

Green Education Challenges in National and Global Contexts: A Critical Analysis and Islamic Values-Based Integrative Paradigm

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Abstract: The increasingly complex global ecological crisis demands a fundamental transformation in the education system, especially through strengthening the *green education* paradigm. Nevertheless, green education in global discourse still faces epistemological, pedagogical, and contextual limitations, especially due to the dominance of secular-technocratic paradigms and the hegemony of Western epistemology. This research aims to critically analyze these limitations and formulate a more integrative and contextual green education model in the perspective of Islamic education. This research employs a qualitative approach through library *research* that is descriptive-analytical and critical. Data were obtained from global policy documents, reputable international journal articles, and relevant academic literature. Data analysis was conducted through *content analysis* combined with critical analysis to identify patterns, gaps, and possible conceptual reconstructions. The findings reveal that green education currently tends toward cognitive reductionism, *knowledge-action gaps*, and incompatibility with local contexts, particularly within the Indonesian education system. As a synthesis, this research offers an integrative green education model based on Islamic values that combines the dimensions of knowledge, values, and critical awareness within the framework of *monotheism*, *caliph*, and *trust*. This model further emphasizes *transformative learning* approaches, institutional integration, and *glocal* perspectives as implementation strategies. The contribution of this research lies in the paradigmatic reconstruction of green education which is not only adaptive to global issues, but also transformative, contextual, and value-based. The proposed model is expected to be an alternative framework in the development of continuing education, especially in the context of Islamic education in Indonesia.

Keywords: Green Education, Green Education, SDGs, Glocal Approach, Sustainability.

Introduction

The 21st century is marked by an escalation of global crises that are complex and multidimensional, including climate change, ecosystem degradation, energy crises, and increasingly strengthening socio-economic inequality (Khalid and Fansuri 2025; Mutiani and Faisal 2019). Phenomena such as global warming, biodiversity loss, and massive exploitation of natural resources have put the world in conditions that the scientific community refers to as *Planetary Emergency*, which is an ecological emergency situation that threatens the sustainability of human life and all life systems on earth (United Nations Environment Programme 2021). In this crisis landscape, education is no longer adequate when reduced to a mere instrument of knowledge transmission, but must be repositioned as a transformational force capable of forming ecological awareness, ethical orientation, and capacity for sustainable collective action (July 2025).

Theoretically, the repositioning of the role of education is rooted in the tradition of progressive and critical thinking. John Dewey emphasized that education is a process of reconstruction of experiences that is integrated with the reality of life (*education as life itself*), so that learning must be contextual and problem-oriented (Dewey 1997). Meanwhile, Paulo Freire, through the concept *Awareness* emphasizing the importance of critical awareness as a prerequisite for human liberation from structures of domination, including exploitative relations with nature (Freire 1970). In contemporary developments, the systemic approach developed by Fritjof Capra strengthens the argument that ecological crises are rooted in reductionistic and fragmentary thinking paradigms, so education needs to be directed at the development of *Ecological Literacy* based on the interconnectedness of the living system (Capra 2005). Thus, the transformation of education is not only pedagogical, but also epistemological, namely concerning the way humans understand their relationship with the universe.

In line with these developments, the global community through UNESCO has mainstreamed the concept of *Education for Sustainable Development* (ESD) as a strategic framework in transforming the education system to be responsive to sustainability challenges. Target 4.7 in *Sustainable Development Goals* (SDGs) explicitly affirm that all students must acquire knowledge, skills, values, and attitudes that support sustainable development (UNESCO 2017). However, various reports show that the implementation of ESD still faces significant structural problems, such as policy fragmentation, limited capacity of educators, and weak integration in pedagogical curriculum and practice (UNESCO 2020). This shows that there is a gap between global normative commitments and the practical reality at the implementation level.

In this context, the concept of *green education* emerged as an elaboration as well as a criticism of the limitations of ESD implementation. Green education is not merely oriented towards the transfer of environmental knowledge, but encompasses the transformation of *ecological consciousness*, the internalization of environmental

ethical values, and the strengthening of praxis competence to act sustainably. In other words, green education represents a holistic pedagogical approach that integrates cognitive, affective, and psychomotor dimensions in one framework of human transformation as a whole. This approach emphasizes that sustainability is not just a technical issue, but a matter of values, culture, and life paradigms.

Although normatively green education has become part of the global agenda, there is a significant gap between international commitments and the reality of implementation, particularly in developing countries. Challenges such as limited resources, inequality in access to education, and weak cross-sectoral policy integration constitute the primary obstacles to the systemic mainstreaming of green education (Tilbury 2011). Furthermore, this gap shows that the transformation of education towards sustainability cannot be understood solely as a technocratic issue, but also involves complex political, ideological, and cultural dimensions.

In the Indonesian national context, this complexity appears in the form of an ecological paradox. On the one hand, Indonesia is one of the countries with the highest level of biodiversity in the world; on the other hand, the country faces serious problems such as deforestation, environmental degradation, pollution, and high vulnerability to climate change (Rusadi and Adni 2025). Ironically, the national education system has not yet fully and systematically integrated sustainability values, either explicitly or implicitly, into curriculum design and pedagogical practices. Despite initiatives such as strengthening character education and the implementation of the Independent Curriculum, the ecological dimension remains largely implicit, sporadic, and has yet to become mainstream in national educational design (Haira Asmar 2025; Vioreza, Hilyati, and Lasminingsih 2023).

Furthermore, from the perspective of Islamic education, ecological issues actually have a strong theological and philosophical foundation. The concept of human beings as "*Caliph fi al-ardh*" affirms the moral-spiritual mandate to maintain the balance of nature as an integral part of religious responsibility. This provides a vital ethical foundation that implicitly encompasses the harmonious relationship between human beings and the natural environment. This was also stated by Seyyed Hossein Nasr who criticized the multidimensional crisis, especially the modern ecological crisis as a result of the desacralization of nature, so that it is necessary to reconstruct spiritual consciousness in viewing nature as a manifestation (Nasr 1989, 2005).

However, there is a fairly sharp gap between the normative richness of Islamic teachings and the practical reality of Islamic education that has not fully integrated the ecological dimension systematically and operationally. Islamic education still tends to be oriented to the ritual and moral dimensions of the individual, so that the dimension of collective ecological responsibility has not received an adequate portion. This condition indicates the need for epistemological and pedagogical reconstruction so that Islamic education is able to play a role as an agent of ecological transformation that is contextual and relevant to the challenges of the times.

Based on this description, "green education" cannot be positioned simply as a pedagogical innovation, but as an urgent epistemological and praxis need in responding to the global crisis. Therefore, this study is directed to: (1) analyze the concept and paradigm of green education in global discourse, especially in the framework of ESD; (2) examine the dynamics of national and global issues that affect their implementation, especially in the Indonesian context; and (3) formulate conceptual models and strategies for the implementation of integrative green education by incorporating Islamic educational values.

Method

This study uses a qualitative approach with the type of literature research (*Library Research*) which is descriptive-analytical as well as critical-reflective. This approach was chosen because of the study of *Green Education*. In facing national and global issues, it requires in-depth conceptual exploration, cross-disciplinary theoretical synthesis, and the ability to reconstruct the meaning of various educational discourses that are developing globally. In the tradition of qualitative research, the study of literature does not simply function as an activity of gathering information, but as a process of knowledge construction through the critical interpretation of the text, the context, and the relationship of meaning that surrounds it (Creswell 2014).

Epistemologically, this research is based on a constructivist-critical paradigm that views the reality of education as the result of a dynamic social construction, shaped by the interaction between global policies, power structures, and value systems that develop in society. This perspective emphasizes that knowledge is not neutral, but rather laden with ideological and historical interests. In this framework, Paulo Freire's thoughts on *critical consciousness* is an important foothold for reading education as an arena of praxis that must liberate and transform (Freire 1970). Therefore, the analysis of green education in this study does not stop at the descriptive level, but is directed at critical evaluation and conceptual reconstruction that is transformative, especially in identifying the gap between global discourse and implementive reality at the local level.

The data sources in this study consist of primary and secondary data that are purposively selected based on the level of authority, relevance, and contribution to the development of the study. Primary data includes global policy documents that have high legitimacy in the discourse of sustainable education, such as *the Education for Sustainable Development* (ESD) document published by UNESCO, *the Greening Education Partnership* report, and the *Sustainable Development Goals* (SDGs) document issued by the United Nations. Meanwhile, secondary

data were obtained from reputable journal articles that intersect with the subject, academic books relevant to environmental education and Islamic education, as well as the results of previous research that have thematic relevance to *green education*. The selection of such sources is based on *the principle of state of the art* to ensure that the analysis carried out is within the landscape of cutting-edge scientific discourse.

The data collection technique was carried out through a systematic *and structured documentary study*. This process begins with searching the literature through various scientific databases. Furthermore, the selection process was carried out using inclusion and exclusion criteria, including thematic relevance, source credibility, year of publication (priority in the latest literature), and theoretical contribution to the study. The selected literature is then classified into main themes to facilitate the process of conceptual analysis and synthesis.

The data analysis in this study uses the *Content Analysis* combined with *Critical Discourse Analysis*. Content analysis is used to identify key patterns, concepts, and trends in the literature, while critical analysis is used to uncover the ideological dimensions, epistemological biases, and power relations embedded in green education discourse (Krippendorff 2019). The analysis stages are carried out systematically through: (1) data reduction to focus on relevant key issues; (2) categorization and thematic coding, such as paradigm *Green Education*, dynamics of global and national issues, as well as implementation strategies; (3) interpretive analysis to find the relationship of meaning and conceptual patterns; (4) critical analysis to evaluate the gap between global construction and local contexts; and (5) conceptual synthesis to formulate an integrative, contextual, and value-based green education model.

To ensure the legitimacy (*trustworthiness*) of the data, this study employs the source triangulation technique by comparing various types of literature from international institutions, reputable scientific journals, and academic books. In addition, the principle of *Credibility* through authoritative and up-to-date sourcing, *dependability* through consistency of analysis procedures, and *Confirmability* through the documentation of the research process in the form of a systematic and transparent *audit trail* (Lincoln and Guba 1985). Thus, the validity of research is determined not only by the quantity of sources, but also by the depth of analysis and consistency of interpretation.

The research also adopts an integrative-interdisciplinary approach that combines the perspectives of global education, sustainability studies, and Islamic education. This approach aims to avoid epistemological reductionism while allowing for the formation of a comprehensive conceptual synthesis. This integration is important considering that the complexity of ecological issues cannot be partially understood, but rather requires a systemic approach that connects ecological, social, cultural, and spiritual dimensions. In this regard, the integrative approach is in line with Fritjof Capra's thinking which emphasizes the importance of *Systems Thinking* in understanding the interconnectedness between elements in the ecological crisis and education (Capra 2005).

Results and Discussion

1. The Green Education Paradigm in Global Discourse: From Environmental Education to Consciousness Transformation

Green education (*Green Education*) in contemporary discourse can no longer be understood as a linear extension of the *Environmental Education* which focuses on the transfer of ecological knowledge. Instead, it has undergone a paradigmatic shift towards a transformational framework that integrates ecological, social, economic, and ethical dimensions in a holistic education system (Andriani and Robandi 2025; (2024). This shift is inseparable from the growing global awareness of systemic ecological crises, which demand a fundamental reorientation of educational goals, content, and praxis (UNESCO 2017).

In a global framework, this development is rooted in the concept of *Education for Sustainable Development* (ESD) which is mainstreamed by UNESCO as an education transformation strategy. ESD emphasizes the importance of integration between environmental sustainability, social justice, and inclusive economic growth. Nevertheless, it can be argued critically that green education goes beyond ESD in the normative sense, since it is not only oriented towards the integration of sustainability content, but also towards the transformation of human consciousness and action.

This was articulated by Fritjof Capra, who emphasized the importance of *Ecological Literacy* as the ability to understand the relationship of life systems as a whole, as well as understanding that education is a process of reconstructing experiences that are oriented to praxis. (Capra 2005; Dewey 1997). In this perspective, green education is not just a cognitive-normative instrument, but a process of forming ecological awareness that is reflective and contextual.

Conceptually, green education can be reconstructed as a pedagogical paradigm that integrates three layers of transformation simultaneously: (1) cognitive transformation related to scientific understanding of global ecological crises, such as climate change and environmental degradation; (2) affective transformation that involves the internalization of values, ecological empathy, and the formation of moral awareness of sustainability; (3) the transformation of praxis manifested in concrete actions based on sustainability in daily life. The integration of these three dimensions marks a fundamental shift from "*knowledge-based education*" to "*action-oriented*

transformative education".

Conceptually, the dimensions of green education can be further elaborated and classified into four main interconnected dimensions, as shown in the following table:

Table 1. The Conceptual Dimension of Green Education

Dimensions	Conceptual Description	Development Focus	Pedagogical Implications
Cognitive (Knowledge-Based)	Understanding of global and local environmental issues	Climate change, biodiversity, sustainability	Integration of issue-based learning curriculum
Affective (Value-Based)	Formation of attitudes, concerns, and ecological awareness	Environmental awareness, empathy	Reflective learning and internalization of values
Psychomotor (Skill-Based)	Practical skills in environmental management	Green skills, problem-solving	Project-based learning, experiential learning
Ethics (Ethical-Spiritual)	Internalization of moral values and ecological responsibility	Environmental ethics, justice	Character building and sustainability ethics

These four dimensions show that green education is not only oriented to knowledge transfer, but also to the transformation of values and actions. The cognitive dimension serves as an epistemological foundation that provides a scientific understanding of the environmental crisis, while the affective and ethical dimensions play a role in shaping moral awareness and commitment. The psychomotor dimension is a concrete manifestation of knowledge and values in the form of real actions.

However, in practice, green education remains frequently trapped in what may be termed "*Pedagogical reductionism*", namely the tendency to reduce the complexity of green education to simply the addition of environmental materials in the formal curriculum (Kadi and Tamam 2025). This reductionism gives rise to what may be referred to as "*Shallow ecological awareness*", which is a condition in which students have knowledge about environmental issues, yet without corresponding emotional engagement or commitment to action.

This resonates with Paulo Freire's critique of the "*banking*", which is an educational model that merely transfers knowledge without cultivating critical awareness (Freire 2008). ^{UNUSED} that is, education that only transfers knowledge without building critical awareness (Freire 2008). In the context of green education, this kind of model actually weakens the transformational potential of education, because it fails to bridge the gap between knowledge and action (*Knowledge-action gap*).

In response to these limitations, UNESCO developed an approach to *whole institution approach*, which places sustainability as a fundamental principle in the entire education ecosystem—including curriculum, institutional governance, organizational culture, and relationships with the community (UNESCO 2020). This approach emphasizes that green education is not just a learning content, but an institutional praxis that is alive and experienced.

It should be emphasized, however, that this global approach still faces significant contextualization challenges, especially in developing countries such as Indonesia. The dominance of the universal paradigm often ignores cultural diversity, value systems, and local socio-economic conditions, so its implementation tends to be normative without significant transformative power. In this context, green education demands a rereading and reconstruction that is not merely pedagogical-normative, but also emphasizes the epistemological aspect, in order to be able to bridge the tension between the circumstances and the facts faced in the context of the environment in the order of global standards and local realities.

2. Global–Local Dialectics: The Problems of Green Education Implementation in a Multidimensional Crisis Landscape

Today's global ecological crisis can no longer be understood as a purely environmental problem, but as a multidimensional crisis that includes social, economic, political, and even epistemological dimensions. In this context, green education has gained strategic significance as an instrument for transforming global awareness towards sustainability. However, there is a fundamental gap between the urgency of the ecological crisis and the readiness of education systems—both global and national—to respond effectively.

In the framework *Education for Sustainable Development* (ESD), education is expected to function as a *Transformative Agent* that not only transmits knowledge, but also shape sustainable values, attitudes, and actions (UNESCO 2017). This view emphasizes that education must be emancipatory and capable of arousing *critical consciousness* social realities, including ecological crises (Freire 1970). However, in practice, these transformational functions still face complex structural and cultural barriers.

Global Ecological Crisis and Education System Limitations

Climate change as the main manifestation of the global ecological crisis shows a systemic character that

cannot be separated from the dynamics of modernity itself. Borrowing terms *Risk Society* Ulrich Beck affirms his view that modernity has produced global risks that are unpredictable and difficult to control (Beck 2015). As made clear by Anthony Giddens' analysis through the concept *Giddens's paradox* which explains the human tendency to ignore long-term threats that are not immediately perceived, despite having enormous impacts (Giddens 2009).

The implication for education is the emergence of a gap between knowledge about the ecological crisis and the urgency of real action. The global education system still tends to be reactive and informative, not yet completely transformative. This is exacerbated by the *policy-practice gap*, which is the gap between global commitments—such as the SDGs—and real implementation in curriculum and learning practices.

In the critical curriculum landscape, Michael W. Apple once stated that the curriculum is not a neutral entity, but an ideological construct that reflects dominant interests (Apple 2004, 2014a). The marginalization of environmental issues in education can be understood as a reflection of the dominance of the exploitative economic development paradigm (Apple 2014b; Muthmainnah, Mustansyir, and Tjahyadi 2020). Therefore, Edgar Morin emphasizes the importance of *Complex Thinking* in education, namely the ability to understand the relationship between systems (Morin 2001, 2005). The absence of this approach causes education to fail to respond to systemic ecological crises.

In addition, the global challenge also lies in the pedagogical capacity of teachers. Green education demands interdisciplinary competence, the establishment to take a reflective, and contextual approach, which in reality most educators do not fully possess. Here's the framework *Transformative Learning* ala Jack Mezirow who posits that a change in perspective can only occur through deep critical reflection (Kurnia 2021; Mezirow 1991). Without this capacity, the learning process tends to reproduce established patterns that are incapable of fostering behavioral change.

However, there is a fundamental paradox in modern education, namely that increasing levels of education are not always directly proportional to sustainability awareness. Ivan Illich as a critic of education shows that educational institutions often reproduce unsustainable social structures. This is reinforced by the fact of modernity over the emergence of symptoms and consumptive society (*Consumer Society*), where consumption becomes the basis of social identity (Juantara and Bulan 2020; Muthmainnah, Mustansyir, and Tjahyadi 2020; Zulfatmi 2013). Education that is not value-based has the potential to strengthen consumptive patterns that are contrary to the principles of sustainability and exploitation which are quite threatening to the environment.

Indonesia's National Context: Ecological Paradox and Fragmentation of Education

In the Indonesian context, the problem of green education is increasingly complex because it is faced with a paradoxical reality. On the one hand, Indonesia has an extraordinary wealth of biodiversity; on the other hand, the country experiences a high degree of environmental degradation. This condition shows that there is a governance crisis that is not only ecological, but also structural and cultural (Juantara and Bulan 2020).

From the perspective of sustainable development, this condition underscores the imperative that development be oriented towards the expansion of human capabilities, not just economic growth by exploiting nature. However, development practices in Indonesia are still often oriented towards the exploitation of natural resources that refer to economic growth, thus ignoring the principle of sustainability.

At the level of education policy, various initiatives such as the Independent Curriculum and the Adiwiyata program, for example, show a commitment to environmental education (Ahmad, Ali, and Zuhriyah 2025; Karina et al. 2025; Muflich and Nursikin 2023). However, the implementation is still fragmentary and has not yet achieved systemic integration. In policy implementation theory, Michael Lipsky explains that the success of policies depends heavily on implementing actors on the ground (*Street-level bureaucrats*), in this context it is the teacher as the educators. When capacity and support for teachers are limited, policies tend to stop at the symbolic level (*Symbolic Policy*) (Lipsky 2010).

From the pedagogical side, the dominance of conventional learning approaches shows that educational transformation has not yet touched the epistemological dimension. As Dewey knows, learning must be experiential (*Learning by doing*), which is very relevant to green education. However, without adequate systemic support and training related to green education, this approach is difficult to implement widely (Nursya'ban 2024).

In addition, inequality in access to education in Indonesia reinforces ecological injustice. In Pierre Bourdieu's view, this can be understood as inequality *Capital* (economic, social, and cultural) that affect access to quality education (Akhiruddin, Kamaruddin, and Adam 2025). As a result, green education has the potential to become a privilege for certain groups through educational institutions that have currently developed in developed countries as *Forest School* or *Nature School* in the Indonesian context, so it is contrary to the principle of social justice in sustainability (Karina et al. 2025).

The cultural dimension is also an important factor. Low ecological awareness indicates that education has not yet engaged with the value dimension in sufficient depth. In the Islamic tradition, the importance of integration between science and morals (*science and adab*) is emphasized as the foundation for the formation of a whole human being. Thus, green education in Indonesia has great potential if integrated with religious values that live in society.

Based on this exposure, it can be emphasized that the problem of green education cannot be understood partially, but rather as a result of a dialectic between global pressures and local realities. At the global level, the main challenges lie in the dominance of economic paradigms, the limitations of the education system, and the disconnect between knowledge and action. Meanwhile, at the national level, these challenges are strengthened by policy fragmentation, limited pedagogical capacity, social inequality, and the suboptimal integration of cultural and religious values.

This dialectic suggests that green education is not enough to be adopted as a global model that is universal, but must be contextually reconstructed taking into account local realities. In other words, the transformation of green education demands a *glocal* approach—integrating a global perspective with local values, cultures, and needs.

In this context, the failure of green education is often not caused by a weakness of the concept, but by the inability of the education system to bridge the gap between global norms and local praxis. Therefore, a new paradigmatic framework is needed that is not only adaptive, but also transformative and contextual.

3. Epistemological Criticism and the Limitations of the Dominant Green Education Paradigm

Although green education has evolved as a global response to ecological crises, epistemologically the underlying paradigm still leaves a variety of fundamental limitations. These limitations are not only technical or implementive, but touch on the philosophical roots of how knowledge about the environment is produced, disseminated, and practiced in the education system. Therefore, the analysis of green education needs to be directed towards epistemological criticism that is able to reveal basic assumptions that have not been questioned so far.

The Dominance of the Secular-Technocratic Paradigm in Green Education

One of the main characteristics of green education in the global discourse is the dominance of the secular-technocratic paradigm that places sustainability as a managerial and technical issue. In this paradigm, ecological crises are understood as problems that can be solved through technological innovation, public policy, and system efficiency, without touching the ontological and ethical dimensions of man's relationship with nature.

This paradigm is critically examined through the thought of Charles Taylor, who argues that modernity has fostered a process of secularization that marginalizes the spiritual dimension of human life. In the context of education, this is reflected in the tendency to separate knowledge from value, as well as to ignore the moral and transcendental dimensions in the formation of consciousness.

As a result, green education often loses its transformational power, as changes in human behavior are determined not only by rational knowledge, but also by values, beliefs, and the orientation of meaning. Under these conditions, education tends to produce individuals who are cognitively "environmentally literate," but lack a deep ethical commitment to sustainability.

Hegemony of Western Epistemology and the Problem of Decolonization of Knowledge

In addition to the problem of secularization, green education also faces challenges in the form of the dominance of Western epistemology which tends to be universalistic. Frameworks such as *Education for Sustainable Development* (ESD) are often positioned as universally applicable global models, without taking into account the diversity of social, cultural, and religious contexts in different parts of the world.

In the perspective of world system theory, Immanuel Wallerstein emphasized that global relations are never neutral, but are influenced by unbalanced power structures. This causes global knowledge production to often be dominated by developed countries, while local and non-Western perspectives become marginalized.

In this context, green education has the potential to become an epistemological reproductive instrument that ignores local *wisdom* and indigenous value systems. In fact, many local societies—including those in the Islamic tradition—have a holistic ecological view rooted in spiritual values.

Therefore, efforts to decolonize green education are needed, which is a process of knowledge reconstruction that integrates local, cultural, and religious perspectives as part of a legitimate epistemological framework. In the thought of Syed Muhammad Naquib al-Attas, this process can be understood as the Islamization of knowledge, defined as an effort to reorient knowledge towards values and ethical conduct (**adab**), so that it is inseparable from the ethical and spiritual dimensions.

Educational Reductionism: The Disconnect between Knowledge, Values, and Actions

One of the fundamental problems in green education lies in the tendency of reductionism, which is the simplification of complex educational realities into mere fragmented, separate and partial aspects. In practice, education is often reduced to a process of knowledge transfer, while the dimensions of values and actions are marginalized. As a result, education loses its transformational power and stops at a purely cognitive level.

This condition results in a significant gap between knowledge and action (*knowledge-action gap*). Students may have an adequate understanding of ecological issues such as climate change, environmental degradation, or the sustainability crisis, but this understanding is not automatically internalized into real moral or behavioral awareness. Knowledge becomes something that is "known", but not "lived".

This phenomenon shows that the main problem of green education does not lie in the lack of information, but in the weak internalization process of values. When knowledge is disconnected from the value system that orients one's life, it tends to become merely instrumental, devoid of ethical impetus. In conditions like this, students can understand the urgency of sustainability, but still get stuck in an unsustainable lifestyle.

Furthermore, the modern education system also indirectly contributes to the reproduction of these patterns. Education often goes hand in hand with a broader social logic, where success is measured through academic achievement and economic productivity, rather than through value integrity or ecological responsibility. As a result, education has the potential to produce individuals who are intellectually intelligent, but morally and pragmatically fragmented.

This condition is further reinforced by the social reality loaded with consumptive culture, where individual identity is built through consumption, rather than through ecological awareness. In such situations, the sustainability messages taught in the classroom are often confronted with contradictory daily life practices. This tension creates a dissonance that makes education lose its influence.

Thus, the failure of green education cannot be understood solely as a problem of lack of curriculum or policy, but rather as a failure to build a complete integration between knowledge, values, and actions. As long as these three dimensions are not brought together in one holistic educational process, green education will remain at the normative and symbolic level, without being able to produce real and sustainable behavioral change.

Cultural Disharmony and Internal Limitations of the Education System

In addition to global epistemological factors, there are also internal problems in the form of *cultural dissonance*, which is the incompatibility between the values taught in educational institutions and the social practices that develop in society. Green education often teaches the principle of sustainability, but the social reality actually shows patterns of consumption, exploitation, and ecological injustice.

This inconsistency or inconsistency causes education to lose its praxis legitimacy, as learners face a contradiction between what is taught and what they see in their daily lives. In this condition, education is not able to function as an agent of social transformation.

Furthermore, the education system itself is often still fragmented and has not adopted a systemic approach. A partial and sectoral approach causes green education to not be fully integrated into the curriculum, pedagogy, and institutional culture.

Based on what has been described, it can be concluded that the limitations of the green education paradigm lie in three main aspects:

1. Epistemological reduction, i.e. the dominance of secular-technocratic paradigms that ignore ethical and spiritual dimensions
2. Global knowledge hegemony, which ignores local contexts and cultural-religious values
3. Pedagogical fragmentation, which leads to a disconnection between knowledge, values, and actions

These limitations suggest that green education requires a more fundamental paradigmatic reconstruction. The reconstruction is not only pedagogical, but also epistemological and axiological, by integrating the rational, critical, and spiritual dimensions in one intact framework.

In this context, an integrative approach that combines a global perspective with local values—especially Islamic education—becomes particularly relevant. This integration serves not only as an alternative, but as a need to restore the dimensions of meaning, ethics, and transcendental responsibility in green education.

4. Conceptual Offer: An Integrative Green Education Model Based on Islamic Values

Departing from the various epistemological, pedagogical, and implementive limitations in the dominant green education paradigm, a reconstruction of an educational model that is not only adaptive to global issues, but also transformative and contextually grounded, becomes imperative. In this context, this study offers a conceptual model of integrative green education based on Islamic values as a synthesis between the global paradigm of sustainability and the framework of Islamic ethics and spirituality.

This model is not intended as a form of rejection of global frameworks such as *Education for Sustainable Development* (ESD), but as an effort to reorient and enrich epistemological treasures so that green education has a stronger depth of value and contextual relevance.

Philosophical Foundation: Integration of Tawheed, Caliph, and Ecological Mandate

Philosophically, this integrative green education model is based on three key concepts in Islamic epistemology, namely *monotheism*, *caliph*, and *trust*. The three do not stand separately, but form a complete ontological framework in looking at the relationship between God, man, and nature.

The concept of *monotheism* emphasizes the unity of reality that removes the dichotomy between the sacred and the profane, between man and nature. In this framework, nature is not positioned as an object of exploitation, but rather as part of a cosmic order that has spiritual meaning. Therefore, ecological crisis is not solely understood as environmental damage in the physical sense, but as a reflection of a crisis of consciousness that breaks human connection with the transcendental dimension. When nature loses its sacred meaning, man's relationship with it shifts from responsibility to domination.

Departing from this foundation, the concept of *the caliph* gives a functional dimension to the existence of humans on earth. Humans are not only understood as rational beings, but as moral subjects who have a mandate to maintain the balance and order of nature. This position contains the ethical implication that any human action against the environment has moral consequences. Thus, education is not enough to equip only ecological knowledge, but must form an awareness of the existential responsibility of humans as guardians, not rulers of nature.

Meanwhile, the concept of *trust* strengthens the dimension of responsibility by placing nature as a trust that must be maintained, not owned absolutely. This perspective shifts the human orientation from exploitation to sustainable and equitable management. In the context of education, this means that the purpose of learning is not only oriented to the mastery of competence, but also to the formation of ecological character (*akhlaq al-bi'ah*) that is rooted in moral and spiritual awareness.

By integrating these three concepts, green education is no longer understood as a mere technical response to the environmental crisis, but rather as a process of consciousness transformation that returns humans to their ethical position in the cosmic order. This integration is also the basis for building an educational paradigm that is not only rational and critical, but also meaningful, reflective, and value-based sustainability-oriented.

Epistemological Framework: Integration of Science, Values, and Critical Consciousness

This model proposes an epistemological reconstruction that integrates three main dimensions: *knowledge*, *values*, and *critical consciousness*. The knowledge dimension includes a scientific understanding of global environmental issues, such as climate change, biodiversity degradation, and sustainability. However, in contrast to conventional approaches, this knowledge does not stand alone, but is integrated with the value dimension derived from Islamic teachings.

The value dimension includes the internalization of Islamic ethical principles such as justice (*'adl*), balance (*mizan*), and the prohibition of damage (*fa'adah*). This integration is essential for overcoming the reductionism that has characterized green education, which has tended to privilege the cognitive dimension. Meanwhile, the dimension of critical awareness refers to the ability of students to read reality in a reflective and transformative way. In this regard, Paulo Freire's thoughts on *critical pedagogy* become relevant, where education must build awareness to change reality, not just understand it. Thus, this model seeks to address *the knowledge-action gap* through the integration of understanding, values, and critical awareness that drives real action.

The Pedagogical Dimension: The Transformation from Teaching to Transformative Learning

At the pedagogical level, this model emphasizes a shift from a *teaching-centered* approach to *transformative learning*. Green education is reconceived not as a process of knowledge transfer, but as a process of transforming consciousness and behavior. This approach adopts the principle of *experiential learning* as put forward by John Dewey, where learning must be based on real and contextual experiences. In practice, this can be realized through:

- 1) *Project-based learning*,
- 2) community-based activities (*community engagement*),
- 3) as well as critical reflection on everyday ecological experiences.

In addition, this model also emphasizes the importance of *hidden curriculum*, which is the values transmitted through institutional culture. Schools or madrasas must be an *eco-culture system* that reflects sustainability practices in daily life.

In the framework of *transformative learning*, Jack Mezirow asserts that perspective change occurs through critical reflection on basic assumptions. Therefore, green education must provide space for dialogue, reflection, and experience that enable such transformation to occur.

Institutional Dimensions: Integration of School Curriculum, Policy, and Culture

Green education transformation cannot be achieved without systemic support at the institutional level. Therefore, this model emphasizes the integration between:

1. Curriculum, by including sustainability issues in a cross-curricular *integration*,
2. School policies, which support environmentally friendly practices,
3. Institutional culture, which reflects the value of sustainability in daily practice.

In this context, the concept of *the whole-school approach* becomes relevant, where all elements of the school play a role in building a green education ecosystem. This approach is in line with the *Greening Education Partnership framework* which emphasizes the importance of transforming the education system as a whole.

However, in contrast to the global approach that tends to be technocratic, this model adds a dimension of Islamic values as the foundation of institutional culture. Thus, the transformation is not only structural, but also cultural and spiritual.

Social Dimensions: Glocal Approaches and Ecological Justice

This integrative green education model also emphasizes the importance of *the glocal* approach, which is the integration between global perspectives and local contexts. In the Indonesian context, this means integrating global frameworks such as the SDGs with local and religious values that live in society.

This approach is important to avoid what is referred to as *epistemic imposition*, i.e. the imposition of an uncontextual global framework. On the contrary, education must be able to accommodate local wisdom and

religious traditions as legitimate sources of knowledge.

In addition, this model also emphasizes the ecological *justice dimension*, namely the awareness that environmental crises have an uneven impact on community groups. In an Islamic perspective, the principle of justice (*'adl*) is the foundation for ensuring that sustainability is not only ecological, but also social.

Conclusion

This study confirms that green *education* in global discourse still faces fundamental limitations that are epistemological, pedagogical, and implementive. At the epistemological level, the dominance of the secular-technocratic paradigm has reduced green education to largely cognitive and managerial concerns, as well as ignoring the ethical and spiritual dimensions. At the global level, the hegemony of Western epistemology also has implications for a lack of sensitivity to local contexts, thus creating a gap between global discourse and educational practice at the national level.

In the Indonesian context, these problems are increasingly complex due to policy fragmentation, limited pedagogical capacity, and the lack of optimal integration of cultural and religious values in the education system. This condition reinforces the existence of a *knowledge-action gap*, where understanding of environmental issues does not automatically transform into real ecological awareness and action.

In response to these limitations, this research proposes an integrative green education model grounded in Islamic values as a conceptual synthesis that integrates the dimensions of knowledge, values, and critical awareness within a comprehensive framework. This model is based on the principles of *monotheism*, *caliphate*, and *trust*, which provide a philosophical and ethical foundation for the formation of transformative ecological consciousness. In addition, the model emphasizes a pedagogical approach based on *transformative learning*, systemic integration at the institutional level, as well as a *glocal* approach that connects global perspectives with local contexts.

Thus, the main contribution of this research lies in efforts to reconstruct the green education paradigm that is not only adaptive to global issues, but also transformative, contextual, and value-based. The model offered is expected to be an alternative framework in the development of continuing education, especially in the context of Islamic education in Indonesia.

Looking ahead, this study recommends the conduct of empirical research to examine the implementation of the proposed model, as well as the development of more integrative and value-transformation-oriented education policies. Without such efforts, green education risks remaining at the normative level without a meaningful praxis impact on an increasingly complex ecological crisis.

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