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**| RESEARCH ARTICLE**

## **Ecopoetry-Based Instructional Model for Enhancing High School Students' Creative Writing Skills in Indonesia**

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**| ABSTRACT**

In a time of increasing environmental challenges, it is essential to incorporate ecological literacy into education, especially through subjects that involve both cognitive and emotional engagement, such as literature. In the setting of Indonesian high schools, poetry education frequently lacks relevance to students' lived experiences and environmental issues, hence constraining its transformative capacity. Current methodologies rarely use ecological issues as a stimulus for creative writing, resulting in a deficiency in educational frameworks that connect ecological consciousness with literary creation. This study presents and analyzes an Ecopoetry-Based Instructional Model, based on Garrard's six ecological categories, aimed at improving students' creative writing abilities while promoting ecological awareness. The model was designed, verified, and evaluated using a Design-Based Research (DBR) methodology across three public high schools in Parepare, Indonesia, engaging 180 Grade X students. Results demonstrate considerable enhancement in poetic components like imagery, metaphor, and emotional tone, as well as heightened student motivation and engagement. The validation results affirmed the model's educational clarity and practical viability. The research emphasizes the value of incorporating local knowledge and personal experiences into poetry expression, hence enhancing ecocritical theory within effective classroom practices. These results indicate that ecopoetry can function as an effective medium for environmental teaching and provide scalable applications across many educational settings.

**| KEYWORDS**

Ecopoetry, Creative Writing, Ecological Literacy, High School Education, Design-Based Research

**| ARTICLE INFORMATION**

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### **1. Introduction**

In the 21st century, education is experiencing a significant shift, driven by the swift advancement of globalization, the climate catastrophe, and the digital revolution (Imamov & Semenikhina, 2021; Mohamed et al., 2022; Alenezi et al., 2023). In this worldwide transition, education is shifting from solely emphasizing cognitive mastery to increasingly fostering students' creative thinking, cultural understanding, and environmental responsibility. A fundamental competency required by 21st-century educational frameworks—such as those established by UNESCO and the OECD—is creativity, especially in the manner students articulate ideas, emotions, and perceptions of their surroundings (Thornhill-Miller et al. 2023; González-Pérez & Ramírez-Montoya, 2022; Dilekçi & Karatay, 2023; Pérez-Sanagustín et al. 2022). Creative writing, particularly poetry, functions as an effective medium for this objective, enabling learners to express intricate internal experiences and societal realities through imaginative, emotive, and symbolic language (Hossain, 2024; Gilbert, 2021; Alghamdi & Alotaibi, 2022; Beghetto & Madison, 2022).

Language and literary education, especially in the realm of poetry instruction, possesses distinct potential to cultivate these creative abilities (Calafato, 2024; Hossain, 2024; Guttesen & Kristjánsson, 2022). Composing poetry allows children to explore varied themes, enhance aesthetic sensitivity, and develop emotional intelligence. Furthermore, it provides a means for cultivating multiliteracy, especially via imagery, symbolism, and rhythm (Jusslin & Höglund, 2021; Jack & Illingworth, 2024). In Indonesia, where Bahasa Indonesia is a fundamental topic at all educational levels, poetry writing is integrated into the national

curriculum and seen as an essential aspect of linguistic and cultural advancement. Nonetheless, despite its theoretical significance, poetry composition in Indonesian educational institutions has frequently been devalued or relegated to mechanical tasks devoid of originality and contextual relevance (Adriansyah et al. 2024; Anum et al. 2025; Widodo, 2023).

Recent environmental and sociological changes have necessitated a reevaluation of educational objectives in Indonesia. The nation's susceptibility to ecological deterioration, climatic catastrophes, and biodiversity depletion has heightened the imperative of integrating environmental awareness into educational curriculum (Saro et al. 2025; Bushra et al. 2024). As a result, there is increasing interest in incorporating environmental concerns across disciplines, including language and literature, through what is commonly known as ecocritical or ecological education. Ecocriticism, as a literary theory, underscores the relationship between human and non-human existence and examines works through the perspectives of environmental ethics, sustainability, and localized knowledge. This methodology in literary studies has developed into a subgenre termed ecopoetry, focusing on themes of nature, ecological consciousness, and environmental justice (Fadhilla et al., 2025; Guryel et al., 2025).

Integrating ecopoetry into classroom instruction offers a valuable chance to connect creative writing with the overarching educational objective of ecological literacy (Aravani & Daskolia, 2025; Kazazoglu, 2025; Ericson, 2025). By structuring poetry writing assignments around environmental concerns, students enhance their linguistic creativity while contemplating their connections to the natural environment (El Refaie & Thatcher, 2025; Shah & Shah, 2025; Didham, 2022; Kern, 2024). Ecopoetry-based learning allows students to investigate local knowledge, react to environmental events, and foster a feeling of ecological responsibility. This approach possesses considerable cultural and pedagogical significance in Indonesia, where varied cultural traditions frequently have profound ties to nature (Dasht2025; Sahoo, 2025).

Although international study on ecocriticism and ecopoetry is expanding—particularly in Western regions like the United States, Europe, and certain areas of East Asia—its implementation in school-based creative writing pedagogy is still relatively unexamined, particularly in Southeast Asia. Research conducted by Peabody (2018) and Luo (2014) has explored the ecological ramifications of literature and movies, whereas Trisnawati (2014) in Indonesia has sought to integrate environmental topics into literary appreciation curricula. Nevertheless, these studies have primarily concentrated on literary analysis or reader responses, rather than on writing training. Furthermore, the majority have prioritized the ecological aspects of texts above exploring educational frameworks that actively involve students in creating ecologically oriented literature.

In the Indonesian context, studies on poetry writing pedagogy have predominantly focused on structural elements—such as diction, rhyme, and poetic devices—while neglecting their connection to substantive content or contextual relevance (Widodo, 2023; Suprpto et al. 2024; Adriansyah et al. 2024). A substantial vacuum exists in the research about the integration of environmental education and creative writing into an instructional approach that fosters both expressive and ecological learning. Moreover, pupils frequently encounter difficulties in composing poetry owing to restricted language, insufficient imaginative confidence, and the lack of pertinent, real-world issues. This has resulted in unsatisfactory outcomes in classroom practice, with poetry writing tasks being regarded as daunting, irrelevant, or overly abstract (Koriatin et al. 2024; Fitriana and Rokhuma 2025; Aminah & Supriadi, 2023). An novel educational framework is required to address these issues—one that synthesizes ecocritical theory with the creative process of poetry writing and is grounded in culturally and environmentally responsive instruction. This paradigm would transcend the formalistic instruction of poetry, providing students with immersive, reflective, and place-based learning opportunities that foster literary creativity and environmental consciousness.

This document presents the design, validation, and implementation of an Ecopoetry-Based Instructional Model specifically developed for high school students in Indonesia. This approach was created through a multi-phase research process that included curriculum analysis, prototype construction, expert validation, and classroom trials. The educational methodology is based on Greg Garrard's (2004) six ecological categories—pollution, wilderness, apocalypse, dwelling, animals, and earth—which function as thematic frameworks for poetry writing assignments. Guided by ecological literary theory and the Indonesian national curriculum (Permendikbud No. 37, 2018), the approach prioritizes student-centered learning, local cultural motifs, and reflective writing methodologies.

The research addresses the pressing demand for innovative teaching methods that improve students' writing abilities while fostering environmental ethics and cultural identity. The evaluation of the model's validity, practicality, and efficacy is conducted through a synthesis of qualitative and quantitative metrics, encompassing expert assessments, classroom observations, student reflections, and writing evaluations. The study was carried out in many public high schools in Parepare, South Sulawesi, focusing on tenth-grade pupils, a pivotal developmental phase for the establishment of cognitive and emotional abilities.

The results of this study provide significant implications for educators, curriculum creators, and legislators aiming to include sustainability and creativity into language teaching. The Ecopoetry-Based Instructional Model enhances students' writing skills while fostering a profound engagement with environmental concerns and cultural values. By contextualizing poem composition within students' lived experiences and indigenous knowledge, the paradigm redefines language education as a platform for ecological and ethical contemplation. It illustrates that creative writing, rather than being a solitary artistic endeavor, may function as a transforming practice for cultivating empathic, environmentally educated individuals.

This study advances the subject of ecopedagogy by providing a contextually relevant educational paradigm that links poetry expression to ecological awareness. It contests the conventional division between literary creativity and scientific environmentalism by advocating for a holistic educational approach—one that is imaginative, analytical, and attuned to the social and ecological contexts of Indonesian adolescents. This paradigm positions poetry as a mechanism for language enhancement and a vehicle for fostering resilience, agency, and ecological sensitivity in future generations.

## **2. Method**

### **2.1 Research Design**

This research employs a Design-Based Research (DBR) methodology to create and assess an ecopoetry-focused educational model intended to improve high school students' creative writing abilities. Design-Based Research (DBR) is especially conducive to educational innovation, as it encompasses iterative cycles of designing, testing, and refining instructional interventions within genuine classroom environments. The objective of Design-Based Research (DBR) is to create successful educational models while simultaneously yielding practical and theoretical insights into learning processes.

The study was executed in four systematic phases: (1) Preliminary Analysis, encompassing needs assessment, curriculum evaluation, and literature review to discern challenges and opportunities in poetry instruction; (2) Design and Development, wherein the prototype model and educational materials were created and validated by experts; (3) Implementation, entailing classroom trials of the model with designated students and educators; and (4) Evaluation and Reflection, concentrating on appraising the model's efficacy and refining it based on empirical data.

### **2.2 Research Setting and Participants**

This research was carried out at three public senior high schools situated in Parepare, South Sulawesi, Indonesia. The schools were chosen for their representativeness of urban educational environments and their readiness to engage in an instructional innovation program. The participants were 180 tenth-grade students from six courses and three teachers of Indonesian language and literature who assisted the instructional model's deployment. All participating students were enrolled in Bahasa Indonesia courses that incorporated poetry writing in their curriculum.

A purposive sample method was utilized to choose both schools and participants, guaranteeing that the selected schools possessed comparable student demographics and a requisite amount of infrastructure to facilitate the intervention. The participating educators have a minimum of five years of teaching experience and exhibited a keen interest in pedagogical innovation. This setting offered a genuine context to evaluate the Ecopoetry-Based Instructional Model and determine its relevance, feasibility, and efficacy in actual classroom situations.

Table 1. Research Setting and Participants

School Name	Number of Classes	Total Students	Participating Teachers
SMA Negeri 1 Parepare	2	60	1
SMA Negeri 2 Parepare	2	60	1
SMA Negeri 3 Parepare	2	60	1

Table 1 delineates the allocation of research participants among three public senior high schools in Parepare, South Sulawesi, Indonesia. Each school provided two classes of tenth-grade students, yielding a balanced total of 60 students per school and an aggregate total of 180 students. Moreover, one educator from each institution contributed to the facilitation of the Ecopoetry-Based Instructional Model's implementation. The purposive sampling method guaranteed that all chosen schools possessed the requisite infrastructure and teacher preparedness for educational innovation. This table depicts the organized distribution of participants for a thorough and contextually relevant classroom-based research intervention.

Figure 1. Distribution of Participating Students by School

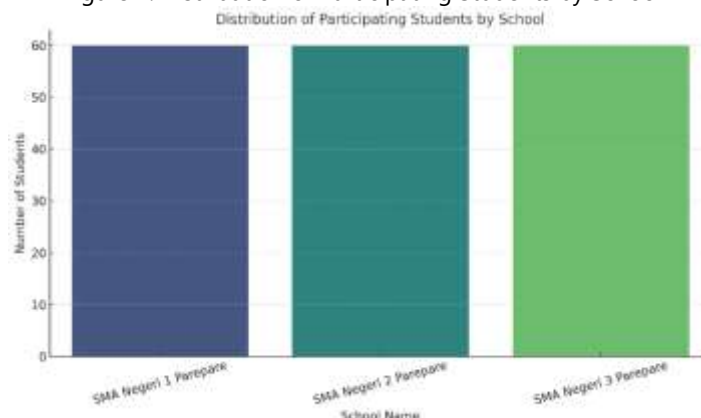


Figure 1 illustrates the distribution of student participants across various schools. Each of the three participating schools contributed an equal number of kids, totaling 60, so creating a uniform sample from SMA Negeri 1, 2, and 3 Parepare. This visual depiction underscores the study design's focus on equilibrium and comparability among institutions. By maintaining uniform sample sizes, the study guarantees that outcomes from the use of the Ecopoetry-Based Instructional Model may be studied more equitably, reducing sampling bias and facilitating a rigorous cross-site evaluation of effectiveness, practicality, and engagement. The homogeneous distribution enhances the generalizability of the research findings.

### 2.3 Procedure and Phases of the Study

This research adhered to a four-phase Design-Based Research (DBR) paradigm. Phase 1: Preliminary Analysis entailed interviewing Bahasa Indonesia educators and examining the current curriculum to pinpoint deficiencies in poetry instruction. A literature study was conducted on ecopoetry, ecological literacy, and poetry pedagogy to guide model construction. Phase 2: Design and Development concentrated on the creation of the prototype for the Ecopoetry-Based Instructional Model, integrating Garrard's (2004) six ecological categories. The methodology, comprising lesson plans and writing assignments, was validated by curriculum specialists and literature educators. Phase 3: Implementation involved doing classroom assessments in three high schools. Educators underwent concise training to comprehend model components. The intervention consisted of six sessions conducted over a period of three weeks. Phase 4: Evaluation and Revision employed classroom observations, educator reflections, and student input for formative evaluation. Utilizing these data, the model was enhanced to augment its practicality and efficacy for prospective application in analogous educational settings.

### 2.4 Data Collection Instruments

This study included both qualitative and quantitative methods to achieve thorough data collecting. Validation sheets were employed during the expert review phase to evaluate the content validity, coherence, and feasibility of the instructional model. These documents were finalized by curriculum specialists and language instructors. Observation checklists were employed during implementation to assess the accuracy of model application, teaching practices, and student engagement levels.

The poetry outputs of students were assessed using a writing rubric that examined aspects such as thematic relevance, imagery, diction, and ecological integration, in accordance with Garrard's six ecological categories. Questionnaires were administered to students post-intervention to collect data on their affective responses, perceptions, interest in poetry writing, and environmental awareness.

Semi-structured interviews were conducted with students and instructors after the intervention to examine their experiences, obstacles, and suggestions for model enhancement. These instruments jointly facilitated a triangulated assessment of model efficacy and feasibility.

### 2.5 Data Analysis Techniques

This study utilized quantitative and qualitative analysis methods to evaluate the validity, feasibility, and efficacy of the Ecopoetry-Based Instructional Model. Quantitative data, comprising student poetry scores and questionnaire responses, were examined through descriptive statistics (mean and standard deviation) to encapsulate performance trends and perspectives. T-tests or ANOVA were performed, where appropriate, to compare pre- and post-intervention outcomes, assessing the significance of improvements in students' writing abilities and attitudes.

A thematic analysis was conducted on students' poems to discern recurring ecological topics, poetic approaches, and personal expressions in the qualitative data. Content analysis was performed on interview transcripts and open-ended questionnaire responses to reveal insights into teaching experiences, learner engagement, and perceived obstacles.

Data triangulation was employed to enhance the dependability of findings by cross-referencing results from writing assessments, observations, questionnaires, and interviews. This mixed-method approach facilitated a thorough comprehension of the model's execution and effects.

## **2.6 Ethical Considerations**

This research rigorously complied with ethical norms to safeguard the rights and welfare of all participants. Informed consent was secured from pertinent stakeholders, including school principals, participating teachers, children, and their parents or guardians, prior to data collection. All participants were explicitly apprised of the study's objectives, procedures, potential dangers, and the voluntary nature of their participation.

To maintain anonymity and confidentiality, all identifying information was eliminated from student assignments, surveys, and interview transcripts. Data were encoded and securely archived, with access restricted to the research team. No personal information was revealed in any publications or reports derived from the study.

The research protocol was reviewed and obtained ethical approval from the institutional ethics council at Universitas Negeri Makassar. This permission confirms that the study adheres to ethical standards for educational research involving minors, ensuring that participants' dignity, privacy, and autonomy were thoroughly respected during the research process.

## **3. Results**

### **3.1 Model Development Output**

The completed Ecopoetry-Based Instructional Model was created through iterative design and validation processes based on curriculum analysis and literary-ecological theory. The approach is organized according to a modular lesson plan of six interrelated learning sessions, each thematically associated with Garrard's (2004) ecological categories: pollution, wilderness, apocalypse, dwelling, animals, and earth. These categories provided a basis for poetic inquiry, directing students to engage critically and creatively with environmental concerns through literary expression.

Each lesson plan comprises four instructional phases: (1) Introduction and investigation of an ecological issue, (2) reading and analyzing exemplary ecopoems, (3) guided creative writing, and (4) peer reflection and performance. This sequence fosters cognitive engagement and emotional resonance, enabling pupils to internalize environmental issues and articulate them poetically.

Examples of poetry assignments included prompts like: "Compose a poem from the viewpoint of a contaminated river" (Pollution), or "Articulate your envisioned future Earth in verse" (Apocalypse). Students were urged to integrate sensory imagery, regional references, and indigenous knowledge into their writing. This paradigm integrates ecological literacy into poetry production, promoting environmental awareness and the development of creative skills in a culturally relevant and pedagogically effective way.

Table 2. Ecopoetry-Based Instructional Model Structure

Session	Ecological Theme	Sample Task
1	Pollution	Write a poem from the perspective of a polluted river
2	Wilderness	Describe an untouched forest and its silent voice
3	Apocalypse	Envision the Earth after environmental collapse
4	Dwelling	Write about your home as a place of ecological belonging
5	Animals	Give voice to an endangered animal in poetic form
6	Earth	Celebrate the Earth as a living organism

Table 2 delineates the framework of the Ecopoetry-Based Instructional Model, including six theme sessions that correspond with Garrard's ecological classifications. Each session presents students with a unique environmental theme—spanning from pollution to the Earth itself—accompanied with a creative poetry assignment that encourages reflection, imagination, and critical expression. These prompts aim to elicit emotional resonance and foster environmental awareness through metaphor, perspective-taking, and local context. The table demonstrates how the methodology methodically builds ecological awareness through poetic investigation, providing a cohesive instructional framework that links environmental education with the enhancement of creative writing abilities.

Figure 2. Integration of Ecological Themes in Instructional Sessions

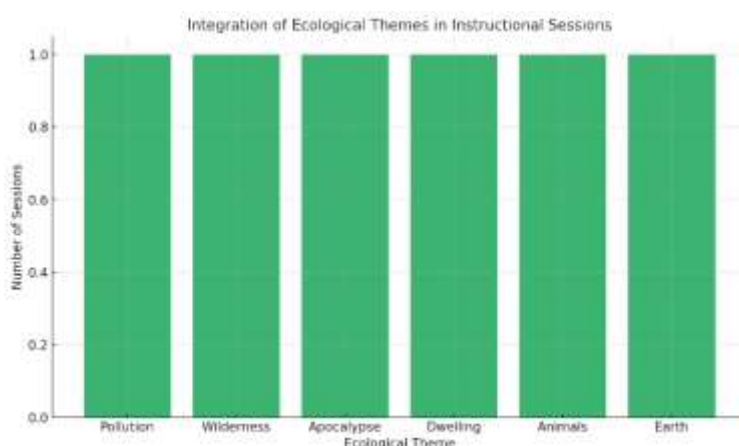


Figure 2 illustrates the distribution of ecological topics throughout the teaching sessions in the ecopoetry approach. Each of the six themes—Pollution, Wilderness, Apocalypse, Dwelling, Animals, and Earth—receives a separate session, underscoring balanced and concentrated thematic integration. This graphic highlights the model's deliberate framework, guaranteeing that students interact with a variety of environmental concepts during the learning process. The instructional methodology promotes a comprehensive grasp of ecological concerns by equally addressing each ecological category, hence ensuring diversity in content and perspective. This equilibrium is essential for fostering both creativity and ecological literacy in student writing.

### 3.2 Model Validation

The Ecopoetry-Based Instructional Model was thoroughly validated by a panel of six experts, including curriculum creators, specialists in language and literature education, and practitioners in instructional design. Validation was performed utilizing structured assessment sheets that examined the model across four principal dimensions: content relevance, ecological integration, instructional feasibility, and creativity stimulation.

The quantitative examination of the validation data produced an average agreement score of 92%, signifying a substantial degree of content validity. Every element of the model—lesson objectives, learning activities, and alignment with ecological themes—garnered significant approval from reviewers. The Content Validity Index (CVI) for all items surpassed the widely recognized criterion of 0.80, validating that the model adhered to both curricular and pedagogical requirements.

Expert qualitative evaluation emphasized the model's cultural responsiveness and its innovative integration of ecological theory with poetic expression. Recommendations for enhancement encompassed the necessity for adaptability in classroom tempo and the incorporation of additional student-directed activities. The experts concurred that the methodology was both theoretically sound and extremely applicable in actual classroom settings. The validation phase enhanced the model's instructional design and assured conformity with the national curriculum and the objectives of environmental literacy in language education.

Table 3. Expert Validation of Ecopoetry Model

Validation Criteria	Average Score (out of 5)
Content Relevance	4.6
Ecological Integration	4.7
Pedagogical Feasibility	4.5
Creativity Stimulation	4.8

Table 3 presents the findings of expert validation for the Ecopoetry-Based Instructional Model across four fundamental criteria. The concept achieved elevated average ratings from six curriculum and literature experts: 4.6 for content relevance, 4.7 for ecological integration, 4.5 for pedagogical practicality, and 4.8 for creativity stimulation. The results indicate robust consensus among experts about the model's congruence with educational objectives, its new ecological methodology, and its capacity to augment student engagement in poetry composition. The consistently elevated scores demonstrate that the concept is both theoretically robust and practically appropriate for classroom implementation in various high school settings in Indonesia.

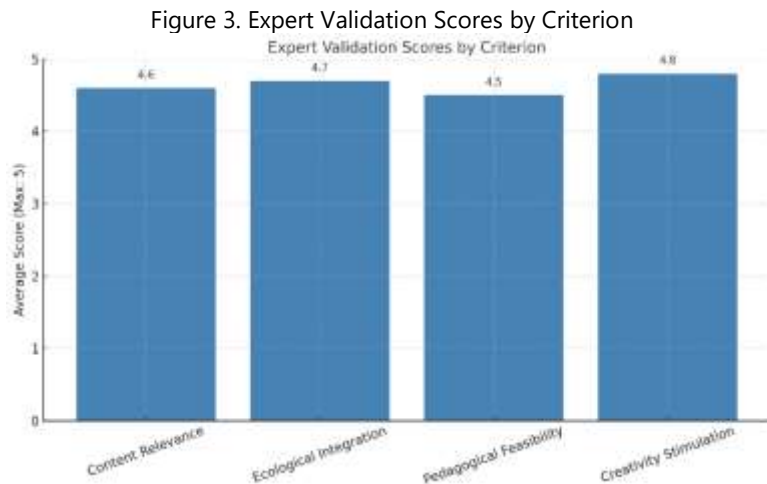


Figure 3 clearly depicts the expert validation scores of the Ecopoetry-Based Instructional Model across essential instructional design criteria. The model earned the highest ranking in creative stimulation (4.8), signifying its effectiveness in fostering student expression through ecological themes. This is succeeded by ecological integration (4.7), demonstrating robust connection with environmental literacy aims. The approach received good scores for content relevance (4.6) and pedagogical feasibility (4.5), indicating its strong alignment with the national curricular framework and classroom limitations. This figure substantiates the model's design integrity and confirms its efficacy in connecting ecological awareness with literary creativity.

3.3 Model Implementation (Classroom Trial)

The execution phase of the Ecopoetry-Based Instructional Model was carried out across six sessions in three high schools in Parepare. Classroom observations indicated elevated levels of student engagement, particularly during creative writing exercises and poetry recitations. Students exhibited heightened engagement, passion, and a readiness to investigate personal and environmental topics. Educators strictly followed the lesson plan and aggressively promoted debates regarding Garrard's ecological categories, prompting pupils to contemplate local environmental concerns.

Exemplary student poetry exhibited a varied array of ecological themes, including river pollution, deforestation, and endangered species. A multitude of students integrated local symbols, sensory imagery, and emotional tone, signifying a profound connection to both the material and the poetry structure. Some poems notably employed potent analogies, such as personifying a withering tree as a neglected elder, illustrating both ecological insight and artistic profundity.

The evaluation employing a systematic creative writing rubric indicated quantifiable enhancements in students' poetry abilities. Average rubric ratings rose by 18%, especially in aspects such as imagery, diction, and thematic coherence. Students demonstrated enhanced utilization of metaphorical language and more innovative viewpoints. The results indicate that the program not only boosted ecological knowledge but also markedly enhanced creative expression in poetry.

Table 4. Rubric-Based Assessment of Student Poetry

Rubric Criteria	Pre-Test Average Score	Post-Test Average Score
Imagery	3.1	4.1
Diction	3.2	4.2
Theme Relevance	3	4
Figurative Language	2.8	3.9
Creativity	3.3	4.3

Table 4 provides a comparative comparison of student performance in poetry writing according to five essential rubric criteria: imagery, diction, thematic relevance, figurative language, and inventiveness. The results indicates significant enhancement in all categories subsequent to the adoption of the Ecopoetry-Based Instructional Model. Pre-test scores averaged between 2.8 and 3.3, however post-test scores increased markedly, with values between 3.9 and 4.3. These improvements suggest that students exhibited increased confidence and expressiveness in their poetry compositions, especially with the

application of literary devices and subject development. The model successfully improved both the technical and creative dimensions of student writing.

Figure 4. Student Poetry Skill Improvements (Pre vs Post Test)

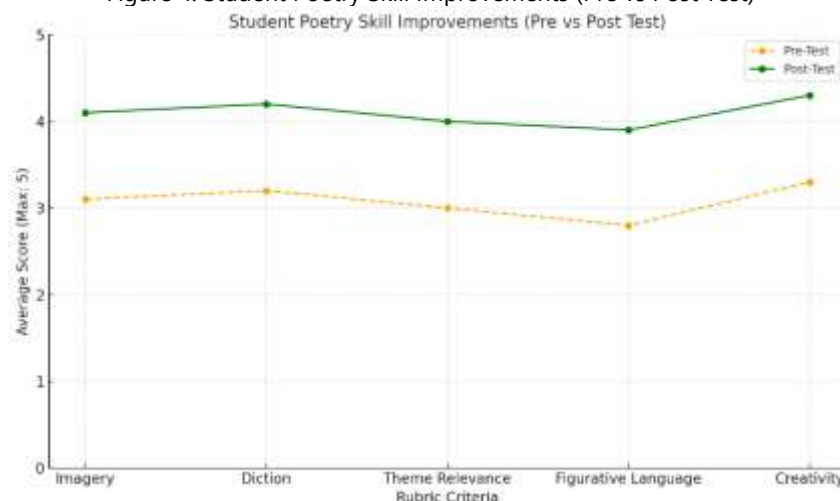


Figure 4 demonstrates the enhancement of students' poetry writing abilities prior to and subsequent to engaging in the Ecopoetry-Based Instructional Model. The chart distinctly illustrates upward trends across all rubric categories, with the most significant improvements in originality and figurative language. The pre-test results, illustrated by the dashed orange line, indicate intermediate proficiency, whereas the solid green line reflecting post-test scores reveals a significant improvement. This graphic contrast underscores the model's efficacy in enhancing students' creative and reflective capacities via ecopoetry. The increase in scores indicates that ecologically oriented poetry assignments successfully fostered enhanced involvement and more advanced writing techniques.

### 3.4 Student Performance

The influence of the Ecopoetry-Based Instructional Model on student performance was assessed using a comparative analysis of pre-test and post-test writing scores, supplemented with student feedback questionnaires. The evaluation concentrated on five fundamental components: diction, imagery, thematic relevance, figurative language, and inventiveness. Post-test results demonstrated substantial enhancement, with average scores rising by 0.8 to 1.1 points across all aspects on a 5-point scale. Significant improvements were noted in imagery and inventiveness, indicating that students enhanced their ability to articulate complex environmental concepts using poetic language.

The questionnaire replies indicated a favorable change in students' attitudes towards poetry writing and environmental consciousness, alongside quantitative enhancements. More than 85% of students indicated a heightened interest in poetry composition, with numerous participants emphasizing their pleasure in addressing real-world environmental concerns through writing. Students exhibited an enhanced comprehension of nature and local ecological issues, indicating that the thematic incorporation of Garrard's ecological categories effectively fostered critical inquiry. Motivation levels increased, especially among pupils who initially felt disconnected from poetry. The model improved technical writing abilities while fostering ecological empathy and creative involvement, confirming its efficacy as a pedagogical and environmental teaching instrument.

Table 5. Pre-Test and Post-Test Student Writing Performance

Writing Aspect	Pre-Test Avg Score	Post-Test Avg Score	Score Increase
Diction	3.2	4.2	1
Imagery	3.1	4.3	1.2
Theme Relevance	3	4	1
Figurative Language	2.9	3.9	1
Creativity	3.3	4.4	1.1

Table 5 juxtaposes students' mean scores across five writing dimensions—diction, imagery, thematic relevance, figurative language, and creativity—prior to and subsequent to the adoption of the Ecopoetry-Based Instructional Model. The data indicates uniform enhancement in all areas, with the most significant advancements noted in imaging (+1.2) and originality (+1.1). The enhancements indicate that the program successfully improved students' capacity to express environmental concerns



through evocative language and poetic devices. The rise in figurative language and thematic relevance scores signifies a heightened connection with ecological topic. The table confirms the model's effectiveness in enhancing both language and thematic writing skills.

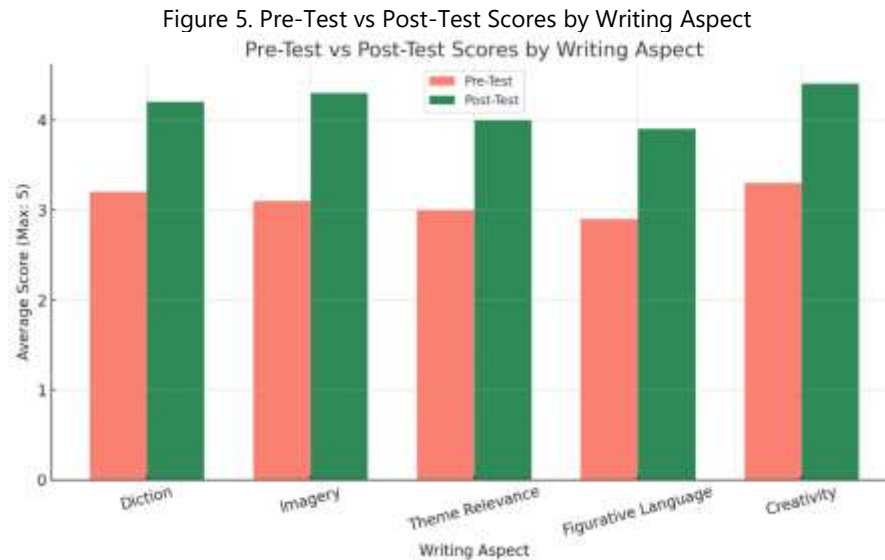


Figure 5 presents a visual comparison of student writing results before and after the test across five essential parameters. The chart illustrates significant enhancement in all writing dimensions subsequent to engagement in the Ecopoetry-Based Instructional Model. Post-test scores (green bars) markedly surpass pre-test scores (red bars), especially in imagery and creativity, which experienced the most substantial improvements. This picture substantiates the assertion that thematically rich and ecologically oriented writing assignments improved students' expressive capabilities. The positive trends in all areas demonstrate the model's ability to enhance student development in creative writing and environmental literacy, affirming its educational and transformative significance.

### 3.5 Practicality and Effectiveness

Instructor evaluations validated the significant practicality and applicability of the Ecopoetry-Based Instructional Model in actual classroom environments. All participating educators indicated that the lesson framework was coherent, flexible, and stimulating. Thematic integration of Garrard's ecological categories was appreciated, as it offered much material for discussion and creative investigation. The model's inherent scaffolding—comprising guided prompts, example texts, and organized peer feedback—was recognized as particularly beneficial in assisting students with diverse skill levels.

Nonetheless, numerous obstacles were faced throughout execution. The challenges encompassed time limitations within the conventional curriculum, differing degrees of student acquaintance with poetry, and the necessity for individualized education to address diverse learning capabilities. In spite of these limitations, educators adjusted by incorporating writing assignments into homework and employing collaborative brainstorming techniques to jointly produce ideas.

The model's overall efficacy was evidenced by triangulated data: elevated student writing scores, favorable questionnaire responses, and observational evidence indicating enhanced engagement and participation. Educators observed that even less self-assured students started to articulate themselves more freely by the third or fourth session. The convergence of data points demonstrates that the Ecopoetry-Based Instructional Model is both possible to adopt and effective in promoting creativity and environmental awareness in secondary education.

Table 6. Teacher Evaluation of Model Practicality and Effectiveness

Evaluation Aspect	Average Rating (out of 5)
Usability of Lesson Plan	4.6
Clarity of Instructions	4.7
Student Engagement	4.5
Creativity Support	4.8
Ecological Integration	4.7

Table 6 encapsulates teacher assessments of the Ecopoetry-Based Instructional Model across five critical dimensions of practicality and efficacy. The model received the highest grade of 4.8 for its capacity to foster student innovation, followed by commendable ratings of 4.7 for clarity of instructions and ecological integration. Educators deemed the lesson plans exceptionally practical (4.6) and indicated significant student engagement levels (4.5). The results indicate that the model is effectively structured for classroom application, providing both instructional clarity and pedagogical creativity. The affirmative responses across all aspects validate that the paradigm is both operational and transformative in application.

Figure 6. Teacher Evaluation of Model Practicality and Effectiveness

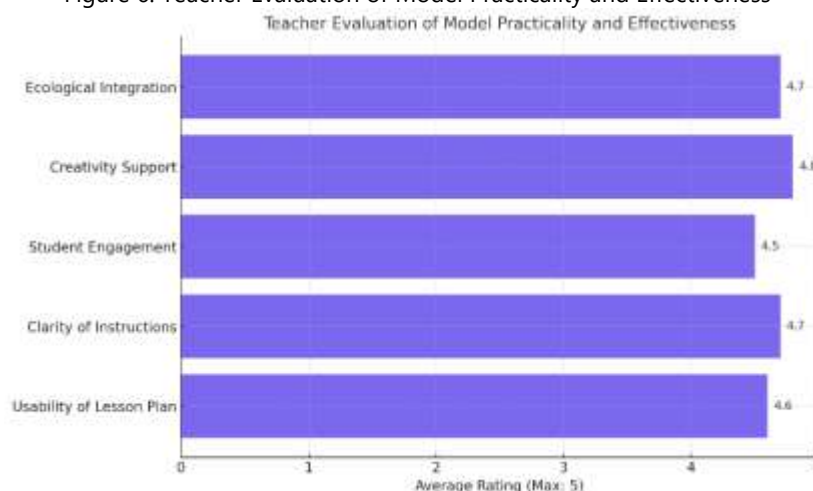


Figure 6 illustrates teacher evaluations concerning the practicality and efficacy of the Ecopoetry-Based Instructional Model. All areas achieved elevated marks, varying from 4.5 to 4.8 out of 5, with creativity support and ecological integration being the highest-rated elements. The graphic underscores the model's effectiveness in attaining instructional clarity and fostering significant student engagement. The consistently high evaluations indicate that educators perceived the approach as straightforward to apply and effective in practical classroom environments. This visual proof bolsters the model's legitimacy as a reproducible and effective framework for merging creative writing with environmental literacy.

## 4. Discussion

### 4.1 Alignment with Ecopoetry and Ecocritical Pedagogy

The results of this study confirm a robust correspondence between the established instructional paradigm and the tenets of ecopoetry and ecocritical pedagogy. The incorporation of Garrard's six ecological categories into poetry assignments allowed students to examine environmental challenges not solely as scientific data but as lived experiences expressed via metaphor, imagery, and personal reflection. The notable enhancement in students' utilization of figurative language, thematic complexity, and emotional articulation indicates that ecological literacy was successfully integrated into the creative writing process. Students articulated environmental consciousness through poetry, demonstrating their comprehension of pollution, biodiversity decline, and ecological interdependence in genuine and creative manners.

The findings align with previous research by Trisnawati (2014), which indicated that literature can enhance environmental awareness among students, but her emphasis was on literary appreciation rather than creation. Likewise, Putri et al. (2023), Hardina et al. (2024), and Rosiawan et al. (2025) emphasized the environmental awareness inherent in Chinese ecological novels and examined ecological themes in animated media. In contrast to prior studies, the present research focuses on student-generated literary works—a unique and underexamined area within Southeast Asian contexts.

This work advances ecocritical pedagogy by presenting a realistic, curriculum-oriented strategy that boosts creative writing abilities while fostering ecological empathy. It illustrates that ecopoetry can function as a transformative vehicle for environmental education, especially when rooted in students' cultural settings and local ecological issues, connecting emotional engagement with educational objectives.

### 4.2 Improved Creative Writing Skills

The application of the Ecopoetry-Based Instructional Model markedly improved students' creative writing abilities, especially with imagery, metaphor, and emotional tone. Post-test analyses indicated significant improvements in students' capacity to create vivid and sensory-rich descriptions, enabling readers to engage with environmental issues through poetry expression. The utilization of metaphor increased in frequency and contextual significance, as students employed figurative language to depict nature as both a nurturing entity and a casualty of human negligence. The emotional tone transitioned from

generic sentiment to more nuanced expressions of concern, appreciation, sorrow, and optimism, indicating a deeper level of engagement and genuineness.

Environmental themes significantly fostered creativity and contemplation. Students were encouraged to derive inspiration from tangible ecological issues, such as local river pollution or nearby deforestation, instead of writing in abstract or generalized terms. These topics offered both topical significance and a structure for emotional and imaginative inquiry. The poetry served as a conduit for personal commentary and ethical contemplation, connecting language innovation with ecological consciousness.

Furthermore, the integration of indigenous knowledge and personal experience enhanced the cultural depth of student projects. Numerous poems encapsulated indigenous beliefs, conventional metaphors, and region-specific imagery, illustrating that ecological literacy may be effectively intertwined with local identity. This link generated an enhanced sense of belonging and accountability toward nature. The program enhanced students' mastery of poetic devices and enabled them to articulate environmental issues in both personal and significant manners.

### **4.3 Pedagogical Implications**

This study's findings indicate that integrating ecological topics into poetry instruction is both feasible and educationally significant in high school settings. The Ecopoetry-Based Instructional Model demonstrated adaptability to the current curriculum and feasibility within standard classroom durations. Educators indicated that the instructional framework, thematic emphasis, and inventive assignments were accessible, even for individuals unacquainted with ecocriticism. The model's thematic consistency and adaptable structure enabled educators to support learning activities without burdening pupils or impairing fundamental language skills.

A significant instructional advantage was the enhancement of student motivation and involvement. A multitude of students, including those before apathetic towards poetry, exhibited enthusiasm for composing on pertinent environmental issues affecting their areas. The emotional and ethical aspects of ecological topics prompted students to articulate personal reflections and societal issues, converting poetry from a strict academic exercise into a significant, introspective experience. This transition was especially apparent in students' readiness to engage in conversations, peer feedback sessions, and public readings of their work.

The concept exhibits significant potential for replication and customization across various educational contexts. The framework can be tailored to accommodate various areas, languages, and educational systems by integrating general environmental themes with unique cultural references. The concept provides a scalable approach to improving creative writing and environmental awareness in urban, rural, and multicultural schools. It asserts that ecopoetry serves as a potent, inclusive medium for imparting language, ethics, and critical thinking skills.

### **4.4 Theoretical Contribution**

This work significantly advances design-based research (DBR) in language and literature education by presenting a theoretically informed and empirically substantiated teaching paradigm that integrates ecological awareness with creative writing pedagogy. By employing iterative cycles of design, implementation, evaluation, and modification, the research actualizes Design-Based Research concepts to tackle a tangible educational issue—insufficient engagement and underdeveloped creativity in poetry writing—by integrating significant ecological material into language training. The Ecopoetry-Based Instructional Model is a replicable educational innovation, substantiated by qualitative insights and quantitative improvements in student learning outcomes (Bhattacharji and Singh 2023).

A significant theoretical development is the enhancement of Greg Garrard's (2004) six ecological categories—pollution, wilderness, apocalypse, dwelling, animals, and earth—into a fruitful literary framework (Abdullah, 2025; Raymond et al., 2024; Arum & Zulyeno). This study recontextualizes Garrard's typology, traditionally used in literary analysis, as a framework for creative composition, allowing students to produce original poetic texts rooted in ecological discourse (Wright et al. 2024; Douglas et al. 2024; Shiferaw et al. 2023; Stanford et al., 2025). This transition from receptive to productive utilization of ecocritical theory signifies an innovative application that enhances both ecological pedagogy and language arts education.

The study demonstrates a significant synergy between ecological literacy and language education, showing that poetic expression can act as a transformative vehicle for enhancing environmental awareness (Gurbanova2024; Rodríguez-Labajos, 2022; Molderez et al., 2021). By connecting literary imagination with location-specific ethics and tangible issues, the model emphasizes how language arts may develop both cognitive and emotional skills. This integrative perspective enhances theoretical comprehension of how environmental themes can enrich and expand the objectives of creative writing, critical thinking, and cultural identity development in education.

### **4.5 Limitations**

Although the results of this study are encouraging, some limitations must be recognized. The study was conducted in a unique geographical context—three public high schools in Parepare, South Sulawesi, Indonesia—which may restrict the generalizability of the findings. The sample size of 180 students and six teachers, although adequate for design-based research,

may not encompass the complete diversity of student responses across various geographies, school types, or sociocultural backgrounds. Additional study with a bigger and more diverse participant pool would improve the external validity of the instructional approach.

The study was confined to one implementation cycle of six instructional sessions. This timescale, although beneficial for assessing initial feasibility and impact, may be inadequate for observing the long-term evolution of students' ecological awareness and creative writing development. Design-based research ideally encompasses numerous iterative cycles to enhance the model and evaluate its long-term sustainability. Future research may employ a longitudinal methodology or evaluate the model over multiple semesters to identify deeper patterns and emerging difficulties.

The study had methodological limitations in assessing creativity. While rubric-based assessments offer organized insights, creativity is a complicated and necessarily subjective term. Measuring factors like originality, emotional depth, and voice is challenging and may not adequately reflect the complexity of student expression. Supplementary qualitative instruments—such as student journals, poetry portfolios, and peer assessments—may yield a more comprehensive insight. Mitigating these constraints would augment the robustness and transferability of the Ecopoetry-Based Instructional Model.

#### 4.6 Recommendations for Future Research

To enhance the encouraging results of this study, other directions for further research are suggested. Longitudinal studies are essential to assess the enduring effects of the Ecopoetry-Based Instructional Model on students' creative writing advancement and ecological awareness. An extended observation period would enable researchers to evaluate the retention and enhancement of students' ecological comprehension and poetic articulation over time, as well as the model's influence on their long-term attitudes toward nature and literature.

Secondly, subsequent research should investigate the incorporation of digital tools into the model. The utilization of digital poetry platforms, multimedia poetry applications, or collaborative writing environments may augment student participation and facilitate wider distribution of student creations. These tools may facilitate multimodal expression, enabling students to include music, picture, and video into their ecopoetic works, thus broadening the expressive potential of the genre.

Third, applying the approach across various grade levels and cultural contexts holds significant significance. Evaluating its adaptability in middle schools, vocational institutions, or foreign classrooms may elucidate how age, language competency, and local ecological contexts affect its efficacy. These cross-contextual applications would enhance the model's adaptability and contribute to culturally responsive ecological pedagogy, so promoting global educational practices.

#### 5. Conclusion

This study investigated the creation and execution of an Ecopoetry-Based Instructional Model designed to improve the creative writing abilities of Indonesian high school students while promoting ecological consciousness. Rooted in design-based research and informed by Garrard's six ecological categories, the program included environmental issues into poetry training to achieve the dual educational objectives of enhancing literary proficiency and fostering environmental awareness.

The results indicated that the paradigm was pragmatic, efficient, and educationally valid. It facilitated students in crafting more vivid, imaginative, and emotionally impactful poetry, especially through the utilization of imagery, metaphor, and ecological themes. Quantitative results indicated substantial enhancements in post-test scores across essential creative writing categories, whereas qualitative observations and teacher feedback underscored heightened student motivation, engagement, and reflective thinking. Educators confirmed the model's clarity and practicality, recognizing its capacity to enhance both cognitive and emotional learning.

Furthermore, the study illustrated the theoretical advancement of converting ecocritical literary theory into an effective writing pedagogy, so providing an innovative framework that connects language arts with environmental education. It emphasized the significance of local knowledge and personal experiences in enhancing students' poetry creativity.

Nonetheless, constraints such as the restricted geographical scope and singular-cycle execution indicate the necessity for extended and more expansive uses. Future research should investigate the model's flexibility across various grade levels, locations, and digital platforms to evaluate its scalability and enduring impact.

In conclusion, this ecopoetry-oriented methodology provides a transformative avenue for reinterpreting language instruction, integrating creativity with ecological accountability.

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