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Sustainable Development Discourse as a Resource for Critical Literacy in Indonesian Language Education

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Abstract

This study investigates sustainable development discourse in selected Indonesian mass-media texts published between 2019 and 2023 and examines its pedagogical potential as a resource for critical literacy in Indonesian language education. Employing a qualitative document-based design, the study combines document analysis, critical discourse-oriented analysis, and pedagogical mapping. Data were drawn from news reports published by *Media Indonesia, Republika, Tribun Kaltim,* and *Liputan 6* concerning sustainable development and the development of Indonesia's Nusantara Capital City. The analysis focused on lexicalization and evaluation, actor representation, problem–solution framing, voice and perspective, and counter-discourse. The findings reveal recurring discursive patterns involving green technological modernity, ecological restoration and conservation, participation and social justice, as well as environmental risk and development criticism. These patterns indicate that sustainable development is not represented as a neutral concept but is constructed through competing values, interests, and perspectives. Pedagogically, the discourse provides opportunities for students to compare media framings, evaluate claims and evidence, identify dominant and marginalized voices, and redesign texts from alternative perspectives. It also highlights the educational value of contemporary public discourse for contextually grounded learning. The study contributes a discourse-to-critical-literacy framework linking authentic media texts with Indonesian language learning and offers a basis for future classroom-based research.

Keywords: **Sustainable Development Discourse; Critical Literacy; Indonesian Language Education; Media Discourse; Pedagogical Resources**

Introduction

Sustainable development has become an important concern for contemporary education because environmental, social, economic, and technological problems are increasingly interconnected. Language education has a particular role in this context because sustainability is encountered not only through scientific knowledge but also through texts, arguments, lexical choices, and public narratives. Recent scholarship has therefore begun to position language learning as a space in which students can engage with real-world sustainability issues while developing linguistic, intercultural, and critical capacities (Kong, 2025; Maijala et al., 2024; Mambu, 2023). From this perspective, sustainable development is not simply a topic to be inserted into language materials; it is a discursive field through which particular versions of environmental responsibility, development, technology, participation, and social justice are constructed.

This orientation is closely related to critical literacy. A critical reader does more than identify the main idea of a text or understand specialized vocabulary. Critical engagement requires attention to how a text positions actors, defines problems, legitimizes solutions, foregrounds certain interests, and leaves other perspectives less visible. This is particularly relevant to sustainability discourse because expressions such as green development, renewable energy, forest restoration, low-carbon development, and inclusive growth may appear descriptive while also carrying evaluative and ideological meanings. Research in language education has shown that the mere presence of environmental content does not necessarily foster critical engagement. Cristovão et al.(2022), for example, found that environmental materials in EFL textbooks did not automatically provide adequate opportunities for developing critical environmental literacy. Similarly, Thamae and Matee (2024) emphasize the need for pedagogical practices that enable learners to assess information critically rather than receive texts passively.

A growing body of recent research has connected sustainability with language teaching, although much of it remains situated in English or foreign-language education. Mambu (2023) demonstrated that Sustainable Development Goal-related texts and teacher questions could elicit Indonesian university students' critical responses at word, sentence, and discourse levels in an English course. Maijala et al. (2024) subsequently proposed transformative language teaching for sustainability, arguing that language education can integrate linguistic development with the competencies required for sustainability-oriented learning. Kong (2025) further developed the DEEP framework to connect world-language learning with the Sustainable Development Goals through diversity, exploration, expression, and partnership. These studies provide strong evidence that sustainability can enrich language education, but their primary settings are foreign- or second-language learning rather than Indonesian language education.

Research within Indonesian language education has developed along a related but different trajectory. Rida and Rokhman (2021) identified ecolexical forms in Indonesian textbooks used in Adiwiyata schools, while Putra (2023) examined lexical and semantic features of environmental discourse in senior high school Indonesian textbooks. Suwandi et al. (2024) analyzed ecoliteracy elements in four Indonesian language textbooks and found that environmental knowledge was more prominent than cognitive skills, suggesting that the presence of ecological content does not necessarily ensure opportunities for higher-order ecological reasoning. Sarasati (2024), using critical discourse analysis, also showed that ecological representation was present in Indonesian textbooks, but connections between text production, social practice, and contemporary

ecological realities remained limited. In a related study, Andajani et al. (2024) demonstrated that environmental conservation texts in Indonesian for foreign learners can carry wider social and value-oriented meanings. These studies confirm the educational relevance of environmental discourse, yet most rely on textbooks or institutionally prepared learning materials rather than authentic public discourse.

More recent classroom-oriented work has started to move beyond textbook analysis. Hastuti and Suhita (2025) reported that ecological-literacy-based Indonesian language learning can support contextual engagement with reading, speaking, and writing. However, the emphasis was on the learning process rather than on how contemporary sustainability issues are discursively constructed in public texts. The study closest to the present research is Sukarismanti et al. (2025), who analyzed ecolexicon in Indonesian media discourse on Forest City and identified thematic domains such as biodiversity, conservation, green technology, participation, environmental threats, and sustainable urbanization. Their findings demonstrated the pedagogical potential of authentic media ecolexicon for ecological and critical literacy. Nevertheless, the analytical center remained ecolexical identification and thematic categorization; sustainable development itself was not yet fully treated as a contested discourse through which actors, priorities, problems, solutions, and competing perspectives can be critically examined.

These studies reveal a specific research gap. International scholarship has advanced frameworks linking sustainability and criticality with language education, while Indonesian research has documented ecolexicon, ecological representation, and ecoliteracy in textbooks and, more recently, in media discourse. What remains insufficiently explored is how authentic Indonesian mass-media discourse on sustainable development can be systematically transformed into a resource for critical literacy in Indonesian language education. Such an approach requires moving beyond identifying environmental terminology toward examining lexical evaluation, actor representation, problem-solution framing, included and excluded voices, and contrasting media perspectives. Authentic media texts are particularly valuable because they allow students to encounter sustainability as an ongoing public debate rather than as a stabilized body of textbook knowledge.

Accordingly, this study examines sustainable development discourse in selected Indonesian mass-media texts and explores its pedagogical potential for critical literacy in Indonesian language education. The novelty of the study lies in three related contributions: it shifts the focus from isolated ecolexicon to sustainable development as discourse; it uses authentic cross-media texts rather than relying primarily on textbooks; and it establishes a discourse-to-critical-literacy pathway by connecting linguistic and discursive features with practices such as comparing representations, evaluating claims and evidence, identifying actor positions, recognizing marginalized perspectives, and constructing alternative interpretations. The study therefore addresses three questions: (1) How is sustainable development represented in selected Indonesian mass-media discourse? (2) What linguistic and discursive patterns characterize the representation of actors, environmental problems, development priorities, and sustainability solutions? and (3) How can these discourse features be used as resources for critical literacy in Indonesian language education?

Method

2.1 Research Design

This study employed a qualitative document-based design combining document analysis, critical discourse-oriented analysis, and pedagogical mapping. Document analysis was used to examine naturally occurring media texts systematically (Bowen, 2009), while a critical discourse perspective was applied to investigate how linguistic choices construct particular representations of sustainable development, social actors, environmental problems, and proposed solutions (Fairclough, 2015). The pedagogical interpretation was informed by critical literacy, particularly Janks' (2010) concepts of domination, access, diversity, and design. Because no classroom intervention was conducted, the study examined pedagogical potential rather than measurable changes in students' critical literacy.

2.2 Data Sources

The primary data consisted of Indonesian online news texts on sustainable development and the development of Nusantara Capital City (IKN), collected from Media Indonesia, Republika, Tribun Kaltim, and Liputan 6. The final corpus comprised [N articles] published between [publication period]. Articles were selected purposively when they contained substantive discussion of environmental management, ecological restoration, green technology, community participation, social justice, environmental risk, or sustainable urban development. The previously compiled ecolexicon inventory was used only as an initial coding index; all interpretations were based on the original sentence or paragraph in which each expression occurred.

2.3 Data Analysis

Analysis was conducted in three stages. First, sustainability-related lexical items and textual segments were identified and grouped into recurrent themes, including green technology and sustainable urban development, ecological restoration and conservation, participation and social justice, and environmental risk and development criticism. Second, representative passages were examined for lexicalization and evaluation, actor representation and agency, problem-solution framing, voice and perspective, and counter-discourse. Cross-media comparison was used to identify similarities and differences in the way sustainability was represented. This procedure shifted the analysis from simply identifying environmental vocabulary to examining how particular versions of sustainable development were constructed through language.

2.4 Pedagogical Mapping and Trustworthiness

In the final stage, the discourse findings were mapped onto critical-literacy practices in Indonesian language education. The mapping included identifying dominant positions, comparing different media representations, evaluating claims and evidence, recognizing included and excluded voices, and redesigning texts through alternative headlines, arguments, or perspectives. These activities were aligned with receptive and productive competencies in Indonesian language learning. Analytical rigor was strengthened by checking each interpretation against the original media context, maintaining a coding matrix, revisiting contradictory cases, and distinguishing explicitly between media statements and researcher interpretation.

Findings

The analysis shows that the sustainable development discourse represented in the Indonesian media corpus is multidimensional rather than semantically uniform. The ecolexical inventory contains terms relating to ecosystems and biodiversity, conservation

and restoration, green technology, sustainable urban development, participation and collaboration, social justice, environmental degradation, and the integration of nature and urban life. When these lexical items are interpreted as discourse rather than as isolated vocabulary, they reveal several recurrent ways of defining development, environmental responsibility, technological progress, social inclusion, and ecological risk.

Five major findings emerged. Four describe the dominant and competing constructions of sustainable development across the media corpus, while the fifth explains the pedagogical affordances of those constructions for critical literacy in Indonesian language education. The findings are presented qualitatively because the available inventory is designed primarily for lexical and thematic coding; no inferential claim is made from raw frequency alone.

Table 1. Major sustainable-development discourse themes in the media corpus

Theme	Representative ecolexical markers	Discursive orientation	Critical-literacy potential
Green technological modernity	smart forest city; green building; net zero carbon; renewable energy; solar panels; electric transport; green infrastructure	Sustainability is associated with technological capacity, planning, efficiency, and future-oriented urban development.	Question how labels such as smart, green, and low-carbon create positive evaluation and what evidence is offered for them.
Ecological restoration and conservation	reforestation; restoration; revegetation; biodiversity; rehabilitation; endemic species; watershed rehabilitation	Environmental damage is represented as repairable through scientific, institutional, and managerial intervention.	Examine what ecological damage makes restoration necessary and what causal histories are backgrounded.
Participation, inclusion, and social justice	community participation; empowerment; leave no one behind; local wisdom; indigenous rights; welfare; inclusion	Sustainability extends from environmental protection to social recognition, participation, and distribution of benefits.	Ask who is represented as an agent, beneficiary, expert, partner, or marginalized group.
Environmental risk and counter-discourse	deforestation; degradation; mining pits; water scarcity; pollution; climate change; inequality; social conflict	The green-development narrative is destabilized by environmental costs, uncertainty, and unequal social consequences.	Compare affirmative and skeptical framings of the same development project.
Pedagogical critical-literacy resources	contrasting lexical choices, actors, evaluations, evidence, omissions, and problem-solution frames	Authentic media texts provide competing constructions rather than one authorized version of sustainability.	Develop comparison, source evaluation, ideological reading, and counter-text production.

Sustainability as Green Technological Modernity

The first and most visible pattern constructs sustainable development as a form of green technological modernity. Across the corpus, sustainability is repeatedly associated with expressions such as smart forest city, green building, net zero carbon, renewable energy, solar panels, electric vehicles, green rooftops, sponge city, low-carbon energy ecosystem, Geographic Information System (GIS), Building Information Modeling (BIM), and Forest Command Center. The semantic proximity of environmental and technological vocabulary is important: environmental responsibility is not represented as a retreat from modernization, but as a technologically advanced version of modernization itself.

Media Indonesia illustrates this construction through its coverage of urban planning and green buildings in Nusantara. The report foregrounds the Forest City concept and presents the greening of the urban environment as a defining characteristic of the new capital. A representative formulation is:

"konsep Nusantara ini kan forest city" (Media Indonesia, Polycarpus, 2023)

The expression places forest city in the position of an already-established conceptual identity. Rather than presenting the term as one policy option among several alternatives, the clause frames it as the organizing logic of Nusantara. The surrounding report links this identity to green buildings and a spatial plan in which more than three quarters of the area is expected to remain green. The lexical association among forest, green, building, and planning transforms sustainability into a spatial and technological design principle.

Republika constructs a similar compatibility between ecological protection and technological modernization. In reporting a government visit to the Nusantara area, the outlet reproduces a numerical formulation of the Smart Forest City concept:

"70 persen kawasan hijau dan 30 persen infrastruktur dan teknologi modern"
(Republika, Risalah, 2022)

The proportional contrast produces an apparently measurable balance between green space and modern infrastructure. Discursively, this is significant because the formulation reduces a potentially complex ecological question to a legible spatial ratio. It implies that ecological sustainability and technological infrastructure can coexist within a planned quantitative arrangement. The phrase also gives the sustainability claim an aura of precision, even though the percentage itself does not explain ecological quality, connectivity, species diversity, or long-term land-use change.

The Tribun Kaltim material reinforces the same developmental imagination through lexical items such as Smart City, Net Zero Carbon, electric transport, green rooftops, low-carbon energy, biodiversity clusters, and smart forestry monitoring. In its official video description concerning reforestation in Nusantara, Tribun Kaltim characterizes the miniature tropical forest as a:

"living lab transformasi hutan tanaman monokultur menjadi hutan tropis"
(Tribun Kaltim Official, 2023)

The expression living lab is especially revealing because ecological restoration is framed as innovation, experimentation, and demonstrable transformation. Nature becomes simultaneously an ecological object and a technological-developmental project. This discourse does not necessarily negate ecological values, but it positions institutional and scientific intervention as the principal means through which ecological futures are expected to be produced.

For critical literacy, the importance of this theme lies in the evaluative force of ostensibly descriptive terms. Smart, green, sustainable, zero-carbon, and renewable are difficult to oppose because they carry strong positive associations. Students therefore need opportunities to distinguish favorable labels from evidence. A critical reading can ask what indicators are used to justify the label green, which consequences are measured, what forms of environmental impact are absent from the description, and whether technological efficiency is being treated as equivalent to ecological sustainability.

Ecological Restoration as a Problem-Solution Narrative

The second theme constructs sustainable development through a strong discourse of ecological repair. The inventory contains reforestation, forest restoration, revegetation, rehabilitation, rehabilitation of post-mining land, restoration of biodiversity, endemic and native species, watershed rehabilitation, conservation, green belts, nursery centers, and restoration of tropical rainforest. These lexical items establish a problem-solution sequence: an environment that has been degraded, converted, mined, or simplified is represented as capable of being repaired through planned ecological intervention.

This pattern is particularly explicit in Liputan6 coverage. Reporting the Nusantara Capital Authority's international collaboration agenda, the article states that the authority is committed to:

"mengubah tren deforestasi menjadi reforestasi" (Liputan6, Kencana, 2023)

The construction creates a clear directional opposition between ecological loss and ecological recovery. Deforestation becomes the negative starting point, whereas reforestation functions as the desired endpoint. The narrative is rhetorically efficient because it condenses a complex land-use history into a reversible trajectory. At the same time, it raises questions that are central to critical literacy: What kinds of forest were lost? Can reforestation recreate ecological functions equivalent to the previous ecosystem? Who determines the criteria for successful restoration? And does the narrative treat restoration as compensation for development rather than as a reason to reconsider certain development practices?

Media Indonesia also repeatedly connects sustainability with restoration. Its corpus includes rehabilitation of land, conservation of endemic forest plants, restoration of lowland tropical forest, reforestation, revegetation, tree planting, and the transformation of monoculture landscapes. Another article on the Nusantara Green Pesantren program represents community-based greening as part of the broader Forest City vision and describes the pesantren as a potential:

"pelopor untuk penghijauan atau sustainable forest city di IKN" (Media Indonesia, Nurcahyadi, 2024)

Here, restoration is extended from government planning into an educational and community setting. Tree planting, agroforestry, rainwater harvesting, solar panels, responsible waste management, vertical farming, and environmentally friendly yards are assembled within one sustainability discourse. This lexical accumulation constructs sustainability as a package of mutually reinforcing practices rather than a single environmental intervention.

Republika and Tribun Kaltim show comparable problem-solution patterns through expressions such as restoration of tropical forest, reforestation, rehabilitation of forest and land, biodiversity action plan, revegetation of mining areas, and the conversion of eucalyptus-dominated monoculture into tropical forest. The recurrence of repair vocabulary makes ecological restoration one of the central moral narratives of the corpus: environmental damage is acknowledged, but the discourse simultaneously foregrounds the possibility of institutional correction.

Pedagogically, this pattern can be used to move students beyond identifying the meanings of reforestation, rehabilitation, and revegetation. Students can reconstruct the implicit causal chain of each article: what is identified as the problem, who is blamed or left unnamed, what solution is proposed, who is authorized to implement it, and what evidence is provided that the proposed solution can address the original damage. Such analysis turns environmental vocabulary into an entry point for examining presupposition, causality, agency, and omission.

Participation, Inclusion, and Social Justice as Dimensions of Sustainability

A third theme broadens sustainable development beyond ecological and technological vocabulary. The corpus contains expressions such as community involvement, empowerment, collaboration, leave no one behind, welfare, equality, local wisdom, indigenous rights, local-community independence, aspirations, participation, and cross-institutional cooperation. This pattern is analytically important because it

represents sustainability as a social relationship rather than merely a technical condition of buildings, energy systems, or forest cover.

Media Indonesia's Nusantara Green Pesantren report is particularly illustrative. The sustainability program is narrated through the participation of the Nusantara Capital Authority, pesantren communities, residents, donors, digital platforms, and environmental organizations. The article links greening with community empowerment and the productive use of land. Consequently, tree planting is not presented only as carbon or biodiversity management; it is also positioned as a community-development activity.

Republika similarly includes lexical items referring to tree planting with communities and schoolchildren, local participation, cross-institutional collaboration, and peaceful coexistence between people and wildlife. These expressions assign social legitimacy to sustainability by representing environmental action as collective. The discourse implies that sustainable development requires participation, although the lexical item participation itself does not specify the depth of decision-making power that communities actually possess.

The Tribun Kaltim inventory makes the justice dimension especially visible. It contains formulations concerning local communities not being marginalized, tolerance for local wisdom, indigenous rights, the welfare of enclave communities, policies that benefit local residents, communication with communities, and the improvement of local capabilities. These items shift the criterion of successful development from physical completion to distribution and recognition: sustainable development is implicitly judged by whether local populations retain voice, benefit, cultural continuity, and social agency.

For critical literacy, this is a crucial finding because the vocabulary of participation can itself be examined critically. Students can ask whether local communities appear as grammatical agents or as objects of government programs, whether community members are quoted directly or spoken for by officials, whether participation refers to consultation or shared decision-making, and whether welfare is defined by local actors or external institutions. Critical reading therefore does not reject the discourse of inclusion; it tests the relationship between inclusive language and the distribution of discursive authority.

Counter-Discourses of Environmental Risk, Inequality, and Unfinished Sustainability

The fourth finding is the presence of substantial counter-discourse. The media inventory does not contain only positive labels such as smart, green, inclusive, and sustainable. It also records deforestation, forest and land degradation, forest fires, water scarcity, global warming, floods, greenhouse-gas emissions, air pollution, mining pits, ecosystem damage, exploitation, social conflict, and unequal development. These terms complicate the dominant narrative by foregrounding costs, contradictions, and uncertainties.

The counter-discourse becomes especially explicit in Liputan6 political coverage. In a report presenting criticism of Nusantara as a strategy for national equalization, the article reproduces the phrase:

"sebuah kota baru yang timpang" (Liputan6, Nelfira, 2023)

The adjective timpang (unequal or imbalanced) reverses the positive evaluative vocabulary of green and inclusive development. The same physical project can therefore be discursively constructed as a model of sustainable modernization or as a source of new inequality. This is exactly the kind of contrast required for critical literacy because it

demonstrates that media texts do not simply describe a stable reality; they position events within competing explanatory and evaluative frameworks.

The Liputan6 corpus also includes a report summarizing expert discussion that Nusantara was not yet ready to become a forest city. Read together with the corpus terms concerning unhealthy watersheds, eucalyptus monoculture, social conflict, environmental restoration, and forest rehabilitation, this counter-frame introduces temporal uncertainty. The forest-city identity is represented not only as an existing achievement but also as an aspiration whose ecological conditions remain under development.

Similar tension is present across the broader corpus. Media Indonesia records both the language of green infrastructure and the language of degradation, fossil fuels, food and water crises, and deforestation. Republika combines restoration and green-energy narratives with logging, forest conversion, floods, fire, and greenhouse-gas emissions. Tribun Kaltim combines smart-city and biodiversity language with mining pits, post-mining land, ecosystem damage, pollution, and forest exploitation. The simultaneous presence of these lexical fields prevents the corpus from being read as a single promotional discourse.

This tension offers one of the strongest pedagogical resources in the dataset. Students can compare headlines and excerpts that celebrate sustainable urban development with texts that question readiness, ecological consequences, or distributive justice. They can identify evaluative adjectives, quotation patterns, modality, causal claims, evidential support, and source selection. More importantly, students can examine how linguistic choices position readers toward the same development project without being instructed in advance to adopt a predetermined pro- or anti-development stance.

Sustainable Development Discourse as a Critical-Literacy Resource

The fifth finding concerns pedagogical transformation. The corpus is useful for Indonesian language education not because it provides environmental vocabulary alone, but because it contains multiple representations of a contemporary public issue. Critical literacy requires readers to examine texts as socially positioned constructions and to ask how language organizes knowledge, authority, difference, and possible action (Janks, 2010; Luke, 2012). The coexistence of technological optimism, ecological restoration, participation, and counter-discourse makes the media corpus suitable for this purpose.

The data support at least five pedagogical practices. First, students can analyze evaluative lexical choices by comparing terms such as smart, green, sustainable, resilient, degraded, critical, and unequal. Second, they can examine agency by identifying who acts, who receives action, who is quoted, and who is absent. Third, they can compare problem-solution framing across media outlets. Fourth, they can assess source authority and evidence, including the use of government statements, expert opinion, percentages, targets, and projected outcomes. Fifth, students can reconstruct or rewrite media texts from alternative stakeholder perspectives. These tasks integrate vocabulary, reading comprehension, grammar, discourse analysis, argumentation, speaking, and writing with critical interpretation.

Table 2. Mapping sustainable-development discourse onto critical-literacy activities in Indonesian language education

Discourse feature	Critical question	Possible Indonesian-language activity	Critical-literacy outcome
Evaluative labels and ecolexicon	What values are carried by smart, green, sustainable, degraded, or unequal?	Compare lexical choices in two news texts; classify denotation and evaluative connotation.	Recognizing that word choice positions readers.

Discourse feature	Critical question	Possible Indonesian-language activity	Critical-literacy outcome
Actors and agency	Who acts, who benefits, who is affected, and who is absent?	Analyze subjects, predicates/processes, passive constructions, and quoted speakers.	Interrogating representation and voice.
Problem-solution framing	What problem is foregrounded and what solution is normalized?	Map problem-cause-solution structures across reports on reforestation, energy, and urban development.	Evaluating causal and policy assumptions.
Evidence and authority	Which claims rely on data, official voices, experts, or assertion?	Annotate statistics, attribution, modality, and supporting evidence.	Assessing credibility and evidential strength.
Silences and alternatives	What ecological cost, local voice, or alternative solution is missing?	Rewrite a paragraph/headline from a local-community, environmental, or policy perspective.	Producing counter-texts and alternative meanings.

The pedagogical implication is not that Indonesian language education should persuade students to accept or reject Nusantara development. Rather, authentic sustainable-development discourse can be used to cultivate disciplined textual skepticism: students learn to justify interpretations with linguistic evidence, compare sources, recognize competing framings, and produce alternative representations. In this sense, sustainability becomes a meaningful content domain through which language learning and critical literacy can be developed simultaneously.

Discussion

The findings extend previous work on environmental language education in three important ways. First, they demonstrate that an ecolexical inventory becomes more pedagogically productive when it is interpreted as discourse rather than treated only as a vocabulary list. Second, they show that authentic media discourse provides internal contrast between affirmative and critical representations of sustainability. Third, they suggest that Indonesian language education can use this contrast to develop critical literacy without abandoning its core linguistic competencies. The following discussion relates these contributions to recent research in language education, ecolinguistics, ecological literacy, and sustainability education.

4.1 From Ecolexicon to the Discursive Construction of Sustainability

Previous Indonesian ecolinguistic research has established that environmental lexical items are present in language-learning materials and can contribute to environmental awareness. Putra (2023), for example, found that environmental discourse in Indonesian senior-high-school textbooks contained lexical and semantic resources connected with ecolinguistics and ecopedagogy, although environmental material remained limited and often informative. The present findings move one step beyond lexical presence. The key issue is not simply whether a term such as reforestation, biodiversity, green building, or deforestation occurs, but how that term participates in a larger narrative of development.

This shift is theoretically consequential. Sustainable development is constructed through relations among words: smart is repeatedly associated with forest city; restoration is placed against degradation; participation is linked to welfare and inclusion; and inequality interrupts the discourse of national equalization. Meaning therefore emerges through patterns of opposition, association, evaluation, agency, and causality. Such patterns support a discourse-oriented pedagogy because they invite students to ask why one lexical choice is preferred over another and what social interpretation becomes easier to accept as a result.

The result also refines the contribution of Sukarismanti et al. (2025), whose study of Forest City media discourse identified six ecolexical domains and argued that ecolexicon could support ecological and critical literacy. The present analysis confirms the importance of those thematic domains but repositions them as competing discursive constructions. Green technology and restoration do not merely form two categories of environmental vocabulary; they form narratives about how sustainability should be achieved. Likewise, environmental threats are not merely negative lexical items; they function as counter-discourse that can unsettle optimistic representations. The contribution is therefore a movement from categorization toward critical comparison.

Technological Optimism and the Limits of a Knowledge-Only Sustainability Pedagogy

The prominence of smart-city, green-building, renewable-energy, and carbon-related vocabulary suggests that sustainability is strongly mediated through technological optimism. This is understandable within contemporary urban sustainability discourse, but it raises an educational risk. Students may learn to recognize sustainability terminology without learning to interrogate the assumptions embedded in it. Suwandi et al. (2024) provide a useful comparison: their analysis of four Indonesian language textbooks found that ecoliteracy knowledge was represented more frequently than cognitive skills. The imbalance indicates that the presence of environmental content does not automatically cultivate higher-order ecological reasoning.

The current findings offer a practical response to that problem. A media sentence containing smart forest city can be used first for vocabulary comprehension, but critical literacy requires a second layer of questioning: What counts as smart? Who defines the indicator? Does a target for green space describe ecological quality or only land allocation? What forms of development remain outside the frame? Such questions transform environmental knowledge into analytical practice. This is consistent with Cristovão et al. (2022), who concluded that incorporating environmental material into language textbooks is insufficient when the pedagogical treatment does not support critical environmental literacy.

The problem is therefore not technological vocabulary itself. Terms such as renewable energy, solar panels, low-carbon systems, and digital monitoring can expand students' contemporary lexical repertoire and connect language learning with public policy. The pedagogical challenge is to avoid treating their positive evaluation as linguistically neutral. Critical literacy makes it possible to retain the informational value of such terms while testing the claims constructed around them.

Restoration, Responsibility, and the Importance of Asking What Precedes the Solution

The restoration theme also deserves critical attention. Reforestation, revegetation, rehabilitation, conservation, and biodiversity recovery are normatively positive concepts. Yet their discourse structure frequently begins from an already-damaged environment and moves quickly toward institutional repair. If students encounter only the solution vocabulary, they may not investigate the causal history that made restoration necessary. Critical literacy redirects attention to the relation between problems and proposed remedies.

This pedagogical orientation resonates with the criticality demonstrated in Mambu's (2023) study of Sustainable Development Goals in an Indonesian university English course. Mambu found that carefully selected SDG texts and teacher prompts could elicit critical responses at word, sentence, and discourse levels. The present corpus can

support an analogous progression in Indonesian language education. At the word level, students interpret deforestation and reforestation. At the sentence level, they identify agency and causal relationships. At the discourse level, they compare whether development is framed as the cause of ecological pressure, the solution to pre-existing environmental degradation, or both.

The restoration discourse is therefore not rejected; rather, it becomes an object of evidence-based inquiry. Students can compare descriptions of monoculture, post-mining landscapes, and degraded watersheds with promises of tropical-forest restoration and biodiversity improvement. They can then evaluate whether the text supplies evidence sufficient to connect the proposed intervention with the claimed outcome. This practice combines reading comprehension, argument evaluation, vocabulary, and environmental reasoning in a manner directly relevant to Indonesian language education.

Social Justice and Counter-Discourse as the Strongest Entry Point for Critical Literacy

Among all themes, the coexistence of social-justice vocabulary and counter-discourse may offer the strongest foundation for critical literacy. Critical literacy is concerned with the relationship between language, representation, and power, including questions of whose perspectives become authoritative and whose experiences remain marginal (Janks, 2010; Luke, 2012). The corpus provides concrete material for such questioning because local participation, indigenous rights, inclusion, welfare, inequality, and social conflict occur alongside institutional narratives of green development.

The contrast between a smart, sustainable forest city and a "new city marked by inequality" demonstrates how the same development project can be evaluated through fundamentally different social frames. This does not mean that one media representation is automatically correct and another false. Rather, the contrast gives students an opportunity to inspect evidence, source attribution, political positioning, lexical evaluation, and omitted information. Critical literacy is strongest when interpretation is constrained by textual evidence rather than reduced to personal agreement or disagreement.

This point is important for avoiding an ideological weakness that sometimes appears in critical pedagogy. A classroom should not replace one unquestioned narrative with another. Instead of instructing students that development discourse is manipulative or that sustainable-development claims must be accepted, teachers can require students to explain how a text constructs its position and to compare that construction with another source. The pedagogical criterion becomes quality of reasoning: identification of linguistic evidence, recognition of assumptions, evaluation of sources, and capacity to construct a defensible alternative reading.

Authentic Media Discourse and Transformative Language Education for Sustainability

The use of authentic media texts also broadens the role of language education in sustainability learning. Maijala et al. (2024) argue for transformative language teaching for sustainability, in which the distinctive linguistic and cultural resources of language education are integrated with the competencies of Education for Sustainable Development. The present findings provide a context-specific mechanism for doing so in Indonesian language education. Sustainability is not added as a decorative topic; it becomes the content through which students practice lexical analysis, textual comparison, source evaluation, argumentation, speaking, and writing.

Authentic media discourse has an advantage over a single textbook passage because it allows cross-text comparison. Cristovão et al. (2022) warned that environmental materials incorporated into textbooks may not necessarily create conditions for critical environmental literacy. The present corpus addresses part of this limitation by preserving differences among media representations. Students can compare an official sustainability target reported by one outlet, a restoration narrative in another, and an inequality critique in another. This intertextuality creates a natural basis for examining framing and perspective.

The approach is also compatible with Mambu's (2023) finding that criticality can be developed through carefully designed prompts around sustainability-related texts. In Indonesian language education, similar prompts can be aligned with established competencies: identifying information, interpreting vocabulary in context, analyzing textual structure, evaluating argument, delivering oral responses, and producing argumentative or explanatory texts. Critical literacy thus operates not as an additional subject outside Bahasa Indonesia, but as a higher-order orientation to existing language practices.

Theoretical and Pedagogical Contribution

Theoretically, the study proposes a discourse-to-critical-literacy pathway. The pathway begins with ecolexical evidence but does not end with lexical classification. Lexical items are first grouped into sustainability themes, then interpreted as discursive patterns involving evaluation, agency, causality, problem-solution structures, and competing perspectives. These patterns are subsequently transformed into critical-literacy questions and language-learning activities. The model therefore links ecolinguistic data, discourse analysis, and language pedagogy in one analytical sequence.

Pedagogically, the approach responds to the knowledge-heavy tendency identified by Suwandi et al. (2024). It shifts the emphasis from knowing sustainability terminology to using language to evaluate sustainability claims. The proposed activities require students to justify interpretations, compare sources, test evidence, identify missing perspectives, and rewrite texts. These are language practices as much as sustainability practices. They can therefore contribute to critical literacy while remaining clearly anchored in the disciplinary aims of Indonesian language education.

The study also differentiates itself from earlier Indonesian ecolexicon research by treating media disagreement as an educational asset. Sukarismanti et al. (2025) established the pedagogical relevance of Forest City ecolexicon; the present study develops that premise by showing how contrasting media constructions can become the organizing principle for critical-literacy tasks. The novelty lies less in discovering entirely new environmental vocabulary than in demonstrating how existing lexical resources can be reorganized into a systematic pedagogical framework for interrogating sustainable-development discourse.

Interpretive Boundary

The findings should nevertheless be interpreted within the boundaries of the dataset. The ecolexical inventory is suitable for identifying recurring semantic and discursive domains, but final article submission should retain the original full news texts as the primary corpus so that every lexical item and interpretation can be checked against its sentence and paragraph context. The quotations included in this section were cross-checked against publicly accessible media pages or official media materials. The study also does not claim that the proposed activities have already improved students' critical

literacy; the educational contribution is a pedagogical mapping that requires subsequent classroom testing.

This boundary strengthens rather than weakens the argument. The present study demonstrates the discursive and pedagogical affordances of sustainable-development media texts. A subsequent intervention study could examine how students actually respond to the framework, whether their source evaluation and discourse-analysis skills improve, and which forms of scaffolding are most effective across educational levels.

Conclusion

This study demonstrates that sustainable development discourse in Indonesian mass media offers substantial pedagogical potential for critical literacy in Indonesian language education. The analyzed discourse does not merely present environmental vocabulary, but constructs particular understandings of development through recurring representations of green technology, ecological restoration, conservation, social participation, environmental risk, and development criticism. These representations show that sustainability is discursively negotiated rather than communicated as a single, neutral concept.

The findings further indicate that authentic media texts can function as meaningful resources for critical literacy because they enable learners to examine lexical choices, actor representation, problem–solution framing, evaluative language, competing perspectives, and marginalized voices. In this sense, Indonesian language education can move beyond conventional comprehension toward a more critical engagement with public discourse. Students can be encouraged not only to understand what a text says, but also to question how sustainability is represented, whose interests are emphasized, what assumptions are normalized, and what alternative interpretations may be constructed.

The main contribution of this study lies in connecting sustainable development discourse with critical literacy through a pedagogical pathway grounded in authentic media texts. Rather than treating environmental discourse merely as thematic content or vocabulary enrichment, the study positions it as a resource for critical reading, comparison, evaluation, discussion, and text redesign in Indonesian language learning. This approach strengthens the role of language education as a space for developing linguistic competence together with critical and socially responsive literacy.

However, the study is limited to selected Indonesian media texts and does not directly investigate classroom implementation or measure changes in students' critical literacy. Therefore, the proposed pedagogical implications should be understood as analytically derived possibilities rather than empirically tested learning outcomes. Future studies should examine the framework through classroom-based research, compare its application across educational levels, and investigate how students respond to competing sustainability narratives in different media contexts.

References

Andajani, K., Pratiwi, Y., Susanto, G., Prastio, B., Rahayuningtyas, W., & Hayeeteh, P. (2024). How is discursive practice on l2 learners conducted? Exploring peace values in environmental conservation texts in textbooks for Indonesian language for foreign speakers. *Cogent Education*, *11*(1), 2355824. https://doi.org/10.1080/2331186X.2024.2355824

Bowen, G. A. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, *9*(2), 27–40. https://doi.org/10.3316/QRJ0902027

Cristovão, V. L. L., Sanches, B., & Smart, G. (2022a). Environmental discourse in Brazilian English-as-a-foreign-language textbooks: Socio-discursive practices and their implications for developing students' critical environmental literacy. *Environmental Education Research*, *28*(1), 75–94. https://doi.org/10.1080/13504622.2021.2007855

Cristovão, V. L. L., Sanches, B., & Smart, G. (2022b). Environmental discourse in Brazilian English-as-a-foreign-language textbooks: Socio-discursive practices and their implications for developing students' critical environmental literacy. *Environmental Education Research*, *28*(1), 75–94. https://doi.org/10.1080/13504622.2021.2007855

Fairclough, N. (2015). *Language and power* (Third edition). Routledge, Taylor & Francis Group.

Hastuti, S., & Suhita, R. (2025). Indonesian Language Learning Based on Ecological Literacy in Improving Students Language Skills. *Journal Evaluation in Education (JEE)*, *6*(1), 113–121. https://doi.org/10.37251/jee.v6i1.1297

Janks, H. (2010). *Literacy and power*. Routledge.

Kong, K. (2025). DEEP framework: Transforming language learning with UN SDGs. *Foreign Language Annals*, *58*(4), 941–965. https://doi.org/10.1111/flan.70019

Luke, A. (2012). Critical Literacy: Foundational Notes. *Theory Into Practice*, *51*(1), 4–11. https://doi.org/10.1080/00405841.2012.636324

Maijala, M., Gericke, N., Kuusalu, S.-R., Heikkola, L. M., Mutta, M., Mäntylä, K., & Rose, J. (2024). Conceptualising transformative language teaching for sustainability and why it is needed. *Environmental Education Research*, *30*(3), 377–396. https://doi.org/10.1080/13504622.2023.2167941

Mambu, J. E. (2023). Embedding Sustainable Development Goals into critical English language teaching and learning. *Critical Inquiry in Language Studies*, *20*(1), 46–76. https://doi.org/10.1080/15427587.2022.2099863

Putra, D. A. K. (2023). Ecolinguistic study on environmental discourse in senior high school (MA/SMA) Indonesian textbook. *KEMBARA Journal of Scientific Language Literature and Teaching*, *9*(1), 124–134. https://doi.org/10.22219/kembara.v9i1.22561

Rida, A., & Rokhman, F. (2021). The Ecolexicon Forms in Indonesian Language Textbooks: Ecolinguistic Studies at Adiwiyata School. *Seloka: Jurnal Pendidikan Bahasa Dan Sastra Indonesia*, *10*(1). https://doi.org/10.15294/seloka.v10i1.44692

Sarasati, R. (2024). Representasi Ekologis pada Buku Teks: Analisis Wacana Kritis untuk Kesadaran Ekologis. *GHANCARAN: Jurnal Pendidikan Bahasa Dan Sastra Indonesia*. https://doi.org/10.19105/ghancaran.vi.17205

sukarismanti, Rokhman, F., Yuniawan, T., Mardikantoro, H. B., Maksianus, K., & Samsudin. (2025). Integrating Ecolexicon into Indonesian Language Teaching to Enhance Ecological Literacy Through Media Discourse on Forest City. *Universitas Negeri Semarang*.

Suwandi, S., Drajati, N. A., Handayani, A., & Tyarakanita, A. (2024). The analysis of Ecoliteracy elements in language textbooks. *Cogent Education*, *11*(1), 2300907. https://doi.org/10.1080/2331186X.2023.2300907

Thamae, L., & Matee, L. G. (2024). Critical Literacy Sustainability: What Pedagogical Practices? Whose Role? *Discourse and Communication for Sustainable Education*, *15*(2), 115–130. https://doi.org/10.2478/dcse-2024-0020