

Environmental Linguistic Narratives in the Poetry of Elementary School Teacher Education Students

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Abstract

Ecological metaphors in the poetry of Elementary School Teacher Education students provide important insights into how prospective teachers conceptualize environmental realities and human-nature relationships. Examining these metaphors is essential for understanding the ecological awareness and ideological orientations embedded in their poetic language. This requires a deeper understanding of how prospective educators frame ecological realities through the use of figurative language. This study aims to reveal the structure of ecological metaphors and environmental framing orientation in the poetry of elementary school teacher education students through the integration of cognitive linguistics and ecolinguistics, placing metaphors as cognitive mechanisms as well as indicators of language ideology. The research data consisted of 50 poems by third-semester PGSD students that explicitly represented environmental or nature issues, collected through academic assignment documentation, selected based on thematic criteria, and analyzed using an interactive analysis model that included data condensation, data presentation, and conclusion drawing or verification. The results of the analysis show the dominance of structural metaphors over orientational and ontological metaphors, which indicates a tendency to construct nature as a role-playing and acting entity, as well as to assess ecological degradation through a relational moral and affective framework. Oriental patterns organize environmental evaluation through spatial and directional value schemes, while ontological metaphors condense abstract concepts into objects of action such as hope, change, and inheritance. The research contributes to enriching cognitive linguistics and ecolinguistics studies, providing an empirical basis for developing environmental literature curricula for prospective teachers, supporting transformative environmental education policies, and strengthening SDG achievements, particularly quality education and climate action.

Keywords: *Ecolinguistics, Environmental Conciousness, Metaphor, Poetry, Students*

Introduction

The global environmental crisis is becoming increasingly complex due to rising global temperatures driven by greenhouse gas emissions from industrial activities and fossil fuel consumption. These conditions contribute to climate change, hydrometeorological disasters, ecosystem degradation, biodiversity loss, and widespread water and marine pollution (Abraham et al., 2021, p. 1). In this context, figurative language, particularly metaphor, plays an important role in shaping how environmental realities are understood, felt, and evaluated. Metaphors function as cognitive mechanisms that map complex and abstract ecological experiences onto more familiar concepts, thereby influencing perceptions of human-nature relationships (Durand-Delacre, 2024, p. 925; Juanda et al., 2024). Students in the Elementary School Teacher Education Study Program are particularly important subjects because they are prospective teachers who

will introduce environmental values to children during the formative years of primary education. Their ways of conceptualizing nature may influence how they later design learning activities, select teaching materials, communicate environmental issues, and cultivate environmentally responsible attitudes among elementary school students. Therefore, examining ecological metaphors in their poetry provides insight into their environmental awareness, cognitive framing, and ideological orientation toward nature. Student poetry serves not only as a medium of aesthetic expression but also as a discursive space in which ecological realities and human responsibilities toward the environment are represented and negotiated.

The analysis of ecological metaphors in student poetry is relevant because recent studies show that metaphors are not only related to linguistic creativity but also to conceptual expansion, the formation of new mental representations, and affective regulation directly related to social awareness and attitudes (Abraham et al., 2021; Anderson & Livie, 2025; Juanda & Azis, 2023). The ecolinguistic approach reinforces this analysis by positioning metaphors as indicators of linguistic ideology that can reveal anthropocentric or ecocentric tendencies in discourse, while usage-based cognitive linguistic developments assert that meaning and language ideology emerge from repeated practices in specific social and ecological contexts, so that students' poetic language can be read as traces of living and dynamic ecological cognition (Chau, 2025, p. 1). Metaphors function as cognitive mechanisms that map complex and abstract ecological experiences onto more familiar concepts, thereby influencing perceptions of human–nature relationships. In poetry, metaphors do not merely serve an aesthetic function by enriching imagery and emotional expression; they also reveal how writers conceptualize nature, interpret environmental degradation, and position humans within ecological relationships.

Previous research shows strong consistency regarding the role of conceptual metaphors as cognitive mechanisms that shape meaning-making, creativity, and cross-domain learning. Studies of creative cognition confirm that the processing of new metaphors activates conceptual expansion that correlates directly with individual creativity capacity through complex semantic integration (Abraham et al., 2021). This view is reinforced by theoretical studies that position metaphors not merely as stylistic devices, but as cognitive foundations that enable humans to organize knowledge and understand abstract experiences through dynamic conceptual mapping (Durand-Delacre, 2024). The field of education demonstrates the function of metaphor as an effective pedagogical bridge for transforming abstract concepts into tangible experiences, as seen in classical vocal training that utilizes metaphors of the body and movement to build students' proprioceptive and emotional connections to vocal techniques (Crisosto-Alarcón et al., 2025, p. 1). The effectiveness of metaphors is also empirically proven in foreign language learning, where the Conceptual Metaphor Theory-based approach significantly improves vocabulary acquisition and learning interest among EFL students compared to conventional approaches (Bapiri & Alavinia, 2026; Han et al., 2025, p. 1). A comparison with embodiment-based approaches shows that gestures have certain advantages in learning specific phonological aspects, although the contribution of metaphors remains significant and is influenced by task characteristics and learners' linguistic experience (Chen & Wang, 2025; Çimen et al., 2025; Yu et al., 2024, p. 1).

Previous studies have predominantly examined conceptual metaphors as general cognitive mechanisms or as pedagogical tools for improving language learning, artistic expression, and individual creativity. However, limited attention has been given to

ecological metaphors in poetry written by prospective elementary school teachers. In particular, existing research has not sufficiently explored how these metaphors frame environmental realities, represent human–nature relationships, and reveal anthropocentric or ecocentric orientations among students who will later teach children at the primary education level. This specific gap is important because the ecological meanings expressed in their poetry may reflect the environmental perspectives that they will eventually communicate through classroom discourse, literary materials, and learning activities. Therefore, the novelty of this study lies in integrating conceptual metaphor theory and ecolinguistics to examine ecological metaphors in the poetry of Elementary School Teacher Education students. This integration enables the study to reveal not only the cognitive structures underlying their representations of nature but also the ecological ideologies embedded in their poetic language. By focusing on prospective elementary school teachers as future pedagogical agents, the study contributes empirical evidence for the development of environmental education that encourages a shift from anthropocentric perspectives toward more ecocentric forms of ecological awareness.

Cognitive linguistics views language as a manifestation of mental processes that are embodied and experience-based, so that meaning is understood as the result of conceptual mapping between concrete and abstract domains through mechanisms such as conceptual metaphors, as formulated by Lakoff and Johnson. Understanding abstract concepts such as nature, crisis, and environment depends on cognitive structures built from sensorimotor experiences and social practices, so that metaphor analysis serves to reveal how the mind organizes knowledge and assesses complex realities (Durand-Delacre, 2024; Eskandari et al., 2025; Shu et al., 2024). This view is reinforced by findings that the processing of new metaphors promotes conceptual expansion and creativity through adaptive semantic integration, suggesting that metaphors are a fundamental cognitive mechanism rather than mere linguistic ornamentation (Abraham et al., 2021).

Recent developments in cognitive linguistics show a shift toward understanding language as a usage-based phenomenon that emerges gradually through repeated practice and social interaction, with meaning viewed as a dynamic pattern that is continually negotiated by speakers. The dialogue between corpus linguistics and cognitive linguistics affirms the position of language users as active and situational agents of meaning, with authentic usage data forming the basis for more empirical conceptual analysis (Chau, 2025; Mondémé, 2025; Nematpour et al., 2025). This approach is expanded through cognitive linguistics' contribution to ecological semantics, which seeks to bridge the dynamics of language use and the stability of meaning through a relational perspective between language, cognition, and environment (Inoue, 2023, p. 1; X. Liu, 2025; Z. Liu et al., 2025).

The complexity of language as a developmental process demands analytical tools capable of systematically capturing nonlinear dynamics and individual variation. Longitudinal statistical models such as Generalized Additive Mixed Models enable the mapping of language development trajectories that are sensitive to gradual change and learner heterogeneity, particularly in second language acquisition studies (Philip, 2025; Phyo et al., 2023; Prathap & Devimeenakshi, 2025; Wirtz & Pfenninger, 2025, p. 1). This approach is complemented by the Repertory Grid Technique, which provides a rigorous framework for exploring participants' personal constructs and implicit beliefs without sacrificing analytical transparency in qualitative and mixed methods research (Imsa-ard, 2025, p. 1; Rastelli, 2025; Rodrigues et al., 2025).

Ecolinguistics views language as a social and ecological practice that not only represents human relations with the environment but also reproduces, legitimizes, or challenges particular ecological ideologies. Within this perspective, ecological framing refers to the linguistic construction of nature through specific roles, attributes, actions, evaluations, and relationships. In this study, ecological framing is identified through the way metaphors position nature as an active subject, passive object, economic resource, victim, partner, home, protector, or living entity. Ecosophy functions as the normative framework used to evaluate whether these linguistic constructions support or undermine ecological well-being. It is operationalized through values such as interdependence, sustainability, care, responsibility, respect for nonhuman life, and environmental justice. Contemporary ecolinguistics has increasingly developed into a transdisciplinary field that examines language as part of cooperative interaction within global ecology, although conceptual and methodological challenges remain (Kravchenko, 2026, p. 1; Lee, 2025; J. Liu et al., 2026; Saglietti et al., 2026).

Anthropocentric orientation is identified when poetic language places humans as superior, central, and entitled to control, exploit, possess, or evaluate nature primarily according to human interests. Its indicators include metaphors that construct nature as property, commodity, instrument, servant, or passive background for human activities. In contrast, ecocentric orientation is indicated by metaphors that recognize the intrinsic value, agency, vulnerability, and interdependence of human and nonhuman life. Such metaphors commonly represent nature as a living subject, companion, caregiver, home, guardian, or entity capable of communicating and experiencing harm. Language ideology is therefore examined through recurring lexical choices, metaphorical mappings, agency patterns, and evaluative expressions that normalize either human domination or ecological reciprocity. The integration of cognitive linguistics and ecolinguistics makes it possible to examine metaphors not only as conceptual mechanisms that structure individual understanding but also as ideological devices that mediate social, cultural, and ecological relations (Khatin-Zadeh et al., 2026; Lai & Tan, 2025; Wang & Liu, 2024, p. 1). Through this operational framework, ecological metaphor analysis can reveal how students frame environmental reality, what ecological values their poetry promotes, and whether their linguistic representations tend toward anthropocentric exploitation or ecocentric sustainability.

This study aims to reveal the structure of ecological metaphors and the framing of environmental reality in the poetry of elementary school teacher education program students through cognitive linguistic and ecolinguistic perspectives. Contributions to the fields of education and curriculum are realized through the provision of an empirical basis for the development of language and literature learning oriented towards strengthening ecological literacy and the formation of an ecocentric paradigm in prospective elementary school teachers. The contribution to the policy realm lies in providing linguistic evidence regarding the mindset and environmental ideology of prospective educators, which can be used as a basis for formulating more transformative and sustainable environmental education policies. The contribution to the achievement of Sustainable Development Goals is reflected in the support for strengthening quality education, climate awareness, and environmentally friendly behavior through the use of language and literature as a strategic medium for cognitive and social change.

Method

Data and Resources

The research corpus comprised 50 poems written by third-semester students enrolled in the Elementary School Teacher Education Study Program at a higher education institution in Indonesia. The participants were prospective elementary school teachers who had completed introductory courses in language skills, literary appreciation, and basic pedagogy. At this stage of study, they were considered to possess sufficient academic literacy and initial pedagogical knowledge to express environmental ideas through literary texts. The poems were produced as part of a regular academic assignment rather than specifically for the research, thereby allowing the corpus to reflect students' relatively natural forms of poetic and ecological expression.

The corpus was selected through a purposive screening process. First, all poems submitted for the assignment were inventoried and converted into a uniform digital format. Each poem was then read to determine whether it explicitly addressed environmental or nature-related issues. Poems were included when they contained representations of natural entities, ecological degradation, environmental protection, or relationships between humans and the nonhuman environment. Poems that did not contain an identifiable environmental theme, relied only on literal descriptions without relevant metaphorical expressions, or duplicated previously submitted texts were excluded. After this screening process, 50 poems were retained as the final corpus. Student poetry was selected because the genre accommodates concentrated cognitive, affective, and figurative expression, enabling the analysis to reveal how prospective elementary school teachers conceptualize nature, ecological crises, and human responsibility toward the environment.

Data Collecting

Data collection techniques were carried out through the documentation of poetry works by third-semester students of the Elementary School Teacher Education Study Program, which were collected as part of academic assignments for courses related to language skills and literary appreciation. The collection process involved the systematic inventorying, selection, and archiving of poetry texts based on predetermined thematic criteria so that only works that explicitly contained environmental or nature issues were used as research data. All poetry texts were then converted into a uniform written text format to maintain consistency in analysis and facilitate the process of coding metaphors and conducting repeated and in-depth ecolinguistic readings.

Data Analysis

Data analysis techniques use an interactive analysis model that includes data condensation, data presentation, and conclusion drawing/verification (Miles et al., 2014). The data condensation stage is carried out through the selection, focusing, and coding of linguistic units that represent ecological metaphors and the framing of environmental reality in the poetry texts. The data presentation stage is realized through the grouping of metaphor patterns and ideological tendencies into a thematic matrix so that the interrelationships between categories can be read systematically. The conclusion drawing and verification stage is carried out through repeated reading, comparison between data, and checking the consistency of interpretations to ensure the validity of findings and the accuracy of analytical inferences.

Results

Structural Metaphor

According to Conceptual Metaphor Theory, a structural metaphor occurs when one conceptual domain is systematically understood and organized in terms of the structure of another domain (Lakoff & Johnson, 1980). The more concrete and familiar conceptual domain functions as the source domain, whereas the more abstract or complex concept being interpreted functions as the target domain. Classification as a structural metaphor requires more than an isolated figurative word. It must demonstrate a coherent set of correspondences in which the elements, relations, actions, or processes of the source domain are systematically mapped onto the target domain. In this study, an expression was classified as a structural metaphor when it met three indicators: it contained identifiable source and target domains, it transferred a relational or procedural structure from the source domain to the target domain, and the mapping contributed to a coherent interpretation of environmental reality. For example, the metaphor NATURE IS A COMMUNICATOR structures natural phenomena through the human communication domain, in which nature functions as a speaker, natural sounds constitute messages, and humans are positioned as listeners. These criteria distinguish structural metaphors from orientational metaphors, which organize concepts through spatial schemas, and ontological metaphors, which conceptualize abstract experiences or nonhuman entities as objects, substances, containers, or persons. The following section presents the structural metaphor patterns identified in the students' poems.

Data 1

"At morning, the Earth whispers softly beneath the waking sky."

There is a structural metaphor because the earth is human (personification). This is the most clear and explicit metaphor. The verb "whisper" (a specific and intimate act of communication) is mapped to the non-human subject, "Earth." The message of nature is food (Experience Metaphor). Although more implicit, the context of 'whisper' in "morning" often triggers a second conceptual metaphor that links communication with the provision of energy or vitality.

Data 2

"Morning dew drips from the tips of the grass."

This line primarily presents a literal image of dew falling from the tips of the grass. The verb drips commonly describe the movement of liquid and does not, by itself, assign a human characteristic or conscious action to the dew. Therefore, the expression should not automatically be classified as personification or as a structural metaphor. The interpretation of dew as providing care, administering medicine, or acting with love is not explicitly supported by the linguistic expression. Such an interpretation would require additional textual evidence showing a systematic mapping between the source domain of caregiving and the target domain of a natural process. Without supporting expressions involving a caregiver, recipient, treatment, protection, or healing, the proposed metaphor nature's care is medical treatment remains speculative. Accordingly, this line is classified as literal ecological imagery rather than a conceptual metaphor. It contributes to the representation of nature through visual and sensory description, but it is excluded from the structural metaphor category to maintain clear analytical boundaries between literal expression, structural metaphor, and ontological metaphor.

Data 3

"Whispering prayers for the wounded nature"

The phrase "wounded nature" conceptualizes environmental degradation through the source domain of bodily injury. Ecological damage is represented as a wound, while nature is positioned as a living entity that can experience vulnerability and suffering. Meanwhile, "whispering prayers" introduces a spiritual and affective response associated with concern, hope, and moral responsibility. Through this mapping, environmental destruction is framed not merely as physical damage but as a condition that deserves care and restoration. This metaphor has the potential to foster ecological empathy by encouraging readers to perceive nature as a vulnerable entity whose suffering warrants ethical attention. However, its actual emotional effect on readers would require further empirical investigation.

Data 4

"Fog embracing the hills"

The phrase is a personification of a human physical action (embracing) that symbolizes affection and protection, as well as a meteorological phenomenon (fog covering the hills). The meaning gives the impression that nature is warm and loving, not just a lifeless landscape.

Data 5

"Heart that grieves"

The phrase "a grieving heart" contains an ontological metaphor in which the heart is conceptualized not merely as a physical organ but as the center and container of human emotions. The verb "grieves" attributes an emotional capacity to the heart, allowing an abstract feeling of profound sadness to be represented through a concrete bodily entity. This metaphor draws on the conventional conceptual mapping EMOTIONS ARE LOCATED IN THE HEART, through which psychological suffering becomes easier to imagine and express. In an environmental context, the grieving heart may also represent the emotional response of humans or nature to ecological degradation. The expression therefore intensifies the affective dimension of the poem and has the potential to encourage ecological empathy by associating environmental damage with an intimate experience of sorrow, loss, and concern.

Data 6

"Let's listen to the whisper of the earth at dawn"

This phrase is built on the metaphor that the earth is human. By giving it the human attribute of being able to "whisper", the earth is no longer considered a physical object or inanimate object, but rather an entity that has consciousness and a desire to communicate. "Whisper" here linguistically functions as a metaphor for subtle natural phenomena such as the sound of a gentle breeze, the rustling of leaves, or intense silence which can only be captured if the listener is calm and focused. The choice of "dawn" provides a pragmatic framework that reinforces this metaphor. Linguistically, dawn is a symbol of the threshold between darkness and light, as well as noise and silence. In this context, "dawn" is not merely an indicator of time, but a metaphor for spiritual and

emotional clarity. The silence of dawn is a prerequisite for humans to cognitively observe the earth's soft "whispers."

Data 7

"mere promise"

The phrase uses a metaphor that implies that a promise is an empty vessel. The word "mere" functions linguistically to reduce the value of the promise, positioning it as mere sound or words (verbal) that have lost the essence of their action. Here, there is a binary opposition between affection (connoted as tangible evidence or behavior) and "promise" (connoted as unrealized potential or even falsehood). This phrase contains a criticism of communication that stops at the level of words. The subject demands the manifestation of affection in the form of concrete actions as a rejection of the rhetoric of "promises" that have no basis in reality.

Data 8

"Now he is cloudy with disappointment"

The main structural metaphor here is that emotions are liquid in a container. The word "murky" takes the physical structure of water polluted by sediment to describe an inner condition. In a normal (calm/happy) state, water or the inner self is described as clear so that the bottom can be seen. However, when the structure 'murky' is attached to the subject "he," disappointment is understood as dirty particles that stir up the clarity of the mind. Structurally, the darkness or visual obscurity of water becomes a model for understanding the complexity and sadness experienced by humans.

The use of the word "hold back" activates a mechanical structure of pressure and capacity. Disappointment is conceptualized as an external force or mass that exerts pressure, while the subject "he" acts as a supporting structure or container (such as a dam or bottle). This metaphor implies that there is a limit to structural capacity; when someone "holds back" disappointment, they are trying to prevent their personality structure from breaking or overflowing. This illustrates that emotions are not just feelings, but something that has physical weight and force that must be managed. The word "now" indicates a change in structure from the previous condition. Structurally, there is a transition from a "clear" to a 'murky' state. This reflects how external events (perhaps unkind human actions) have changed the subject's inner composition. This structural analysis shows that disappointment does not stand alone, but is mixed with and changes the entire physical nature of the subject, so that they no longer function or appear the same as before.

Data 9

"Longing for the day when it regains its freedom."

The main structural metaphor at work here is that freedom is the absence of physical barriers. The word "freedom" borrows its structure from the condition of an object that is no longer bound or confined. Structurally, this phrase implies that the subject's current condition (perhaps a murky river or damaged nature) is in a "prison" or "confinement" structure. By using the structure of independence, the reader's mind is directed to imagine the removal of barriers or burdens that prevent the subject from functioning naturally. The use of the phrase "the day when" establishes a temporal

structure as the destination. The longed-for day is treated as a coordinate point in the future that must be reached through a journey. This structure suggests that independence is not something that comes by itself, but rather a place that is reached through a linear process. "Longing" in this context functions as a compass or driving force that directs the subject's entire orientation towards that destination. The word 'return' implies a cyclical structure or a return to the starting point. Structurally, this suggests that "independence" is the original or default condition of the subject. This metaphor constructs the idea that the damage or bondage experienced today is a deviation from the original structure. The desired state of independence is not a new, unfamiliar structure, but rather the restoration of an order that has existed since the beginning but was lost.

Data 10

"The air blows, carrying a gentle message"

The phrase includes the main structural metaphor in this phrase, which is that the wind is the bearer of messages. Air is not seen as merely the movement of a mass of gas due to pressure differences, but is structured based on the role of a courier. The word "carries" implies the existence of a subject (air), an object being transported (message), and a destination. Structurally, we understand airflow through logistical logic: something is taken from one point and delivered to another point to be conveyed to the recipient. The use of the word "message" applies linguistic structure to sensory phenomena. Moving air (wind) usually only produces hissing or friction sounds, but structurally, these sounds are conceptualized as codes or symbols that have intellectual meaning. This structure allows humans to process natural sounds not as noise, but as information with a specific meaning. The word "soft" gives the physical structure of the tactile world (texture) to something auditory or cognitive. Structurally, the message is not described as a loud or harsh sound, but uses the logic of silk or a smooth surface. This creates a mapping in which the way the information is conveyed is not surprising or assaulting to the senses, but rather blends quietly into the recipient's consciousness. The data "asks us to pause listening" includes the main structural metaphor at work here, which is the activity of moving forward. The word "stop" borrows its structure from the operation of a vehicle or the movement of feet that are running. Structurally, human life or daily routines are understood as a fast-moving trajectory. By using the word "stop," this phrase constructs the understanding that to perform the activity of "listening" with quality, a complete halt to the 'engine' of routine is necessary. This structure emphasizes that listening is not an activity that can be done optimally in passing or at high speed. The word "for a moment" provides a structure of spatial and temporal limitation. In this structural logic, human attention is considered a "container" with limited capacity. To fill this container with the sounds of nature or the "whispers of the earth," the container must be silent (static). This structure implies that "hearing" requires a pause or space in the timeline so that incoming information does not collide with the noise of other activities. Structurally, the act of "hearing" in this context is not merely the biological process of capturing sound by the ear, but is structured as an active process of data collection. The word "ask" provides the structure of the system's needs. Nature or circumstances are positioned as subjects that give work instructions to humans. Structurally, if humans do not stop, the process of absorbing messages (such as soft messages from the air) will fail because the system is too busy with its own physical movements.

Data 11

"That the earth is not just a place to stand on"

Structurally, the general view of humans often uses the metaphor that the earth is the floor/base. This structure positions the earth as a static, lifeless object whose function is limited to supporting gravity for human activities. The use of the word "not only" in the phrase aims to break down the limitations of this structure. The speaker invites us to no longer view the earth with the logic of a building structure (where the floor is only the bottom part that is stepped on), but to begin to construct a new understanding that the earth has a more dynamic structure, like an organism or a large household. When we reject the limitation of "place to stand," we are structurally looking for a replacement model. If the earth is not just a foothold, then its structure shifts to the earth is a womb, or the earth is a teacher. This changes the relationship between humans and the earth, from a one-way relationship (pressing down/treading) to a reciprocal relationship (interaction). This new structure implies that the earth has "content" and "meaning," not just a surface. This is a shift from a structure of utility (practical use) to a structure of existential function (meaningful existence). This phrase structurally places humans and the earth in a new position on the cognitive map. In the "foothold" structure, humans are active subjects and the earth is a passive object. However, by rejecting this structure, space is created for a partnership structure. The earth is no longer understood as the backdrop against which humans act, but as a co-actor in the drama of life. The rejection of this "foothold" structure opens the door to the metaphors we discussed earlier, such as the earth whispering, caring, and even feeling disappointed.

Oriental Metaphor

Oriental metaphors organize abstract concepts through spatial relationships derived from embodied human experience, such as up-down, in-out, front-back, deep-shallow, center-periphery, and near-far. These spatial schemas are not arbitrary because they emerge from bodily movement, physical position, and interaction with the surrounding environment. For example, positive conditions are commonly associated with an upward orientation, while negative conditions are represented as downward movement; safety may be conceptualized as being inside a protected space, whereas danger is positioned outside it. In this study, an expression is classified as an orientational metaphor when it structures an environmental condition, value, or relationship through a consistent spatial direction rather than through a complete source-domain structure. Such metaphors can reveal how students evaluate ecological realities by positioning environmental health, protection, and sustainability as upward or central conditions, while pollution, degradation, exclusion, and ecological vulnerability are framed as downward, peripheral, or outside states.

Data 12

*"At the city's center, waste dances and laughs,
while the fragile shore bears what power casts away."*

This data is identified as an orientational metaphor because it orients the center - Edge: In this poem, the City Center is described as the source of the "disposal" problem, while the Beach Edge becomes the shelter. In terms of orientation, the center is the point of control, and the edge is the point of fragility. Top-Bottom (Irony): The words "dancing" and "laughing" usually have an "up" orientation (happy/powerful). However,

the perpetrator is 'trash' (something that is morally "below"). This creates a strong sarcastic effect: something low is actually on top.

Data 13

"Polluting fish houses and coral reefs"

The explanation of the phrase through the lens of orientational metaphor emphasizes how direction and space (such as up-down, inside-outside, or center-edge) are used to understand the emotional quality or status of a situation. Up-Down Orientation: Quality and Health. In Lakoff and Johnson's theory, there is a general scheme: good is up, bad is down. Pollution as a Downward Movement: The word "pollute" indicates a decline in status. Clear water is in the 'up' position (pure/healthy), but when polluted, it descends to the "down" position (dirty/damaged). Coral Reefs at the Bottom: Physically, coral reefs are at the bottom of the sea (below). Metaphorically, the act of polluting something that is already "below" (at the bottom) gives the impression of oppression or destruction of the most fundamental foundation of life.

Data 14

"Vehicle smoke billows through the beautiful sky"

The phrase through the lens of the orientational metaphor focuses primarily on the up-down direction. The word "billows" is usually associated with sharp objects (such as arrows or needles) that pass through barriers. Here, the upward movement of smoke is positioned as a "weapon" that pierces or destroys. The fact that vehicle smoke does not just remain below, but rises upward and pollutes the clean air (sky), which is a symbol of the sanctity of nature.

Data 15

"Leaving black marks on a bright face"

Including the orientational metaphor, focuses on the Surface (Front/Outside) scheme and the contrast between Light and Dark values. Explanation of the phrase. The phrase "stain on the face" means that the face is the first part of the human body that is seen and becomes an identity. Black marks on the face are symbols of disgrace or physical defects in human experience. Meanwhile, the phrase "Impact of Pollution on the Landscape" means that "bright face" refers to the horizon or the beautiful surface of the earth, while "black mark" is a metaphor for soot, pollution, or damage left behind by humans.

Data 16

"Protect creatures and care for fragile sources of life"

The use of the words "protect" and "care for" implicitly activates an image scheme in which the subject (protector) is in a position to provide shade or support. Orientationally, something "fragile" is positioned in danger of falling or breaking (below). Thus, the act of protecting is an effort to keep "creatures" and "sources of life" in a stable state of existence (above). This phrase assumes that life is a structure that needs support to prevent it from collapsing toward the gravity of destruction. Orientationally, the term "source of life" refers to an important metaphor: the center.

The source is understood as the central point from which everything emanates. When this source is described as “fragile,” there is a linguistic concern that the center could be shaken, resulting in instability throughout the entire system that depends on it. The word “care” indicates a movement of convergence or a focusing of attention on that central point to ensure the survival of the entire ecosystem.

Data 17

“For the sake of the most beautiful legacy for our generation”

Orientationally, this phrase uses a future image scheme. The use of the word “our generation” implicitly refers to those who are at the next point in time in the chronological line. In human linguistic consciousness, we move forward toward the future. “Legacy” is positioned as an object that is carried or prepared from the present point (here) to be handed over to the point ahead (there). This creates a progressive and responsible orientation of movement toward the future. The use of the superlative “most beautiful” activates the orientational metaphor of above. In a metaphorical sense, “beautiful” or ‘best’ occupies the top position on the vertical scale of values. By mentioning “the most beautiful heritage,” the speaker indirectly invites the listener to raise the standard of quality of life and environment from a low (bad/ordinary) condition to a higher (noble/beautiful) position. The effort to realize this legacy is seen as a movement to improve quality that must be maintained for those who come later.

Data 18

“By human hands that are no longer friendly”

This phrase operates on the vertical axis of moral quality, where moral is above and amoral is below. The word ‘friendly’ is implicitly positioned in a high place (noble), while the condition “no longer friendly” indicates a downward movement or degradation of value. The use of the word “no longer” implies a process of falling or shifting position from where it should be (harmonious/above) to a lower condition (destructive/below). Cognitively, human unfriendliness is understood as a decline in the degree of humanity itself. In orientational linguistics, “hands” often represent a center of control or power. Something that is under someone’s hands means that it is under their control. In this phrase, human hands are in a superior position (as the subject holding authority), but because of their “no longer friendly” nature, this superior position turns into oppression. The orientation of power, which should be protective (sheltering), shifts to downward pressure, referring to objects (nature/other beings) that are under human control.

Data 19

“The river flows carrying real stories”

This phrase uses the future as the direction of flow (down/forward). Rivers naturally flow from upstream (up) to downstream (down). This “flowing” movement maps the orientation of time where the past is behind (upstream) and the future is ahead (downstream). The “true stories” carried by the flow are positioned as entities that move forward along the timeline. Orientalistically, life is understood as a process that cannot return backwards (upstream), but rather continues to move in the direction of the gravity of time towards the estuary. The use of the word “carries” activates a

horizontal orientalistic metaphor. Real stories are positioned as 'loads' or "cargo" that move spatially from one location to another. Cognitively, we understand the dissemination of news or history as the movement of objects from point A to point B. This orientation suggests that the story is not static in one place, but dynamic and reaches anyone along the path of the flow. Rivers always move towards lower positions. In this orientational metaphor, truth/reality is the basis. The word "real" in "real story" gives it an ontological weight that is in line with the gravity of a river's flow. The story moves downward (downstream) to eventually settle or accumulate. This downward orientation is often associated with depth and foundation, implying that the story carried by the river has a strong foundation in reality, not just a story floating aimlessly.

Data 20

"O mankind, guardian of the future"

This phrase is based on the scheme that the future is the direction ahead. The word "future" automatically directs human cognitive vision to the empty space in front of them in a linear timeline. By referring to humans as "guardians," the position of humans is placed right on the threshold between the present and the future. This orientation gives the impression that humans are "barriers" or 'gateways' that determine what qualities are allowed to pass into the space ahead. The word "guardian" activates the orientational metaphor of having control over. A spatial guardian is often positioned in a higher place (such as a watchtower) in order to have a wide field of view. This orientation places humans in a dominant hierarchical position over nature or the entities they guard. However, this "higher" position does not mean arbitrariness, but rather a vertical responsibility to ensure that what is under their control does not fall or be destroyed. Orientationally, the activity of "guarding" also involves a scheme of sustainability, which is to support (up). The future is seen as something that must remain standing tall. If humans as guardians are negligent, then the future will fall (down). Therefore, the orientation of humans in this phrase is as the support of the structure of civilization. The call "O mankind" serves as a call to draw human consciousness back to the upper position (aware and alert) so as not to fall into the lower position (negligent).

Data 21

"let's take care of this house with all our love"

The use of the word "house" activates the image of a container. Unlike the concept of "place of standing," which is open and spacious, "house" creates an orientation boundary between 'inside' and "outside." By referring to the earth as a home, humans are positioned "inside" the same space as nature. This orientation eliminates the spatial distance between subject and object; taking care of the home means taking care of ourselves because we are inside that structure. This creates a sense of security and intimacy that open spaces do not have. The phrase "with all our love" uses an orientational metaphor that is more about quality than quantity. The word "full" refers to the maximum limit of a filled container. Orientationally, doing something with "all my love" means filling the capacity of our actions to the peak (top). This shows total commitment, where there is no empty space left for neglect or hatred. This "full" orientation gives direction to human behavior to always move towards the highest standards in caring for the environment.

Ontological Metaphor

Ontological metaphors conceptualize abstract experiences, events, emotions, ideas, or natural phenomena as concrete entities, substances, objects, or containers. This process allows intangible concepts to be identified, described, measured, possessed, or acted upon as if they had physical existence. Personification is one form of ontological metaphor in which nonhuman entities or abstract concepts are represented as human beings with human characteristics, intentions, emotions, or actions. However, not all ontological metaphors involve personification. Expressions such as “hope is in our hands” conceptualize hope as a physical object, while “a heart full of sadness” represents emotion as a substance contained within a vessel. Therefore, personification should be treated as a subtype of ontological metaphor rather than as an equivalent term for the entire category.

Data 22

“But hope is in our hands”

In the phrase includes an ontological metaphor, namely hope or a physical object/commodity that can be held, carried, or placed in the palm (such as a tool or plant seedling). By saying that hope is “in our hands,” the poet transforms something invisible into something tangible. This gives readers the psychological power that they have this “tool” (hope) and are responsible for using it through concrete actions (hands as a symbol of action).

Data 23

“Small steps are the beginning of real change”

The phrase views the word ‘change’ as something that has a boundary or starting point that can be marked by a “step.” Meanwhile, the word “small” refers to size (small as opposed to big): By giving the attribute “small,” the poet ontologizes (materializes) change as something that has dimensions or volume. This helps humans understand that change is not something scary or heavy, but something that can be “stepped on” or started with minimal capacity.

Data 24

“Sorting trash and planting seeds of life”

The phrase uses the word ‘life’ as a small physical object that has enormous growth potential. Meanwhile, the activity of “sorting” implies that environmental problems (trash) are a collection of substances that can be managed and separated so that they do not contaminate each other. By mentioning “planting,” the poet emphasizes that humans have direct control over “life.” We can determine whether the seeds will grow or die.

Data 25

“Turning off the lights with sincerity”

The phrase implies that sincerity is a substance/liquid in a container. It means something (such as water or contents) that can fill a space to its maximum limit (“full”). The intensity of a person's intention or seriousness in acting. It means that sincerity is considered an object or substance that has volume. If an action is done “fully,” it means

that the entire soul and intention of the perpetrator is poured out without residue in that action.

Data 26

"Let's listen to the whisper of the earth at dawn,"

The main ontological metaphor in this phrase is that nature is human. By mentioning a "whisper," the earth is no longer seen as just a pile of matter or a planet, but as an entity that has organs of communication and consciousness. Ontologically, "whisper" transforms the faint vibrations of nature into a structured message. This gives the earth ontological status as a subject equal to humans, capable of sharing secrets or warnings through very subtle sounds. The word "whisper" also functions as an ontological metaphor that converts silence or the sound of the wind into a concrete object of hearing. Without this metaphor, the sounds of nature at dawn might be considered nothing more than background noise. However, by labeling it as a "whisper," the phenomenon is given a "container" so that it can be identified, noticed, and 'heard' as something that has substance. The time of "dawn" in this phrase is treated as a container or physical space where the interaction takes place. Ontologically, dawn is not merely a marker of time, but a limited environment that allows the whisper to be heard. It is in this silent "container" of dawn that the entities of the earth and humans can meet on the same frequency. This clarifies the status of the earth as an entity that is not only silent but actively interacts in a specific space and time.

Data 27

"He asks for affection, not just promises"

This expression is predominantly classified as an ontological metaphor because the abstract concepts of affection and promises are conceptualized as entities that can be requested, given, received, or rejected. The verb "asks" gives affection an object-like status, suggesting that it should be manifested through observable actions rather than remaining an abstract emotion. Meanwhile, the contrastive phrase "not just promises" frames promises as insufficient entities that lack the substance expected by the subject. The expression therefore establishes a contrast between affection as meaningful and tangible evidence of care and promises as verbal entities without corresponding action. Although the line may evoke a broader exchange schema, it does not provide a sufficiently systematic mapping to justify its separate classification as a structural metaphor. Accordingly, the data is coded only as an ontological metaphor, specifically affection is a tangible object and promises are empty objects.

Data 28

"Protect creatures and care for fragile sources of life"

The phrase includes the most dominant ontological metaphor here, which is that life is a solid object. By mentioning the existence of "sources of life," this phrase transforms the abstract concept of life sustainability into an object or machine that has a central point (source). The word "nurture" reinforces this ontological status, because linguistically we nurture objects that can be damaged or wither. This object is no longer seen as an automatic natural process, but rather as a valuable asset whose existence depends on human actions. The use of the adjective "fragile" is an ontological metaphor

that attributes material properties (such as glass or porcelain) to ecosystems. Ontologically, nature is positioned as something that is easily broken. This depiction is crucial in changing human perceptions; if nature is considered to be something very strong and unlimited, humans tend to be negligent. However, by labeling it as “fragile,” nature acquires the ontological status of an entity that needs special protection so that its physical form is not destroyed or lost. The word ‘protect’ places “creatures” in the ontological category of objects in danger. In the cognitive space, living beings are understood here as entities that do not have sufficient internal defenses, thus requiring external intervention. This creates a scheme in which humans are the subject (agent) and other beings are objects whose existence is “located” within the space of human protection. This metaphor provides a clear boundary between the protector (humans) and the protected (creatures and sources of life).

Data 29

“For the sake of the most beautiful legacy for our generation”

The phrase includes the main ontological metaphor in this phrase, which is that the result of an action is an object of ownership (legacy). Ontologically, the word “legacy” transforms abstract things (such as nature conservation or social stability) into entities that have boundaries, volume, and sale value, just like land, money, or jewelry. By labeling future conditions as “heritage,” the speaker gives concrete status to moral responsibility. Something that should be dynamic and intangible is condensed into an ‘object’ that can be left behind, handed over, or accepted by heirs (future generations). The use of the word “most beautiful” gives an aesthetic dimension to this ontological object. Beauty is usually attached to objects that can be perceived visually. In this context, the quality of life and the condition of the earth in the future are understood through the metaphor that goodness is physical beauty. This makes the “legacy” not only exist, but also have perfect surface quality and form. Cognitively, this makes it easier for humans to imagine their goal as an effort to “beautify” an object that will be given to others. Ontologically, “our generation” is positioned as a vessel or recipient entity. In the inheritance scheme, there must be a subject who receives the object. By referring to future generations as recipients, this phrase places boundaries on the identity of future humans, as if they were individuals already standing in line to receive physical packages from the present. This reinforces the urgency that the “objects” being prepared today have a clear and tangible end goal.

Data 30

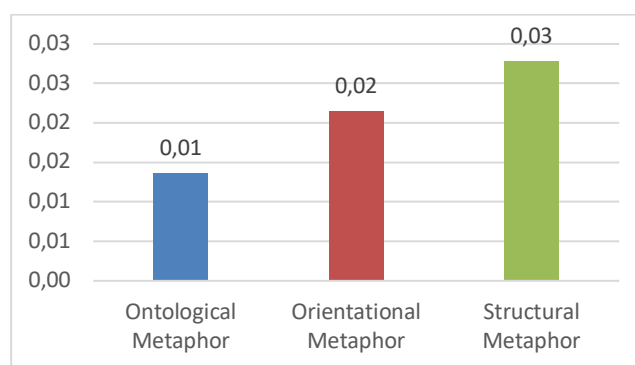
“The forest stands as an eternal protector”

This phrase uses the metaphor of the forest as a human/guardian. The verb “stands” gives the forest human physical attributes. The forest is no longer viewed passively as a geographical object, but as a subject that has the posture and awareness to perform actions. By “standing,” the forest is positioned as an alert guardian. This ontological status changes our perspective on nature, from merely a resource to be exploited to a “person” whose presence must be respected because it plays an active role in the ecosystem. In addition to being human, forests are also given the ontological status of being a fortress/shield. The word “protector” conceptualizes forests as functional objects that have physical boundaries to ward off threats. In human cognition, a protector is an object that stands between us and danger. By giving it this label, the

biological phenomena of the forest (such as roots that retain water or canopies that block the wind) are condensed into a single, clear function: a protective tool. The attribute of “eternity” gives it an ontological dimension of extraordinary durability. Metaphorically, the forest is seen as an object that is not subject to the laws of decay or the ravages of time. This creates an ontological image of a “super-permanent” object. Although trees can die biologically, as a ‘Forest’ (a collective entity), it is considered to have an existence that transcends human lifespan. This reinforces the urgency not to destroy it, because damaging something “eternal” is considered a violation of a fundamental existential order.

Tabel 1 Percentage Coverage

No	Coding	Percentage Coverage
1	Ontological Metaphor	0,01
2	Orientalational Metaphor	0,02
3	Structural Metaphor	0,03



Gambar 1 Percentage Coverage Graphic

Table 1 shows the percentage distribution of conceptual metaphor types identified in PGSD students' poems, with structural metaphors occupying the highest proportion of 0.03, followed by orientational metaphors at 0.02, and ontological metaphors at 0.01. This pattern indicates a tendency among students to construct environmental reality through systemic and relational conceptual mapping, in which concrete experiential structures are used to organize understanding of complex ecological phenomena. The dominance of structural metaphors reflects a cognitive tendency to explain environmental issues through the framework of actions, processes, and cause-and-effect relationships, while orientational metaphors serve to complement meaning through affective evaluation based on spatial orientation, and ontological metaphors play a more limited role as a means of condensing abstract experiences into referable entities.

Figure 1 visually represents the data in Table 1 through a bar graph that clarifies the differences in the frequency of each type of metaphor. This graphic representation shows a consistent gradation between the three categories of metaphors, making it easier to read the dominant trends in the corpus of poems analyzed. This visual clarity confirms that structural metaphors function as the main framework for framing environmental reality, while orientational and ontological metaphors serve as supporting mechanisms in constructing nuances of meaning and ecological evaluation. This pattern reinforces the interpretation that the construction of students' environmental awareness is mediated more by relational and processual cognitive schemas than by the mere personification or objectification of the environment.

Tabel 2 Item Correlation by Pearson Correlation Coefficient

	Structural Metaphor	Orientalional Metaphor	Ontological Metaphor
Structural Metaphor	1		
Orientalional Metaphor	-0.262	1	
Ontological Metaphor	0.081	0.287	1

Table 2 presents Pearson correlation coefficients between types of conceptual metaphors, showing relatively weak and varied relationship patterns. The negative correlation between structural metaphors and orientational metaphors of 0.262 indicates a tendency for opposite usage, where an increase in the intensity of structural metaphors is followed by a decrease in the appearance of orientational metaphors. The low positive correlation between structural metaphors and ontological metaphors of 0.081 indicates a very limited relationship, such that the two types of metaphors tend to operate independently in framing the reality of the environment. The higher positive correlation between orientational metaphors and ontological metaphors of 0.287 reflects a stronger tendency toward coexistence, indicating that spatial orientation in environmental meaning-making is often accompanied by the objectification or conceptualization of ecological experiences into conceptual entities.

Discussion

The relative prominence of structural metaphors indicates that the students tended to understand ecological realities through coherent schemas derived from familiar human experiences. Nature was not represented merely through isolated figurative expressions but was organized through broader mappings such as nature is a communicator, nature is a caregiver, and environmental degradation is bodily injury. Within these mappings, the earth whispers, fog embraces, air carries messages, and damaged nature suffers wounds. Such expressions allow complex ecological conditions to be interpreted through interpersonal, bodily, and emotional experiences that are more immediately accessible to the students. This finding supports the view that metaphors function as cognitive mechanisms for organizing abstract knowledge rather than merely as poetic ornaments (Durand-Delacre, 2024; Eskandari et al., 2025). It is also consistent with Abraham et al. (2021), who argue that metaphor processing facilitates conceptual expansion by connecting unfamiliar or abstract experiences with established semantic structures. The prominence of structural metaphors may therefore reflect the students' reliance on everyday relational schemas to make ecological problems understandable, emotionally meaningful, and narratively coherent.

The representation of the earth, fog, air, forests, and other natural entities as subjects capable of communicating, protecting, embracing, or suffering also suggests a predominantly ecocentric tendency. From an ecolinguistic perspective, agency is significant because grammatical and metaphorical choices determine whether nature is positioned as an active participant or merely as a passive object available for human use. By granting nature voice, emotion, vulnerability, and protective functions, the poems recognize nonhuman entities as participants with intrinsic value. This framing challenges strongly anthropocentric discourse in which nature is treated only as a

commodity, instrument, or background for human activity. The finding extends previous studies that have emphasized metaphor as a cognitive and pedagogical resource by showing that metaphor also carries ecological ideology. In this corpus, interpersonal metaphors do not simply simplify environmental concepts; they contribute to an ethical framing in which environmental damage is interpreted as injury, neglect, or the disruption of a reciprocal relationship between humans and nature. This confirms the relevance of integrating cognitive linguistics with ecolinguistics, because conceptual mappings simultaneously reveal how students understand nature and how they evaluate human responsibility toward it (Khatin-Zadeh et al., 2026; Wang & Liu, 2024).

Orientational metaphors provide a more concrete spatial organization of ecological values and power relations. The contrast between the city center and the edge of the beach, for example, frames the center as the location from which waste and control originate, whereas the coastal edge becomes the vulnerable space that receives the consequences. This center-periphery pattern turns environmental pollution into a representation of ecological inequality: those occupying the center exercise greater control, while peripheral ecosystems bear the burden. Similarly, the up-down schema evaluates environmental conditions morally. Pollution, degradation, and destructive behavior are conceptualized as downward movement, whereas protection, restoration, and ecological responsibility are associated with upward movement. The image of vehicle smoke rising into a beautiful sky creates an ironic reversal because a physically upward movement carries morally negative consequences. The inside-outside schema in the metaphor *Earth Is A Home* further positions humans inside, rather than outside, the ecological system. Consequently, environmental protection is framed not as care for a distant object but as the preservation of the shared space on which human and nonhuman life depend. These patterns demonstrate that orientational metaphors organize not only spatial perception but also judgments about ecological quality, vulnerability, responsibility, and power.

Ontological metaphors transform abstract ecological values such as hope, change, sincerity, responsibility, and inheritance into entities that can be held, planted, protected, transferred, or damaged. Expressions such as “hope is in our hands,” “small steps are the beginning of real change,” and “seeds of life” make environmental action appear concrete and achievable. This finding is pedagogically relevant because prospective elementary school teachers need linguistic strategies that translate abstract environmental principles into concepts accessible to young learners. Metaphors involving hands, steps, seeds, homes, wounds, and protectors connect ecological ideas with bodily and everyday experiences familiar to children. In literature and environmental literacy lessons, such expressions can be used to encourage pupils to identify figurative meanings, discuss human responsibility, and connect poetic imagery with practical actions such as reducing waste, saving energy, planting trees, and protecting living creatures. This pedagogical potential is consistent with studies showing that conceptual metaphors can bridge abstract knowledge and embodied experience in educational contexts (Crisosto-Alarcón et al., 2025; Han et al., 2025). The present study extends that insight by demonstrating how metaphor-based literary learning may simultaneously develop linguistic competence, imaginative engagement, and ecological awareness.

Nevertheless, the poems cannot be classified as entirely ecocentric. Some expressions continue to position humans as guardians, owners, managers, or decision-makers who determine the future of nature. Metaphors such as environmental heritage being transferred to future generations or fragile ecosystems depending on human protection

may promote responsibility, but they also preserve a hierarchical relationship in which humans occupy the superior position of control. Nature is sometimes valued because it supports human survival or constitutes an asset to be inherited, rather than because it possesses intrinsic worth. The corpus therefore reveals a negotiated ideological position. Ecocentric tendencies appear through the attribution of agency, emotion, voice, and inherent value to nature, whereas anthropocentric traces remain in metaphors of ownership, management, guardianship, and utility. This tension is important because it indicates that the students' ecological awareness is developing but has not fully moved beyond human-centered assumptions.

Overall, the study contributes to earlier metaphor research by shifting attention from metaphor as a general cognitive mechanism or instructional technique to metaphor as a marker of ecological framing among prospective elementary school teachers. Previous studies have demonstrated that metaphors support conceptual expansion, creativity, vocabulary learning, and embodied understanding (Abraham et al., 2021; Crisosto-Alarcón et al., 2025; Durand-Delacre, 2024; Han et al., 2025). The present findings add that metaphors in student poetry also disclose ideological orientations toward human-nature relations. Structural metaphors reveal the relational models through which students understand nature, orientational metaphors organize ecological value and power spatially, and ontological metaphors transform environmental responsibility into tangible forms of action. The integration of these findings provides an empirical basis for incorporating ecological metaphor analysis into teacher education, particularly in literature courses that seek to prepare prospective teachers to critically evaluate anthropocentric language and promote more reciprocal, responsible, and ecocentric environmental narratives in elementary classrooms.

Conclusion

The poetry of the Elementary School Teacher Education students constructs environmental reality primarily through structural metaphors that present the earth, fog, air, forests, and other natural entities as active participants capable of communicating, protecting, embracing, and experiencing harm. Orientational metaphors organize ecological evaluation through spatial relations such as center-periphery, up-down, inside-outside, and front-back, thereby representing ecological inequality, moral decline, vulnerability, and responsibility for the future. Ontological metaphors make abstract concepts such as hope, change, sincerity, life, and environmental inheritance more tangible by representing them as entities that can be held, planted, protected, maintained, or transferred. From an ecolinguistic perspective, these patterns indicate a predominantly ecocentric orientation because nature is generally represented as a living, valuable, and vulnerable subject rather than merely as a passive resource. Nevertheless, anthropocentric traces remain in expressions that position humans as guardians, managers, or owners of nature. The poems therefore reflect a developing ecological ideology that tends toward reciprocity, care, and sustainability, although it has not entirely moved beyond human-centered assumptions.

This research contributes theoretically by enriching cognitive linguistic and ecolinguistic studies through mapping ecological metaphors as cognitive and ideological mechanisms in the framing of environmental reality by prospective elementary school teachers. Pedagogical contributions are realized through the provision of an empirical basis for the development of language and literature learning oriented towards strengthening ecological literacy and forming an ecocentric paradigm in basic education. Policy contributions are reflected in the provision of linguistic evidence regarding the

mindset and environmental value orientation of prospective educators, which can be utilized in the formulation of more transformative environmental education policies. Contributions to Sustainable Development Goals are realized through support for quality education, climate awareness, and environmentally responsible behavior in line with efforts to achieve sustainable development.

Future research has the opportunity to develop this study by expanding the research subjects and objects to include prospective teachers from various institutional and cultural backgrounds in order to identify variations in ecological metaphors influenced by sociocultural factors. In-depth analysis can be conducted by combining qualitative and quantitative methods based on linguistic corpora to improve the accuracy of mapping metaphorical patterns and ideological tendencies. The direction of future research can also focus on evaluating the effectiveness of environmental literature-based pedagogical interventions in shaping cognitive changes and sustainable ecological attitudes in prospective educators.

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