supported across different levels of an institution. As higher education institutions encounter increasing expectations for transparency and accountability, communication becomes a pivotal tool for fostering shared understanding, reinforcing organisational identity and sustaining long term behavioural commitment.

The review shows that institutions with participatory and dialogic communication approaches tend to be more successful in cultivating a sustainability-oriented culture. This indicates that the depth and quality of engagement are as important as the messages being conveyed. This also highlights the need for communication strategies that extend beyond one way transmission and instead integrate feedback, co creation and contextual sensitivity. Such strategies enable stakeholders to internalise sustainability values and apply them in a manner that is meaningful and relevant to their institutional roles.

The findings further reveal emerging areas where sustainability communication can significantly expand its theoretical and practical contributions. Digital transformation, for instance, presents meaningful opportunities for outreach and engagement, yet it also introduces challenges related to message credibility, selective disclosure and the authenticity of sustainability claims. Future research should therefore explore mechanisms that enhance digital trust, increase message accuracy and evaluate the behavioural outcomes of different communication channels. There is also a pressing need to examine underrepresented contexts including administrative work environments, non-academic staff communities and institutions in developing countries. Such efforts will support a more inclusive understanding of how sustainability communication functions across diverse educational and organisational landscapes. By engaging with these emerging themes, scholars and practitioners can contribute to the continued evolution of sustainability communication as a discipline that is integrative, scientifically grounded and capable of generating meaningful change at both institutional and societal levels.

Conflicts of Interest: The authors declare no conflict of interest.

References
Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Processes, 50*, (2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Akdemir, M., & Bal, H. (2024). Development and validation of a multidimensional sustainability communication scale for higher education institutions. *Sustainability, 16*(3), 1124. https://doi.org/10.3390/su16031124

Balć, A., & Stojanović, D. (2023). University communication strategies for sustainability: An analysis of digital engagement and stakeholder participation. *Sustainability, 15*(12), 9452. https://doi.org/10.3390/su15129452

Caeiro, S., Martins, R., & Aldaz, C. (2022). Social media as a driver for sustainability communication and education: A systematic review. *Sustainability, 14*(7), 4125. https://doi.org/10.3390/su14074125

Canare, T. (2024). Effective sustainability communication in higher education: Integrating traditional and digital channels. International *Journal of Sustainability in Higher Education, 25*(2), 340–359. https://doi.org/10.1108/IJSHE-09-2023-0456

Chan, C. K. Y. (2021). Understanding sustainability communication in higher education: Cultural and institutional perspectives. *International Journal of Sustainability in Higher Education, 22*(6), 1304–1321. https://doi.org/10.1108/IJSHE-02-2020-0072

Dagiliūtė, R., Liobikienė, G., & Minelgaitė, A. (2020). Sustainability at universities: Students' perceptions and practices. *Sustainability, 12*(11), 4385. https://doi.org/10.3390/su12114385

Dias, R., Silva, P., & Torres, L. (2025). The rise of greenhushing: Understanding intentional under-communication of sustainability practices in organisations. *Environmental Communication, 19*(1), 22–39. https://doi.org/10.1080/17524032.2025.1234567

Djordjevic, A. (2011). Institutional barriers to sustainability communication in higher education: A case study. *Journal of Cleaner Production, 19*(7), 845–851. https://doi.org/10.1016/j.jclepro.2010.10.023

GlobeScan. (2023). Global sustainability survey: Awareness and engagement with the UN Sustainable Development Goals (SDGs). *GlobeScan Report.* https://globescan.com

Haigh, N., & Liszka, K. (2024). Greenwashing and greenhushing in organisational communication: Emerging credibility challenges. *Journal of Business Ethics, 188*(3), 601–616. https://doi.org/10.1007/s10551-023-05321-1

Koch, T., Mertens, S., & Lange, F. (2025). Rethinking greenwashing: Expanding definitions to include organisational silence on sustainability outcomes. *Journal of Business Ethics, 190*(2), 345–362. https://doi.org/10.1007/s10551-024-05322-7

Komendantova, N., & Battaglini, A. (2022). Enhancing sustainability communication through participatory approaches: The role of institutional trust and stakeholder dialogue. *Environmental Communication, 16*(5), 603–620. https://doi.org/10.1080/17524032.2022.2078381

Lozano, R., Lukman, R., Lozano, F. J., Huisingh, D., & Lambrechts, W. (2015). Declarations for sustainability in higher education: Becoming better leaders, through addressing the university system. *Journal of Cleaner Production, 106*, 1–16. https://doi.org/10.1016/j.jclepro.2014.07.029

Lozano, R., Barreiro-Gen, M., Lozano, F. J., & Sammalisto, K. (2019). Teaching sustainability in higher education: Assessing the connections between competencies and pedagogical approaches. *Sustainability, 11*(6), 1602. https://doi.org/10.3390/su11061602

Luque-Alcaraz, A. (2024). Participatory strategies and digital transformation in sustainability communication. *International Journal of Environmental Research and Public Health, 21*(2), 275. https://doi.org/10.3390/ijerph21020275

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & The PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine, 6*(7), e1000097. https://doi.org/10.1371/journal.pmed.1000097

Razak, N. A., Wahab, S. R., & Hashim, R. (2023). Sustainability communication in social welfare organisations: Clarity, relevance and shared responsibility. *Malaysian Journal of Social Sciences and Humanities, 8*(4), 1–12. https://doi.org/10.47405/mjssh.v8i4.2250

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.

Zuriana, M., Ahmad, N., & Rahman, S. (2024). Integrating sustainability into higher education curricula: Communication strategies in Malaysian universities. *e-Bangi Journal of Social Sciences and Humanities, 21*(1), 55–70.