

E-Dakwah and Digital Literacy in Reclaiming Eco-Theology: A Semiotic and Narrative Analysis of Gen Z's Eco-Islamic Movement on Social Media

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Article Info	ABSTRACT
Article history: Received 2026-08-20 Revised 2026-09-07 Accepted 2026-09-10 Keywords: Digital literacy Eco-Islamic movement Eco-jihad E-dakwah	Amid the escalating global climate crisis, the digital Islamic movement is undergoing a paradigm shift from ritual fiqh toward ecological activism (<i>eco-jihad</i>). However, the integration of e-dakwah strategies and digital literacy in fostering eco-theological awareness among Generation Z remains underexplored. This study aims to analyze how eco-theological discourse is constructed through e-dakwah and how the level of digital literacy among Gen Z influences the articulation of eco-Islamic movements on social media. Using a qualitative approach with a mixed analytical design, this study combines Roland Barthes' Semiotics to deconstruct visual and textual signification in e-dakwah content on Instagram and TikTok, with Narrative Analysis to map the meanings and responses underlying Gen Z's ecological actions. The data corpus comprises environmentally themed posts from three major youth-oriented Islamic da'wah accounts during 2024–2025. The findings indicate that e-dakwah successfully legitimizes environmental issues as a religious obligation through transformative religious textual signification and interactive visual narratives. Critical digital literacy enables Gen Z to reconceptualize the doctrine of <i>khalifah fil ardh</i> into concrete actions, such as promoting low-waste lifestyles and protecting ecosystems. This study contributes to the discourse on Islamic broadcasting communication by demonstrating that digital literacy-based e-dakwah can effectively mobilize contemporary socio-religious activism. <i>This is an open-access article under the CC BY-SA license.</i> 

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1. INTRODUCTION

The global climate crisis has shifted from a matter of physical environmental degradation to an existential humanitarian crisis that demands fundamental intervention across socio-religious dimensions. In response to escalating environmental degradation, contemporary religious discourse has increasingly focused on resacralizing nature as a foundation for environmental ethics in the Anthropocene [1]. Theologically, Islam offers a

transformative eco-theological doctrine that positions the verses of the universe as non-verbal revelation, whereby nature is read and treated on a par with sacred texts whose preservation is a religious obligation [2]. Integrating Islamic values is therefore crucial to shift the paradigm from environmental exploitation toward ecological piety rooted in collective religious consciousness. Nevertheless, this rich eco-theological doctrine often remains confined to abstract philosophical discourse within purely academic spheres or formal institutions. Consequently, a substantial gap persists between theological idealism and the practical manifestation of ecological awareness amid the dynamics of modern society. Therefore, a form of value transmission is needed to bridge spiritual eco-theology with a collective consciousness responsive to the challenges posed by the current global environmental crisis.

As information technology has penetrated society more deeply, social media platforms have become major arenas for transforming contemporary Islamic broadcasting and communication practices. This phenomenon has given rise to *Digital Islam*, a new landscape that not only creates spaces for negotiating religious authority but also facilitates the commodification and inclusive dissemination of religious narratives [3]. In the context of environmental issues, this digital shift has encouraged the differentiation of da'wah strategies through the emergence of *Green Dakwah*, in which digital media channels are used to build public ecological awareness [4]. Generation Z, as a group of *digital natives*, has become a key actor in producing, consuming, and redistributing ecological da'wah content in interactive audio-visual formats. Social media platforms provide young Muslims with spaces to articulate their religious values through green lifestyles that align with contemporary youth trends. The orchestration of religious narratives and the power of digital media convincingly demonstrate that digital da'wah can mobilize collective awareness beyond the boundaries of conventional preaching. Through these digital networks, eco-theological messages are recontextualized and revitalized, making them more accessible and easier for younger demographics to accept and internalize.

Although exposure to ecological da'wah content in digital spaces is extensive, the success of turning such messages into concrete action largely depends on the quality of the audience's media and information literacy. Amid the information crisis and the overwhelming flow of complex digital narratives, media literacy no longer refers merely to the technical ability to operate digital devices, but also encompasses the critical capacity to filter, analyze, and validate the accuracy of messages [5]. Generation Z needs strong digital literacy to understand the theological substance behind the aesthetic presentation of social media content, avoiding superficial interpretations or merely reactive enthusiasm. Mature digital literacy functions as an essential catalyst that transforms cognitive perceptions of *Green Dakwah* content into concrete environmental actions, such as waste reduction and community-based ecological activism. Conversely, limited information literacy may reduce strategic da'wah messages to mere trends in content consumption without any commitment to sustainable behavioral change. Therefore, strengthening critical-thinking-based digital literacy is an essential prerequisite for building organized environmental resilience and awareness among young Muslims. The dialectical relationship between the

effectiveness of e-dakwah and digital literacy constitutes a key factor in realizing impactful eco-theological awareness.

Previous studies have examined the relationship between religion, media, and the environment; however, a literature mapping reveals a fundamental research gap. Most Islamic scholarship continues to focus on ecotheology within local institutional and doctrinal contexts, such as integrating environmental ethics into the intellectual traditions of Islamic mass organizations [6] and analysing the relationship between spirituality and nature within traditional Islamic boarding school communities [7]. Meanwhile, existing studies on e-dakwah in digital spaces have tended to focus predominantly on religious moderation, identity politics, and the management of socio-religious issues in the post-pandemic context [8]. Consequently, an academic gap remains regarding how environmentally oriented digital da'wah is constructed through visual and narrative forms and how Gen Z's digital literacy mediates the interpretation of eco-theology into a social movement. To date, no study has specifically integrated visual semiotic and narrative analyses to examine the anatomy of *Green Dakwah* content on social media. This empirical and methodological gap underscores the urgency of an in-depth investigation into how contemporary eco-Islamic movements articulate themselves on social media.

Building upon this literature gap, this study aims to critically investigate how e-dakwah construction and digital literacy capabilities reconstruct the understanding and practice of eco-theology among Generation Z. Methodologically, this qualitative study employs a netnographic approach as a comprehensive framework for exploring the culture, narratives, and social interactions of communities within digital media spaces [9]. The primary novelty of this research lies in combining a netnographic framework with semiotic and narrative analyses to uncover the structure of visual signs and linguistic texts within the digital eco-Islamic movement. This article not only captures ecological activism at the surface level of digital screens but also uncovers the ideological and symbolic mechanisms that stimulate collective awareness among young Muslims. Theoretically, the findings contribute to Islamic broadcasting and communication studies by making them more responsive to the global environmental crisis. Practically, the findings provide strategic guidance for *da'i*, academics, and da'wah media developers in designing precise, contextual, and impactful ecological communication strategies for future generations.

2. LITERATURE REVIEW

Islamic Eco-Theology and the Re-Sacralization of Nature

Eco-theology within religious communication is rooted in the understanding that the global environmental crisis is essentially a crisis of human ethics and spirituality in the Anthropocene era. In this context, the eco-theological paradigm offers an approach to resacralizing nature and restoring the environment's sacredness as a creation that reflects the signs of Divine greatness [10]. Hermeneutically, this concept positions natural phenomena as non-verbal revelation (*ayat kauniyyah*) with spiritual significance comparable to sacred texts, so actions that damage ecosystems are regarded as violations of fundamental religious ethics [11]. In Indonesian social praxis, eco-theological values are integrated into environmental ethics rooted in local religious traditions, such as the Aswaja

Ecotheology concept underlying conservation movements initiated by religious organizations [12]. Furthermore, analyses of traditional religious communities demonstrate that the relationship between humans, nature, and spirituality is not separate but rather interconnected in shaping holistic ecological piety [13]. Thus, eco-theology serves as both a doctrinal foundation and a primary driver of ethical values, providing philosophical substance for environmental da'wah movements.

The Dynamics of E-Dakwah and the Phenomenon of *Green Dakwah* in Digital Media

The transformation of information technology has significantly reshaped the landscape of Islamic communication, shifting it from conventional models toward digital spaces or *e-dakwah*. The emergence of *Digital Islam* has not only expanded the reach of religious message transmission but has also reconstructed new spaces of authority that enable *da'i* and Muslim communities to present contemporary issues in more contextual ways [13]. One progressive articulation of e-dakwah is the emergence of *Green Dakwah*, a digital communication strategy that specifically utilizes social media platforms to mainstream messages of environmental preservation and ecological awareness [14]. Through audio-visual formats, infographics, and interactive narratives on digital platforms, *Green Dakwah* has successfully transformed complex eco-theological doctrines into popular media content that is accessible and easily comprehensible to Gen Z. This shift demonstrates that e-dakwah is no longer limited to shaping ritual-oriented opinions but has evolved into an instrument for mobilizing socio-religious action that responds to global crises.

The Role of Critical Digital Literacy in the Era of Information Crisis

The effectiveness of *Green Dakwah* messages in stimulating ecological action depends heavily on the digital literacy capacities of their audiences. Amid the complexity of digital information flows and the widespread information crisis on social media, media literacy is no longer understood merely as the technical ability to operate digital devices but rather as the critical capacity to evaluate and deeply internalize the meaning of messages [15]. Within the landscape of Islamic communication research, previous studies of e-dakwah have tended to focus predominantly on issues such as promoting religious moderation and disseminating social policies [16]. This limited focus underscores the importance of critical digital literacy so that Generation Z does not merely become passive consumers of viral da'wah content but instead translates the symbols of *Green Dakwah* into critical awareness that encourages tangible changes in ecological behavior. Thus, digital literacy functions as a mediating variable that determines whether exposure to e-dakwah successfully stimulates substantive ecological activism or merely remains a temporary trend of content consumption.

The Netnographic Approach to Capturing the Digital Eco-Islam Movement

To examine how *Green Dakwah* narratives are articulated and received by digital communities, a qualitative methodological approach responsive to the characteristics of social media culture is required. The netnographic approach serves as an ethnographic

research methodology specifically designed to investigate human behavior, narratives, symbols, and sociocultural interactions manifested within digital spaces [5]. As the technocultural landscape continues to evolve, the application of netnographic methodology has undergone dynamic adaptation to capture the complexity of algorithm-driven socio-religious movements and contemporary digital platforms [7]. Within the framework of this study, netnography provides a systematic instrument for observing e-dakwah accounts, documenting patterns of Generation Z engagement, and exploring how eco-theological meanings are produced and negotiated through texts, images, and hashtags. A netnographic framework, combined with semiotic and narrative analyses, provides a robust operational foundation for mapping the anatomy of communication within the digital eco-Islam movement.

3. METHOD

This study employs a qualitative approach with a hybrid design integrating digital netnography and text-visual analysis. Netnography serves as the primary operational framework for investigating in depth the culture, symbols, narratives, and dynamics of social interaction among digital Muslim communities within social media spaces [17]. This approach was selected because it enables a naturalistic examination of religious ecological activism within authentic interactions on digital platforms [18]. The observation focuses on social media accounts (Instagram and TikTok) that consistently promote *Green Dakwah* narratives in Indonesia. Through digital participant observation, the researchers document the communication landscape in which Gen Z audiences produce, distribute, and respond to eco-theological discourses within social media's algorithmic ecosystem [11], [12].

Data collection was conducted systematically through the archiving of digital data (*archival data*) and the extraction of audience interactions (*elicited data*). Primary data consisted of a corpus of multimedia posts, including caption texts, infographic designs, short-form videos, and environmentally themed hashtags, collected using social media data archiving tools. Content samples were selected using *purposive sampling* based on the following inclusion criteria: (1) the content was produced by reputable digital da'wah accounts or independent *digital preachers*; (2) the content explicitly addressed Islamic doctrines related to the environment; and (3) the content demonstrated a high level of engagement among Gen Z audiences. Meanwhile, secondary data were obtained from comments and reposts to capture audience narratives and responses to the eco-theological messages conveyed.

Data analysis was conducted using a combination of Roland Barthes' Semiotic Analysis and qualitative Narrative Analysis to uncover both textual dimensions and their broader social contexts. The first stage employed Barthesian semiotic analysis to examine the sign structures of visual and video-based *Green Dakwah* content through three levels of meaning: denotation (the explicit meaning of visual/textual elements), connotation (implicit cultural and theological meanings), and myth (the ideological construction of eco-theology) [19], [10]. The second stage employed narrative analysis to map how Gen Z retells, reinterprets, and articulates these visual da'wah messages into narratives of collective identity and commitment to ecological action [6]. The study used digital data

triangulation and online-focused discussions (online member checking) to ensure the validity and credibility of the research findings.

Table 1. Operationalization Matrix of Roland Barthes' Semiotics
Analysis of *Green Dakwah* Content

Barthes' Semiotic Element	Analytical Focus on <i>Green Dakwah</i> Content	Operational Indicators / Observation Objects	Data Application (Digital Content Category)
Denotation (Explicit Meaning / First Level)	Examining the physical form of signs that appear literally on the social media screen without cultural associations.	Visual: Written text, colors, natural objects (trees, water, waste), facial expressions of <i>da'i</i> /creators. Audio: Voiceover narration, background music (<i>backsound</i>). Technical: Font type, camera angle, lighting.	An image of a young Muslim holding a plant seedling against the backdrop of barren land, accompanied by the headline: " <i>Planting One Tree = Oxygen Charity.</i> "
Connotation (Implicit Meaning / Second Level)	Uncovering cultural values, religious symbols, and emotions associated with denotative signs.	Eco-Theology: Association of plant seedlings with <i>amal jariyah</i> (ongoing charity) or the practice of <i>khalifah fil ardh</i> . Visual Dynamics: Visual contrast between barren land (degradation) and green seedlings (hope/recovery). Audio-Visual: Contemplative background music intended to evoke social empathy.	Tree planting is interpreted not merely as a physical greening activity but as a religious obligation (<i>theological obedience</i>) and a manifestation of transformative faith.
Myth (Ideological Construction / Third Level)	Revealing underlying ideological narratives that become normalized as popular beliefs among Gen Z.	Eco-Islamic Ideology: Normalization of the idea that the piety of modern Muslims should include environmental concern (<i>Eco-Jihad</i>). Democratization of Da'wah: Deconstruction of religious authority from traditional pulpit preaching toward concrete action based on creative social media content.	The idea that environmental degradation constitutes a universal crisis of faith and that ecological activism on social media represents a legitimate contemporary form of worship (<i>Modern Eco-Theology</i>).

4. RESULTS AND DISCUSSION

4.1 RESULTS

Typology of Signs and Barthesian Semiotic Construction in *Green Dakwah* Content

The articulation of *Green Dakwah* narratives on digital platforms such as Instagram and TikTok cannot be understood merely as the transmission of ordinary ecological information; rather, it constitutes a process of symbolic reconstruction that marks a shift in how religious texts are visually manifested [20]. Within the hyper-visual ecosystem of social media, characterized by intense competition for audience attention, religious messages undergo profound mediatization. Islamic environmental ethics (*fiqh al-bi'ah*) are transformed from rigid, text-based normative discourse into dynamic and aesthetically engaging visual-auditory sequences of signs [2; 17]. The utilization of social media platforms by advocates of environmental da'wah creates a new technoculture in which symbols of Islamic piety explicitly intersect with the discourse of the global climate crisis

[13]. This articulation process relies on manipulating visual composition, typography, cinematographic rhythm, and background music to construct a new aesthetic language of religious communication that responds to the psychographic characteristics of Generation Z as the primary consumers of digital content [10].

Theoretically, examining digital media texts requires an analytical framework that can uncover not only the surface structure of messages but also the ideological layers concealed behind their visual aesthetics [4]. This is where Roland Barthes' Semiotics becomes methodologically relevant. Through his framework of two-fold signification, Barthes provides a critical instrument for examining how visual signs function in the production of meaning [10]. At the first level (*linguistic system*), signs appear explicitly through denotation, which objectively records the physical form of an object. At the second level (*mythological system*), however, these signs operate systematically to evoke cultural, religious, and emotional connotations that ultimately crystallize into myths—that is, the naturalization of ideology, through which particular religious ideas are presented as ordinary, self-evident, and unquestionable truths [4; 10]. Therefore, before examining the specific distribution of meanings, it is important to map the empirical typology of signs extracted through the netnographic approach [5] in order to identify how this visual language is constructed both technologically and theologically. The table below presents a comprehensive mapping of empirical findings from netnographic observations of *Green Dakwah* content on Instagram and TikTok during 2024–2025, categorized according to sign typology and Barthes' three levels of signification.

Table 2. Empirical Findings Matrix of Sign Typology and Barthesian Semiotic Construction

Digital Sign Typology	Empirical Findings (Visual / Textual / Audio Data)	Denotative Meaning (Level I)	Connotative Meaning (Level II)	Myth / Ideological Construction (Level III) & References
Ecological-Spiritual Visual Icon	A clenched hand holding a green plant seedling against a backdrop of cracked/barren soil.	An individual is holding a plant seedling in a drought-affected area.	Tree planting symbolizes the restoration of life, the manifestation of the responsibility of <i>khalifah fil ardh</i> , and an act of <i>amal jariyah</i> (ongoing charity) [2].	Myth of Ecological Piety (Eco-Jihad): Tree planting is naturalized as a form of religious obedience equivalent to formal acts of worship [9; 15].
Religious-Environmental Textual / Lexical Sign	Text overlays reading “ <i>Oxygen Charity</i> ,” “ <i>Environmental Fiqh</i> ,” and “ <i>Preventing Environmental Destruction = Worship</i> .”	Indonesian typography combining technical/scientific/ecological terminology with Arabic/Islamic vocabulary.	The sanctification of environmental stewardship by directly associating Islamic law (<i>fiqh</i>) with the climate crisis [2].	Myth of the Redefinition of Sin and Reward: Environmental destruction is normalized as a form of social sin, while environmental preservation is constructed as a path toward modern religious reward [8].

Digital Sign Typology	Empirical Findings (Visual / Textual / Audio Data)	Denotative Meaning (Level I)	Connotative Meaning (Level II)	Myth / Ideological Construction (Level III) & References
Symbolic Digital Lifestyle	Content creators wear modern Muslim attire (<i>koko</i> /hijab) while carrying reusable water bottles (<i>tumblers</i>) and cloth shopping bags (<i>totebags</i>).	Young Muslim men and women, neatly dressed and carrying environmentally friendly items in urban settings.	The integration of modern religious identity, <i>zero-waste</i> trends, and Generation Z popular culture [9].	Green Muslim Identity Myth: Being a devout and “cool” Muslim is implicitly associated with adopting an environmentally friendly lifestyle (<i>eco-lifestyle</i>) [10; 13].
Audio-Cinematic & Atmospheric Sign	Slow-motion cinematic video transitions accompanied by contemplative acoustic music and natural soundtracks (flowing water/wind).	High-quality audio-visual recordings depicting the beauty of nature in detail.	Theological contemplation of natural phenomena as non-verbal revelation (<i>ayat kauniyyah</i>) that generates spiritual tranquility [15].	Myth of the Sacredness of Nature: Nature is constructed not as a physical commodity freely available for exploitation, but as a sacred entity that must be respected (<i>Re-Sacralization of Nature</i>) [16].

Based on netnographic observations of the multimedia content corpus on Instagram and TikTok during 2024–2025, the signification of *Green Dakwah* narratives is articulated through distinctive visual and textual structures [5; 7]. Roland Barthes' Semiotic Analysis reveals three fundamental levels of meaning in the extracted data [4; 10].

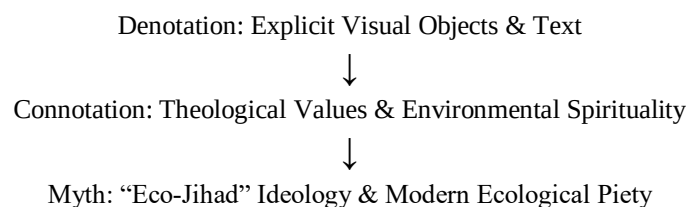


Figure 1. Extraction of Three Levels of Meaning

Referring to the design presented in Figure 1, the denotative meaning indicates that the visual data are dominated by a combination of contrasting elements, such as damaged natural landscapes (plastic pollution and deforestation) juxtaposed with symbols of sustainability (a clenched hand holding a plant seedling, visualizations of clear water, and infographics presenting climate crisis statistics) [4]. The headlines explicitly employ a combination of religious vocabulary and modern ecological terminology, such as “*Oxygen Charity*,” “*Environmental Fiqh*,” and “*Eco-Jihad*” [2; 9]. At the connotative level, natural objects are no longer positioned merely as passive physical matter but rather as manifestations of *ayat kauniyyah* (signs of Divine greatness) [15]. Actions such as planting trees or reducing plastic waste are connotatively articulated as forms of spiritual obedience (*ibadah muamalah*) and as a reflective responsibility of human beings as *khalifah fil ardh*

(stewards of the Earth) [8; 16]. Meanwhile, the construction of myth (ideology) demonstrates that the “myth” established through the consistency of these posts is the normalization of ecological piety [9]. *Green Dakwah* content successfully constructs a new myth among younger generations that the measure of a modern Muslim’s faith is no longer limited to formal rituals such as prayer and fasting, but is also measured by their environmental awareness and involvement in environmental conservation actions [2; 13].

The Anatomy of Netnographic Interaction and Gen Z’s Narrative Responses

The anatomy of digital interaction within *Green Dakwah* content not only reflects the audience’s technological preferences for particular media formats but also reveals a profound transformation in how Generation Z consumes, internalizes, and negotiates religious messages [12; 13]. The high engagement rates associated with micro-video formats such as TikTok and Instagram Reels demonstrate how algorithmic and participatory culture operate within social media [11; 14]. Micro-videos operate through a combination of rapid visual stimuli, contextual audio narratives, and algorithm-driven recommendation mechanisms such as the *For You Page*, which precisely target younger audiences’ cognitive patterns [11]. Within the framework of the mediatization of religion, this format deconstructs the rigidity of linear traditional da’wah transmission and transforms it into a participatory, dialogical form of interaction [12; 17]. Gen Z audiences no longer position themselves merely as passive recipients of spiritual doctrines but rather as active agents who directly contribute meaning, responses, and emotional expressions within comment sections [21].

The comment sections beneath *Green Dakwah* posts function as netnographic laboratories that record the meaning-making practices of religious *prosumers* (producers-consumers) in the digital era [5; 7]. This interaction pattern can be understood through audience reception theory and digital public participation, in which theological messages transmitted by *digital preachers* trigger cognitive responses that are fragmented yet structured [13; 14]. Varying responses, from affirmative acceptance to critical evaluation, indicate a process of re-articulating the identity of piety among Gen Z [3; 6]. This phenomenon demonstrates that netnographic interaction on social media is not merely a product of algorithmic compulsion or superficial reactions represented by *vanity metrics* such as likes and shares. Rather, it is an arena for discursive negotiation in which eco-theological teachings are tested for validity, connected to everyday lived experiences, and transformed into narratives of collective action and critical discourse [1; 11]. The table below presents a comprehensive mapping of empirical findings obtained from netnographic observations of *Green Dakwah* digital interaction spaces (TikTok and Instagram Reels, 2024–2025)

Table 3. Data Results on the Anatomy of Netnographic Interaction and Gen Z’s Narrative Responses

Response Narrative Category	Data Proportion (%)	Key Indicators of Digital Interaction	Unit of Analysis & Verbatim Comment Extraction (Empirical Data)	Theoretical Implications / Audience Meaning-Making & References
Spirituality Re-Interpretation Narrative	45%	Ø High Likes on Comments Ø Theological Discussion Threads Ø Use of Reflective Emojis (☹, ☹, ☹)	<i>“I used to think that sin only meant not praying or dating. Now I understand that carelessly throwing away plastic waste and damaging nature can also constitute an ongoing sin (dosa jariyah)...”</i> (TikTok Comment, 2024)	Reframing Sin and Piety: A theological reorientation occurs in which ecocide/environmental destruction is recognized as a violation of religious ethics (socio-ecological sin) [2; 8].
Affirmative Narrative & Action Commitment	35%	Ø Sharing Personal Stories Ø Tagging Friends (Social Circulation) Ø Use of Hashtags (#ZeroWasteMuslim)	<i>“Bismillah, after watching this video, since last month I’ve started bringing my own tumbler and reusable cloth bag whenever I go to campus. I intend to make it part of my worship.”</i> (Reels Comment, 2025)	Internalization of Practical Action: E-dakwah messages successfully trigger behavioral change, transforming theological discourse into an environmentally friendly lifestyle (eco-lifestyle) [6; 9].
Critical Narrative & Validity Testing	20%	Ø Critical Inquiries Ø Demands for Transparency Ø Algorithmic Skepticism	<i>“The content is good and aesthetically pleasing, Ustadz, but does the organization/creator actually carry out real tree-planting activities in the field? It shouldn’t just be religious greenwashing for engagement.”</i> (TikTok Comment, 2025)	Critical Digital Literacy: Gen Z audiences utilize their information literacy to assess the authenticity of da’wah and reject the exploitation of religious symbols for popularity (greenwashing) [1; 3; 13].

4.2 DISCUSSION

Re-Sacralization of Nature and the Formulation of Aswaja Ecotheology in Digital Spaces

The findings of this study demonstrate that the articulation of *Green Dakwah* on social media platforms has successfully democratized and crystallized abstract eco-theological concepts into an inclusive popular cultural movement among young Muslims. The process of resacralizing nature, as extracted at the connotative and semiotic-myth levels, significantly confirms Seyyed Hossein Nasr’s framework concerning the urgency of restoring the sacred dimension (*sacredness*) of nature to address the systematic

environmental crisis in the Anthropocene era [16]. Within Indonesia's socio-religious landscape, this phenomenon does not merely function as the dissemination of conventional ecological discourse but actively strengthens the integration of environmental ethics rooted in local religious traditions, particularly within the framework of *Ahlus Sunnah wal Jama'ah* (Aswaja) Ecotheology [2]. Nature is no longer positioned within an exploitative anthropocentric paradigm that places humans as the sole masters of the Earth's physical resources. Instead, it is reinterpreted through a theocentric perspective as non-verbal revelation (*ayat kauniyyah*) possessing spiritual validity comparable to that of written sacred texts (*ayat qauliyyah*) [15]. The symbiotic relationship between ritual piety and environmental concern reflected in this discourse confirms the adaptive capacity of traditionalist Muslim communities and young people to transform the spiritual values of Islamic boarding schools (*pesantren*) into contemporary environmental ethics that respond to global issues [8].

Furthermore, this symbolic reconstruction indicates an epistemological shift in the transmission of religious authority in digital spaces. When environmental ethics are articulated through decentralized visual platforms, classical normative concepts such as *khalifah fil ardh* (stewardship of the Earth) and *hifzh al-bi'ah* (environmental protection) undergo a process of meaning re-territorialization [9; 13]. *Green Dakwah* successfully bridges the gap between metaphysical theological doctrine and practical ecological awareness through highly adaptive mechanisms of religious mediatization [17]. The intersection between normative piety and *eco-activism* no longer positions environmentalism as an agenda imported from the West but rather as a genuine articulation of religious commitment (*eco-jihad*) rooted in the intellectual and spiritual heritage of Islam [22]. Thus, the re-sacralization of nature taking place in digital spaces succeeds in breaking down the artificial dichotomy between ritualistic-transcendental worship and immanent social action, transforming them into a holistic paradigm of ecological piety for Generation Z [8; 10].

Nevertheless, the effectiveness of cultivating environmental ethics through the digital ecosystem is accompanied by complex dynamics and ambivalence. On the one hand, the commodification of Islamic values and visual aesthetics presented by *digital preachers* facilitates the adoption of environmentally friendly lifestyles (*green lifestyles*) as a "cool" and relevant pop-cultural identity among young people [10]. On the other hand, the dominance of participation-oriented social media algorithms risks reducing the substance of ecological commitment to symbolic consumption or superficial reactions [11; 14]. A critical challenge arising from this formulation of digital theology is ensuring that the re-sacralization of nature on social media can endure beyond trends of *virality* and avoid becoming trapped in religious *greenwashing* [1; 3]. Therefore, strengthening digital literacy based on local Aswaja values is an essential prerequisite for ensuring that awareness transformed in virtual spaces can develop into tangible, systematic, and sustainable environmental conservation movements in physical spaces [2; 7].

The Transformation of *Digital Islam*: Religious Authority and the Role of *Green Dakwah*

From a communication perspective, the shift from conventional da'wah toward digitally based *Green Dakwah* represents a fundamental evolution in the landscape of *Digital Islam* in Indonesia [13]. The emergence of *digital preachers* and social media communities has systematically reconstructed the landscape of religious authority. Islamic discourse is no longer dominated solely by relatively rigid classical fiqh doctrines but has expanded to encompass issues of climate justice and global ecology [9]. The success of *Green Dakwah* in reaching Generation Z is rooted in its communicative capacity to transform abstract theological doctrines into aesthetic, interactive, and decentralized multimodal visual narratives [17]. This phenomenon confirms that digital platforms do not merely function as passive channels of message transmission (*medium of transmission*) but also operate as sites of cultural articulation (*site of cultural articulation*) where religious values are renegotiated and positively commodified to mobilize faith-based social activism (*eco-jihad*) [6; 10].

To clarify the epistemological differentiation and concrete forms of this digital transformation, Table 4 maps the comparison between the conventional da'wah framework and the digital *Green Dakwah* paradigm, along with the empirical evidence identified in this study.

Table 4. Comparative Synthesis of the Transformation of Religious Authority and Empirical Evidence of **Green Dakwah**

Analytical Dimension	Conventional Da'wah Paradigm	Digital <i>Green Dakwah</i> Paradigm	Empirical Research Findings (Semiotic & Netnographic Data)
Location of Authority	Hierarchical, centralized, and based on physical <i>kiai/ustaz</i> figures within traditional institutions such as <i>pesantren</i> and mosques.	Decentralized and based on an ecosystem of <i>digital preachers</i> , content creators, and social media algorithms [13].	Reconstruction of the role of religious <i>micro-influencers</i> who combine Aswaja religious symbols with global environmental issues [15].
Substance of Discourse	Ritualistic fiqh, textual halal-haram regulations, and individualistic piety.	Ecotheology, climate justice, and socio-ecological piety (<i>eco-jihad</i>) [9].	45% of audience responses were identified as Spirituality Re-Interpretation, redefining environmental destruction as “ecological sin” [11].
Mode of Communication	Monologic, instructional-sanctional, textual-verbal, and linear.	Multimodal, interactive, based on contemplative visual aesthetics and experiential engagement [17].	Three levels of semiotic signification—visual landscape denotation, <i>ayat kauniyyah</i> connotation, and the <i>Eco-Jihad</i> myth—successfully attracted Gen Z engagement.
Audience Orientation	Passive listeners/congregants (<i>passive consumers of religious texts</i>).	Active participants, narrative co-creators, and agents of discourse quality control [6].	35% demonstrated Action Commitment (<i>eco-lifestyle</i>), while 20% expressed Critical Narratives that actively tested the authenticity of da'wah against <i>religious greenwashing</i> [1].

This study further supports the argument empirically through a synthesis of semiotic and netnographic analyses within the social media ecosystem. The research findings demonstrate that the visual construction of *Green Dakwah* is capable of shifting the indicators of piety among Gen Z audiences from an initial focus on ritual-individualistic dimensions toward socio-ecological piety. Netnographic data recorded the dominance of audience narratives in the categories of spirituality re-interpretation (45%) and affirmative action commitment (35%), in which digital participants actively redefined environmental destruction as a form of theological wrongdoing (*ecological sin*) while adopting green lifestyle practices (*eco-lifestyle*) as an articulation of religious commitment [11; 15]. Nevertheless, the presence of 20% critical narratives and validity-testing responses demonstrates a mature form of digital literacy; Generation Z does not merely passively consume religious symbols but continuously validates them to assess the authenticity of da'wah and identify the risk of *religious greenwashing* [1; 3]. Thus, these findings provide empirical confirmation that digital *Green Dakwah* has successfully legitimized a new form of religious authority that is responsive to the ecological crisis of the Anthropocene [23].

The Mediating Role of Critical Digital Literacy in Gen Z's Ecological Awareness

The finding that 20% of Gen Z audience interactions consisted of critical narratives and validity testing concerning potential *religious greenwashing* indicates the fundamental importance of critical digital literacy within the contemporary religious communication ecosystem. Amid the infodemic crisis and the dominance of shallow discourse commodification on social media, digital participants' ability to examine and validate *Green Dakwah* messages directly confirms the thesis in [3] that genuine information literacy lies in the capacity for critical analysis to distinguish artificial ecological symbolism from authentic conservation practices.

While much previous research on *e-dakwah* has focused narrowly on religious moderation or identity-political contestation during periods of crisis [17], this study addresses this academic gap (*research gap*). This study shows that critical digital literacy is not merely a misinformation filter; it also functions as a fundamental epistemological mediating variable that encourages audiences to move beyond passive content consumption toward the formation of ecological awareness that is transformative, evidence-based, and empirically grounded in action [1; 7]. To translate this theoretical contribution into a measurable academic framework, Table 5 maps how this study's findings extend and address limitations in previous literature on the role of digital literacy in religious communication.

This mediating function further emphasizes that the success of *Green Dakwah* in the digital sphere depends heavily on the cognitive maturity and literacy levels of digital participants. Research findings documenting healthy skepticism among Gen Z demonstrate that environmentally oriented religious rhetoric disconnected from concrete action in the field is likely to encounter rejection or critical re-evaluation from online communities [11; 14]. This audience-driven quality-control mechanism prevents the commodification of religion from being reduced to merely aesthetic jargon (*green façade*). Thus, critical digital

literacy demonstrably transforms Gen Z's ecological awareness from passive emotional sympathy into a measurable form of critical social agency capable of producing concrete impacts on environmental conservation movements in the Anthropocene era [2; 16].

Table 5. Novelty Contribution Map: The Trajectory of Digital Literacy in E-Dakwah and Ecological Studies

Synthesis Dimension	Previous E-Dakwah Studies [17; 13]	Conventional Theoretical Framework [3]	Findings & Novelty of the Current Study
Primary Discourse Focus	Religious moderation, political tolerance, and deradicalization in digital spaces.	General information literacy and the detection of data manipulation/misinformation.	Digital Eco-Theology: Integration of Aswaja ethics, the global climate crisis, and Gen Z ecological piety.
Role of Audience / Gen Z	Passive consumers (<i>passive receivers</i>) of digital religious doctrines.	Subjects who distinguish technical/informational facts.	Active Evaluative Actors: Audiences test the validity of religious messages through cross-checking with concrete offline actions.
Literacy Mediation Pattern	Functional literacy (ability to access and share content).	Cognitive literacy (ability to verify news sources).	Transformative Critical Digital Literacy: Mediation from symbolic appreciation toward rejection of <i>religious greenwashing</i> and commitment to real action (35%).

Practical and Policy Implications

In practical and applied terms, the findings formulate concrete contributions for digital da'wah practitioners, religious organizations, environmental policymakers, and media developers.

1. Strategic Communication Model for Digital Preachers and Religious Institutions

Mainstream religious organizations, such as Nahdlatul Ulama through NU Online, as well as young da'i, can adopt an aesthetically driven Green Dakwah formulation based on contemplative audio-visual communication as a new standard for public communication [9]. Da'wah strategies should no longer rely solely on instructional-sanctional narratives centered on ritualistic sin and reward, but should integrate multimodal visual approaches that connect local environmental issues with Generation Z's popular cultural identity in contextual ways [25].

2. Faith-Based Environmental Education Policy

The Ministry of Religious Affairs, the Ministry of Environment and Forestry (KLHK), and Islamic educational institutions such as pesantren and madrasah can utilize this potential for digital engagement to design Eco-Pesantren curricula or faith-based environmental conservation movements (faith-based environmental activism). Empirical data on Gen Z's narrative responses show that value-based religious narratives can effectively stimulate environmentally friendly behavioral change, such as zero-waste practices and low-carbon lifestyles, compared with rigidly technocratic scientific campaigns [2; 8].

3. Mitigating Religious Greenwashing and Strengthening Media Literacy

For content developers and social media platforms, the finding that 20% of audience narratives were critical demands greater principles of transparency and accountability regarding real-world environmental actions. Digital da'wah institutions are encouraged to integrate e-dakwah content with verified offline programs, such as direct collaboration with tree-planting initiatives or community-based waste-management movements, to maintain the credibility and authenticity of Islamic teachings in digital spaces [1; 7].

Research Novelty and Methodological Implications

The primary novelty of this study lies in the methodological integration of Netnography and Roland Barthes' Semiotics to map the digital eco-Islamic movement. This study shows that combining sign-structure analysis (denotation, connotation, and myth) with digital ethnographic observation can uncover not only what Green Dakwah content communicates but also how these messages construct ideology and encourage social action among younger generations.

The theoretical implications of this study propose a "Digital Eco-Dakwah" communication model that integrates theological doctrine, digital media aesthetics, and critical audience literacy as the three principal pillars for transforming environmental awareness in developing countries.

5. CONCLUSION

This study concludes that the articulation of *Green Dakwah* on social media platforms (Instagram and TikTok) has successfully democratized and reconstructed environmental theological discourse into a component of Generation Z's popular culture. Through a Barthesian semiotic approach and netnographic methodology, this study confirms that the mediatization of e-dakwah does not merely function as a superficial means of transmitting ecological information, but also as a mechanism for the re-sacralization of nature. The three levels of signification identified—from the visual denotation of natural landscapes, to the connotation of the theological value of *ayat kauniyyah*, and finally to the construction of the *Eco-Jihad* myth—demonstrate that the abstract doctrine of Aswaja Ecotheology has been successfully transformed into an indicator of modern ecological piety.

Furthermore, the netnographic analysis of the anatomy of digital interactions reveals that Generation Z expresses dynamic and structured narrative responses. These responses are distributed across three main categories: Spirituality Re-Interpretation (45%), which reframes sin and socio-ecological piety; Affirmative Responses and Action Commitments (35%), which encourage the adoption of environmentally friendly behaviors and an *eco-lifestyle*; and Critical Narratives and Validity Testing (20%), reflecting a high level of digital literacy in rejecting the risks of *religious greenwashing*. Thus, *Green Dakwah* has demonstrated its effectiveness as a theo-ecological medium that integrates traditionalist Islamic spirituality with global environmental awareness and action in the *Anthropocene* era.

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