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Transmitting Environmental Educational Values through Javanese Traditional Children's Play Songs: An Ecolinguistic Study

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Abstract

The inheritance of environmental education values is an important aspect in building ecological awareness from an early age, especially through traditional oral culture. One form of oral culture that plays a strategic role in this process is traditional children's play songs that are passed down from generation to generation. The present study aims to describe the environmental education values represented and inherited through Javanese traditional children's play songs from an ecolinguistic perspective. The present study employs a descriptive qualitative approach, underpinned by an ecolinguistic theoretical framework. This theoretical framework conceptualises language as a social practice that interacts dynamically with the natural and cultural environment. The research data consists of the lyrics of seven Javanese traditional children's play songs, which were collected through documentation and interviews with cultural informants. The results of the analysis demonstrate that Javanese traditional children's play songs constitute a coherent and ideological ecological representation system, rooted in an agrarian cosmology that positions nature as a moral, symbolic, and social entity. The depiction of fauna, flora, and landscapes transcends mere description, serving as a conduit for articulating the harmonious and sustainable relationship between humans and nature. Structurally and pragmatically, repetition, parallelism, metaphor, and onomatopoeia function as cognitive-pedagogical mechanisms that internalize ecological ethics through collective musical practices that are educational, regulatory, and affective. Thus, Javanese traditional children's play songs can be understood as a form of beneficial ecolinguistic discourse as well as a model of eco-pedagogy based on local wisdom that is relevant for strengthening ecological literacy.

Keywords: *ecolinguistics; environmental education; Javanese ecological worldview; traditional children's play songs*

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Introduction

The global environmental crisis—marked by ecosystem degradation, climate change, and biodiversity loss—has driven scholars to reassess the ontological foundations of the human–nature relationship, recognizing that ecological problems are not merely technical or biogeophysical but also linguistic, cultural, and ideological, since representation in language shapes human treatment of nature (Haugen, 1972 ; Stibbe, 2020). Consequently, the crisis is also a crisis of representation, positioning environmental education as a transformative strategy to cultivate ecological awareness from an early age through sustainable cultural meaning-making (Palmer, 1998; Tilbury, 2011) , where language functions not only as communication but as a shaper of social and ecological reality. Halliday (2001) argues that language both reflects and shapes ecological understanding, forming the basis of ecolinguistics as an interdisciplinary field examining reciprocal relations among language, culture, and ecology (Fill & Mühlhäusler, 2001; Crystal, 2001; Stibbe, 2020, 2021).

Ecolinguistics has developed through two principal approaches: the Haugenian language ecology perspective, focusing on environmental influence on language, and the Hallidayan ecological linguistics perspective, examining language's impact on the environment (Fill, 2001). Lindo & Bundsgaard (2000) further distinguishes language ecology from eco-critical discourse analysis, the latter investigating how discourse sustains or undermines life-support systems, while Hogan-Brun & O'Rourke (2018) stress reciprocal interactions among language, thought, community, and environment, and Nash & Mühlhäusler (2014) highlights fieldwork exploring networks linking human agents, communities, and nature. As a conceptual umbrella, ecolinguistics evaluates linguistic narratives ecologically, identifies "stories we live by," rejects destructive narratives, and promotes sustainable alternatives (Chen, 2016; Stibbe, 2020).

Within this theoretical framework, language emerges as the predominant medium for transmitting ecological values across generations (Steffensen & Fill, 2014), with local linguistic practices providing insights into community–environment relations (Pennycook, 2001). Traditional ecological knowledge is frequently embedded in language, folklore, and cultural practices that are transmitted intergenerationally (Berkes, 2012), This concept intersects with that of local wisdom, defined as experiential, nature-balanced knowledge that integrates body, soul, and environment (Malihah et al., 2019; Retnowati et al., 2014; Radzi et al., 2016). Consequently, traditional cultural texts function as pivotal conduits for the production, negotiation, and transmission of ecological values.

Ecolinguistic inquiry thus encompasses oral literature, songs, and folk games alongside modern discourse (Fill & Mühlhäusler, 2001; Mühlhäusler, 2003), recognizing that language can either support or hinder sustainability depending on its narratives (Muhlhausler, 2003; Stibbe, 2020). Folklore, as defined by Abrahams (Abrahams, 1980), is a communal medium for teaching and entertaining through everyday expressions, rituals, and symbolic practices. It carries didactic functions that shape environmental behavior (Amlor & Alidza, 2016) and adaptive socio-ecological values (Khasandi-Telewa, 2016). As stated in the works of (Berk, 2013; Nicolopoulou et al., 2015), traditional children's play songs and games integrate language, music, movement, and social interaction. These elements embed values of harmony, life cycles, collective labor, and respect for living beings (Kahn & Kellert, 2002; Foley, 2019). In Javanese cosmology, concepts such as *memayu hayuning bawana* (Geertz, 1976; Magnis-Suseno, 1997) and moral principles like sepi ing pamrih rame ing gawe are encoded in ecological lexicons referencing fauna, flora, and agrarian life (Bang & Door, 2007; Brown & Graver, 2021) Songs like "Aku duwe pitik" illustrate contextual ecological transmission (Stibbe, 2020).

Empirical studies reinforce the environmental-educational potential of traditional children's play songs and games: Martin (2017) identify conservation and sustainable agriculture themes; Agyeman et al. (2012) and Sobel (2004) show culturally grounded education strengthens children's emotional and ecological identity; Pretty et al.

(2009) emphasize integrating local knowledge into sustainability education; Winarti (2019) and Soehardi (2002) underline traditional children's play songs as inheritors of moral–ecological values such as *sepi ing pamrih rame ing gawe* and *memayu hayuning bawana*. Cross-cultural research by Nurkhazanah et al. (2021) reveals shared meanings in Sundanese and Korean children's songs, while ecolinguistic analyses by Perangin-angin & Dewi (2020), Rizqan (2019), and Ghorbanpour (2016) uncover metaphors, personification, and ecological lexicons in regional and popular music. Despite ideological ambiguities, these findings highlight the urgency of anthropological and ecolinguistic lyric analysis.

Yet modernization, globalization, and digital media dominance have marginalized traditional practices from children's lived environments (Louv, 2008), prompting warnings from UNESCO (2019), Henderson (2020), and McLaren (2003) that erosion of tradition risks losing vital local ecological knowledge, even as environmental education grows more urgent; as Fernández-Llamazares & Lepofsky (2019) and Liu & Song (2025) note, traditional children's play songs are vehicles of intergenerational social and ecological transmission. Against this backdrop, the present study examines Javanese traditional children's play songs through lexical, metaphorical, and ideological ecolinguistic analysis to address research gaps focused on modern texts and formal education (Stevenson et al., 2013; Pennycook, 2001), expanding ecolinguistic contributions to sustainability discourse (Stibbe, 2020; Mühlhäusler, 2003; Garcia & Dilling, 2022) while offering a conceptual foundation for transformative, contextual, and sustainable local wisdom-based environmental education amid globalization.

Methodology

This study employs a qualitative descriptive design with an ecolinguistic perspective to examine language as a cultural practice representing human-environment relations in traditional children's play songs from Central Java and Yogyakarta. A qualitative approach was selected because the data consists of words and discourse rather than numbers (Sudaryanto, 1993) providing in-depth descriptions of language communities (Djajasudarma, 1994) . Similarly, Creswell & Poth (2018) emphasize that qualitative research explores the meanings individuals or groups assign to social issues. The ecolinguistic approach views language as the primary medium for inheriting environmental values; Penz & Fill (2022) note it examines language's role in interactions supporting life among humans, other species, and the environment. Stibbe (2021) further states that language shapes how humans perceive and act toward nature. Consequently, this analysis assesses how these aesthetic cultural discourses transmit ecological values and local wisdom.

The primary data comprises ecolexicons and metaphors from seven songs: *Kidang Talun* (The Jungle Deer), *Pitik Tukung* (The Tailless Chicken), *Jago Kluruk* (The Crowing Rooster), *Lir-Ilir* (Gentle Breeze), *Menthok-Menthok* (Hey, Muscovy ducks!), *Kupu Kui* (That Butterfly), and *Kodhok Ngorek* (The Croaking Frog). Data sources include traditional song documentations (Purwadi & Waryanti, 2016; Farida, 2016) . Data collection utilized documentation and interviews. Following Riduwan (2008) , documentation aims to obtain direct relevant data, applied here by analyzing the aforementioned song collections (Purwadi & Waryanti, 2016; Farida, 2016). To obtain supporting data on song meanings, interviews were conducted with five native Javanese speakers (over 50 years old) and three Javanese language teachers from Sleman Regency.

Data analysis combined textual, lexical-semantic, and interpretative thematic approaches. Textual analysis examined lyric structures, metaphors, and social contexts as representations of cultural ideologies (Fairclough, 1995), viewing songs as social practices reflecting societal views on nature (Finnegan, 2012) . Lexical-semantic analysis involved thematic coding of environmental lexicons based on linguistic form, referent, and pragmatic-cultural function. This reflects how

communities construct their environmental reality (Crystal, 2018) and is interpreted ecolinguistically to reveal human-nature ethical relations (Stibbe, 2020). Interpretive thematic analysis identified themes such as human-nature harmony, sustainability, and ecological responsibility, interpreting them as local wisdom inherited through oral traditions (Geertz, 1973). This entire process was conducted iteratively and reflectively to maintain the consistency and validity of the data interpretation (Miles et al., 1994) .

Table 1 Classification of Themes, Contexts of Use, Structures, and Pragmatic Functions

Song	Environmental Theme (Core)	Context of Use	Characteristics of Lyric Structure	Primary Pragmatic Function
Kidang Talun	Agrarian-rural ecosystem (wild & domestic fauna, field flora) with an emphasis on human–nature harmony	Children's collective play	Repetition, parallelism, cosmological metaphor	Educational, affective, social
Pitik Tukung	Micro ecosystem of livestock farming and the life cycle of livestock	Collective imitation play	Onomatopoeia, narrative parallelism	Educational, regulative, affective
Jago Kluruk	Rural ecological system (fauna, flora, weather, agriculture)	Agrarian collective play	Descriptive parallelism, sound-nature imagery	Educational, regulative, social
Lir Ilir	Symbolic agrarian environment and cosmic balance	Cross-generational play & ritual	Imperative repetition, nature metaphor	Educational, regulative, affective
Menthok-Menthok	Micro environment of domestic livestock farming	Children's critical play	Repetition, fauna allegory	Regulative, affective, social
Kupu Kui	Natural ecosystem of pollinator fauna & open spaces	Movement-dialogue play	Directional parallelism, motion verbs	Educational, regulative, social
Kodhok Ngorek	Micro aquatic ecosystem (frog–river)	Sound imitation play	Repetition of onomatopoeia	Educational, affective, social

Results and Discussion

1. Contexts of Use

Within the broader study, these songs operate within collective children's play involving performative configurations and social functions. Anthropologically, songs are embodied social practices involving movement, spatial organization, rhythm, and interpersonal interaction; thus, lyrics function as mechanisms of ecological and social enculturation through repetitive collective performance. *Kidang Talun* employs responsive circle game patterns, particularly *cit-cit-cuit* (tweet-tweet) and sequential references to *tikus pithi* and other fauna, encouraging participation. Repetition coordinates turn-taking, vocal synchronization, and collective rhythm, familiarizing children with biodiversity without explicit conservation instructions. The *Pitik Tukung* method utilizes experiential learning through imitating chicken movements (pecking, brooding, crowing). These kinesthetic activities introduce domestic animal life cycles (incubation, hatching, chick rearing), fostering coordination while introducing productive agricultural practices and rural economic structures.

Jago Kluruk introduces temporal awareness through morning and agricultural

references. The expression "bebarengan padha nandur" (literally, "to cultivate rice together") connects play with collective rice cultivation, internalizing cooperation as a social norm and bridging childhood experience with adult work ethics. *Lir Ilir* exemplifies contextual flexibility through incorporation into games and socio-religious rituals. The *cah angon* (shepherd boy) represents village children and learning subjects, while collective performance facilitates intergenerational transmission of moral and spiritual values, extending beyond entertainment into normative pedagogy that connects profane and sacred domains.

Menthok-Menthok utilizes humor and satire through *megal-megol* (waddling movements), emulating duck behavior to convey indirect criticism and negotiate social norms, subtly regulating everyday social behavior. *Kupu Kui* emphasizes dynamic participation through chasing, butterfly imitation, and verbal challenges, developing motor skills, cooperation, and controlled competition. Simulated butterfly movements naturalize ecological experience through social interaction. Similarly, *Kodhok Ngorek* emphasizes auditory-kinesthetic participation through frog-sound imitation and jumping, connecting children with river habitats while developing coordination, responsiveness, and performance confidence.

Comparative analysis reveals that sound imitation facilitates bodily participation, symbolic spirituality enables ritual flexibility, and animal allegories communicate social criticism through humor, transforming collective experiences into pedagogical resources for contemporary eco-pedagogy.

2. Structural Characteristics of Lyrics

The seven songs consistently employ repetition, parallelism, and sound imitation, serving interconnected aesthetic, cognitive, and pragmatic functions. In oral traditions, repetition facilitates memorability and intergenerational transmission. These structures organize ecological representations and communicate social values through rhythm, phonological patterns, and metaphorical associations.

In *Kidang Talun*, expressions like *mangan kacang talun* (eating jungle peanuts), *mil kethemil mil kethemil* (eating little by little), and *si kidang mangan lembayung* (the deer eats purple spinach leaves) underscore symbiotic relationships between fauna and natural food sources. Parallel references to deer, mice, and elephants construct a poetic biodiversity inventory, while "gedhene meh podho gunung" establishes a concrete topographical analogy. *Pitik Tukung* employs onomatopoeia (*petok go petok petok*), reduplicative expressions (*trondol-trondol* and *mondol-mondol*), and narrative parallelism involving chicken ownership, feeding with corn, laying eggs, and physical descriptions like *wulune brintik* (curly feathers), *cucuk klien* (yellow beak), and *jengger abang* (red comb). The hyperbole "tarung mesti menang" (which translates to "will certainly win a fight") transforms livestock representation into symbolic imaginative discourse.

In *Jago Kluruk*, semantic parallelism creates ecological images encompassing animal sounds, morning chorus, human activities, and landscape. Auditory-visual representations of rural ecological life are created by repeating *rame swarane* (noisy with sounds) and *pating cemruwit* (calling out simultaneously), alongside *srengenge nyunar* and *padha nandur pari*. *Lir Ilir* exhibits rhetorical complexity through repetitions of *lir-ilir, lir-ilir*, and *dodotira-dodotira* functioning as rhythmic mantras. Imperative sequences like *penekna* (climb), *dondomana* (sew), and *jlumantana* (make straight) establish progressive actions, while *ijo royo-royo* and *lunyu-lunyu peneken* (climb even when the tree is slippery) metaphorically connect ecological growth with moral perseverance.

Menthok-Menthok employs repetitive expressions and behavioral parallelism like *angisin-isini* (embarrassing), *ngorok* (snoring), and *ora nyambut gawe* (not working) to construct satirical representations through animal personification. In *Kupu Kui*, directional

parallelism (*ngalor ngidul*, *ngetan bali ngulon*, and *mrana-mrene*) and movement verbs like *mencok* (perching), *cegrok* (landing), and *mabur bleber* (flying away swiftly) establish spatial dynamics. The opposition between *tak cekele* (let me catch it) and *mabur bleber* represents tension between human control and nature's autonomy. *Kodhok Ngorek* relies on repeating *kodhok ngorek* and the onomatopoeia *theyot theblung*, integrating sound imitation with thematic emphasis, establishing symbolic associations between animal behavior and human characteristics. Consequently, lyrics function as an epistemological apparatus for transmitting ecological knowledge and social values.

3. Pragmatic Functions

Pragmatically, the songs exhibit interconnected educational, regulatory, affective, and social functions manifested through linguistic strategies, ecological imagery, and collective performativity, shaping value orientations in Javanese agrarian society.

In *Kidang Talun*, educational content emerges through ecological relationships in *si kidang mangan lembayung* and *mangan kacang talun*, alongside mice, birds, and elephants. The expression *maiu panas wani mati* (advance to war, willing to die) extends discourse toward courage and collective ethos. Affective engagement is reinforced through *cit-cit-cuit* and *nuk legunuk*, while collective singing strengthens communal solidarity. *Pitik Tukung* introduces cause-and-effect reasoning and responsibility through *aku duwe pitik* (I have a chicken), *tak pakani jagung* (I feed it corn), and *ngendok netes trondol-trondol* (laying eggs and hatching). The hyperbole "tarung mesti menang" (which translates to "the one who wins must challenge me and fight my chicken") instills competitive confidence, while "petok go petok" (which translates to "one who dares challenges me and fights my chicken") fosters collective enjoyment.
conventional play songs metamorphose ecological experience into culturally embedded knowledge.

In *Jago Kluruk*, pragmatic meaning centers on temporal organization and cooperation. The rooster's crowing traditionally signals dawn, while communal rice planting fosters social cohesion, reinforcing an optimistic agrarian lifestyle perspective. Regulatory functions become explicit in *Lir Ilir* through directive speech acts *penekna blimbing kuwi* and *dondomana jlumatana*, communicating moral transformation. Metaphors like "ijo royo-royo" and "lunu-lunu" encourage perseverance against adversity, while "sorak hore" (collective cheering) reinforces shared hope and intergenerational spiritual transmission.

In *Menthok-Menthok*, social critique is expressed through animal allegories and indirect expressions, including *angisin-isini*, *ora nyambut gawe*, and *mbok ya aja ngetok ana kandhang wae* (please do not come out; just stay in the cage). Humor reduces confrontational tendencies while underscoring diligence and ethical conduct. *Kupu Kui* provides ecological education through directional expressions (*ngalor-ngidul* and *ngetan bali ngulon*) and the movement *mabur bleber*. The unsuccessful attempt in *tak cekele* implicitly illustrates human intervention limitations in controlling nature.

Finally, *Kodhok Ngorek* combines ecological awareness with explicit social evaluation through the dichotomy *sing pinter besuk dadi dhokter* (those who are clever will become doctors in the future) and *sing bodho besuk kaya kebo* (those who are foolish will become buffaloes in the future). Alongside *kodhok ngorek* and *theyot theblung*, these expressions establish a nexus between animal habitats/sounds and motivational discourse, reproducing ingrained social hierarchies and meritocratic expectations. As a whole, these songs operate as multifunctional pedagogical practices, conveying environmental literacy, work ethics, and social values, illustrating how

Table 2. Classification of Form, Type, Function, and Ecolinguistic Evaluation

The Dimension of Analysis	Category	Primary Lexical Realization	Ecological Representation and Meaning
Forms of lexicons	Base words	*kidang* (deer), *pitik* (chicken), *jago* (rooster), *menthok* (muscovy duck), *kupu-kupu* (butterfly), *kodhok* (frog), *tikus pithi* (mouse)	Presenting concrete environmental elements that are close to children's ecological experiences and agrarian life
	Affixed words	*mangan* (eating), *nandur* (planting), *ngremake* (nurturing), *ngendok* (laying egg), *netes* (hatching), *nyunar* (shining), *ngoceh* (chirping), *ngorek* (squeaking)	Representing ecological processes and human–nature relational activities
	Reduplication	*mil kethemil* (eating little by little), *nuk legunuk* (huddled together), *petok petok* (clucking sound), *trondol-trondol* (featherless), *lir-ilir* (waking up slowly), *royo-royo* (luxuriant), *menthok-menthok* (muscovy ducks), *theyot-theyot* (sticking out repeatedly)	Imitation of natural sounds/movements; an affective and performative pedagogical strategy
	Ecological noun phrase	*kacang talun* (forest beans), *tandure wis sumilir* (the plants have sprouted), *ing pinggir kali* (by the river), *nandur pari* (planting rice), *ana kandhang wae* (always in the coop)	Building an agrarian ecological landscape and the living space of creatures.
	Nature-based metaphors	*gedhene meh podho gunung* (the size is almost as big as a mountain), *ijo royo-royo* (lush green), *tarung mesti menang* (always wins in a fight), *kebo* (buffalo)	Nature as a tool for conceptualizing value, size, and character.
Types of lexicons	Biotics (flora-fauna)	*Kidang* (deer), *pitik* (chicken), *jago* (rooster), *menthok* (muscovy duck), *kupu* (butterfly), *kodhok* (frog), *tikus* (rat), *pithi* (mouse), *gajah* (elephant), *pari* (rice), *blimbing* (starfruit)	Affirming the dominance of an ecological imagination rooted in fauna and agriculture
	Abiotics	*Kali (river), tanah (soil), gunung (mountain), srengenge (sun), rembulan (moon), wayah esuk (morning time)*	Nature as a space and support system for life
	Ecological activities	*mangan* (eating), *nandur* (planting), *ngremake* (nurturing), *ngendok* (laying egg), *netes* (hatching), *mabur* (flying), *ngorek* (squeaking)	Demonstrating the mutual relationship between Living beings and their environment
	Javanese ecological symbolism	*Kebo* (buffalo), *gajah* (elephant), *ayam jago* (rooster), *kupu-kupu* (butterfly)	The integration of Javanese cosmology: nature as a source of moral and social values

The Dimension of Analysis	Category	Primary Lexical Realization	Ecological Representation and Meaning
Functions of lexicons	Referential	Fauna, flora, and landscape naming	Direct introduction of environmental vocabulary
	Educational	Life cycle, agriculture, livestock farming, habitat	Transfer of basic ecological knowledge to children
	Ideological	Harmony, hard work, responsibility, respect for nature	Instilling ecological ethics and sustainability values
	Sociocultural	Collective song, humor, imitation, symbol	Formation of a collective ecological identity based on culture
Critical ecolinguistic evaluation	Ecological narration	Beneficial ecological discourse	Nature is represented as a living partner; the human-nature relationship is harmonious and non-exploitative

4. Lexical Forms

Analyzing the lexical forms in Javanese traditional children's play songs uncovers systematic patterns portraying nature as a concrete, experiential reality. Lexical choices, grammatical constructions, and stylistic devices collectively build ecological knowledge and cultural perspectives on human-nature relationships. In *Kidang Talun*, nouns for deer, mice, elephants, soil, and mountains identify biotic and abiotic elements. The verb *mangan* (eating) indicates ecological consumption, while reduplications like *mil kethemil* and *nuk legunuk* imitate animal sounds and movements. The metaphor "gedhene meh podho gunung" (almost as big as a mountain) reflects Javanese cosmology through landscape analogies.

A similar pattern emerges in *Pitik Tukung*, where *pitik* (chicken), *jagung* (corn), *wulu* (feather), *cucuk* (beak), and *jengger* (comb) represent domestic fauna and agricultural resources. Active constructions like *tak pakani* (I feed it) and *tak ngremake* (I nurture it) establish human agency in animal care. Percussive sounds like *petok go petok petok* and *trondol-trondol* stimulate auditory imagination, while *tarung mesti menang* (will certainly win a fight) associates the rooster with courage. In *Jago Kluruk*, *jago*, *srengenge* (sun), *manuk* (bird), *pari* (rice), and *donya* (world) construct a rural landscape. Verbs such as *nandur* (to plant), *nyunar* (to shine), and *ngoceh* (to chirp), alongside *rame swarane* and *pating cemruwit*, embody dynamic ecological activities and harmonious village rhythms.

A more symbolic configuration appears in *Lir Ilir* through *tandur*, *ijo*, *rembulan*, and *blimbing*, representing growth, fertility, and renewal. Reduplications like *lir-ilir*, *royo-royo*, and *lunyu-lunyu* underscore continuity and natural processes. Expressions such as *tandure wis sumilir* and *ijo royo-royo* construct a fertile agrarian landscape where ecological imagery functions as a medium for moral reflection. In *Menthok-Menthok*, *menthok*, *kandhang*, and *gawe* represent domestic agrarian space. Repeating "menthok-menthok" captures attention, while "kandhani," "nyambut gawe," and "nggetok" establish normative human-animal relationships, transforming the duck into a humorous personification of laziness.

In *Kupu Kui*, *kupu* (butterfly), *mabur* (flying), *cekele* (catch it), and *ngewuhake* (making others busy) represent dynamic human-animal interactions. Expressions like *mabur bleber* and *mencok cegrok* imitate agile movements, while *ngalor ngidul* and *ngetan bali ngulon* construct spatial awareness and ecological mobility. Finally, *Kodhok Ngorek* uses *kodhok* (frog) and *kali* (river) to represent aquatic habitats. The verb *ngorek* (croaking), onomatopoeia *theyot theblung*, syntactic repetition, and *ing pinggir kali* (beside the river) establish sensory connections between fauna and environments. Comprehensive analysis reveals that lexical selection,

reduplication, and metaphors shape children's ecological imagination, presenting nature as a living system and facilitating intergenerational transmission of local wisdom.

5. Lexicon Type Analysis

Ecological lexicons are classified into four interconnected categories: biotic, abiotic, ecological activity, and symbolic-ecological lexicons. Integrating these categories within a narrative structure connects environmental experience, agrarian practices, and Javanese symbolism.

In *Kidang Talun*, biotic lexicons include deer, mice, and elephants, complemented by *kacang talun* and *lembayung* as vegetation markers. Abiotic references to soil and mountains expand the landscape. The metaphor "gajah gedhene meh podho gunung" associates animal representation with natural magnitude, while "mangan" establishes consumption relationships. Conversely, "maju pang wani mati" (advancing to war, willing to die) introduces courage as a cultural meaning, intersecting empirical representations with cultural values. In *Pitik Tukung*, domestic animals (chickens, chicks) and agricultural resources (corn) are pervasive. Activities like *tak pakani*, *ngendok*, *netes*, and *ngremake* illustrate animal reproduction and care, positioning humans as microecosystem managers. The limited abiotic presence reflects domestic familiarity, while *tarung mesti menang* introduces courage, masculinity, and competition through animal symbolism.

In *Jago Kluruk*, biotic lexicons (*jago*, *manuk*, *pari*, *wit-witan*) interact with abiotic references to *wayah esuk* (morning) and *srengenge nyunar* (shining sunlight). Agricultural activities like *nandur pari* represent complex human-environment interactions and collective labor. The rooster's crowing serves as a natural temporal marker, integrating biological rhythms, environmental conditions, and social practices into agrarian cosmology. *Lir Ilir* emphasizes flora, employing climbing, *tandur*, and *ijo* for a visual composition enriched by cosmic elements like the moon and *padhang* (brightness). Activities such as *tandur*, *penekna*, and *mbasuh* indicate ecological engagement. Its distinctive feature lies in the symbolic-ecological transformation of vegetation into metaphors of spiritual and ethical development, positioning nature as a medium of moral reflection.

In *Menthok-Menthok*, the biotic lexicon centers on the duck, while *kandhang* represents domestic habitat. Activities like *nyambut gawe*, *ngetok*, and *ngorok* illustrate complex human-animal relationships. Animal behavior functions as an allegory critiquing indolence, transforming domestic ecology into character education. *Kupu Kui* foregrounds butterflies and mobility, with *ngalor–ngidul–ngetan–ngulon* representing spatial orientation. "Chasing" and "checkel" denote human interaction with wild fauna, while butterfly mobility denotes flexibility, autonomy, and balance. Concurrently, *Kodhok Ngorek* integrates frogs and buffaloes (biotic) with rivers (abiotic). *Ngorek* and *theyot theblung* indicate aquatic dynamics. Juxtaposing intelligent/unintelligent children with the buffalo metaphor introduces social/moral categorization. Collectively, these lexical categories demonstrate that ecological meaning extends beyond naming into cultural interpretation.

6. Lexical Functions

Lexicons in Javanese children's songs function as pedagogical and ideological instruments with referential, educational, ideological, and sociocultural functions.

In *Kidang Talun*, the referential function introduces fauna (deer, mice, elephants), flora (*kacang talun*, *lembayung*), and landscapes (soil, mountains). The educational function manifests through representations of animal feeding. Ideologically, "gajah gedhene meh podho gunung" fosters respect for nature's grandeur, while rhythmic repetition reinforces collective ecological identity and agrarian cosmology. In *Pitik Tukung*, references to chickens, corn, and anatomy establish ecological vocabulary. The narrative sequence (*pakani*, *ngendok*, *netes*) conveys reproductive processes and animal care. The ideological

dimension combines responsibility with courage, symbolized by "tarung mesti menang." Collective performance reinforces identification with agrarian community life.

In *Jago Kluruk*, references to fauna, flora, sunlight, and agriculture establish ecological recognition, while *wayah esuk* and *nandur pari* introduce temporal cycles and farming practices. Expressions like *bebarengan* (together) and *sedulur tani* (fellow farmers) articulate cooperation as an ecological ethic. The sociocultural function entails reproducing collective agricultural identity by synchronizing human activities with natural rhythms. In *Lir Ilir*, integrating planting, vegetation, and lunar imagery serves referential and educational functions introducing agricultural processes. Crucially, the ideological function metamorphoses vegetative growth into ethical development, positioning nature as a wellspring of spiritual reflection and cultural legitimacy.

In *Menthok-Menthok*, *menthok* and *kandhang* identify domestic elements, while laziness criticism communicates work ethics. The ideological function internalizes productivity and discipline through animal allegories. Collective mockery and *gawe guyu* (making people laugh) negotiate social norms and reinforce solidarity. *Kupu Kui* identifies butterflies and flying, introducing mobility and ecological characteristics. The ideological dimension underscores human intervention limitations and acknowledges nature's autonomy. Collective performance fosters empathy and dialogic ecological awareness. Finally, *Kodhok Ngorek* introduces frogs and rivers, providing knowledge about aquatic habitats. Juxtaposing intelligence levels with the buffalo metaphor conveys culturally entrenched expectations regarding diligence and social mobility. These functions demonstrate how ecological vocabulary transmits environmental knowledge, cultural identity, and social values through collective performances.

7. Critical Ecolinguistic Analysis

From a critical ecolinguistic perspective, language functions as a semiotic system representing, normalizing, and transmitting human-nature relationships. The seven songs are predominantly beneficial ecological discourse, though orientations and representational strategies vary. Lexical choices promote ecological coexistence, responsibility, and appreciation.

Kidang Talun employs *kidang*, *talun*, and natural elements to illustrate cosmological coexistence and interconnectedness. The absence of expressions associated with capturing or controlling animals establishes an observational relationship, reflecting a moderately non-anthropocentric orientation. Nature is conceptualized as a community of life, with collective play serving as early ecological socialization. *Pitik Tukung* is an agricultural microecosystem involving *pitik*, *ngendok*, *netes*, and feeding. Human agency is embedded within a care ethic, illustrating relational anthropocentrism where responsibility and protection are underscored without reducing animals exclusively to commodities.

Jago Kluruk expands ecological discourse through temporality, sunlight, and agricultural practices. The rooster's crowing synchronizes human activities with environmental cycles. The expression *tambah asri donya donya* (making the world and everything in it more beautiful) constructs a shared ecological space whose beauty depends on harmony, fostering an ecocentric-communal orientation based on collective agricultural activity. Similarly, *Lir Ilir* incorporates agrarian symbolism and spirituality through plant growth, ecological care, and fertility metaphors. Nature is a productive entity requiring ethical attention, and its symbolic language encourages transformation, responsibility, and sustainability-oriented education.

Although *Menthok-Menthok* emphasizes satire over ecological description, its discourse remains beneficial by avoiding destructive domination through animal representation. The duck serves as a medium for moral reflection on work, discipline, and

responsibility, transforming domestic ecology into a space for negotiating social values through humor. *Kupu Kui* symbolizes animal mobility using butterflies as a metaphorical representation of movement, elaborated through movement verbs and directional parallelism. The butterfly's elusiveness signifies human control limitations, transitioning from domination to recognizing ecological autonomy. Kinesthetic performance develops empathy toward living organisms.

Finally, *Kodhok Ngorek* represents river ecosystems through frog sounds, aquatic habitats, and onomatopoeia, generating sensory proximity between children and environments. Rivers and aquatic fauna are integrated into everyday play without representing habitat destruction or ecological domination. Despite evaluative metaphors concerning human intelligence that create social hierarchies, nature remains a space of coexistence and ecological familiarity. Essentially, the seven compositions primarily embody favorable ecological discourse by incorporating biodiversity, environmental relationships, agrarian responsibility, and cultural values. Their significance lies beyond natural vocabulary presence; it is found in how linguistic representations establish ethical relationships between humans and the environment, providing culturally grounded resources that facilitate ecological literacy, environmental awareness, and sustainability-oriented education.

Table 3 Classification of Ecological Insights and Local Wisdom

Song	Human-Nature Harmony	Traditional Sustainability	Javanese Cosmology (Nature as Moral Subject)	Collective Ecological Ethics
Kidang Talun	Peaceful human-fauna coexistence	Natural consumption without exploitation	Fauna as meaningful living entities	Empathy and awareness of living together
Pitik Tukung	Human–animal care relations	Accepted natural life cycle	Animals as valued subjects	Responsibility and care
Jago Kluruk	Human-nature rhythm synchronization	Agriculture follows natural cycle	Nature as a marker of order	Collective work and ecological sensitivity
Lir Ilir	Harmonious agrarian landscape	Balanced utilization of nature	Nature with moral-spiritual meaning	Ethics of care and regeneration
Menthok-Menthok	Orderliness of the living space	Sustainability through participation	Animals as a moral mirror	Ecological discipline and responsibility
Kupu Kui	Non-destructive interaction	Protection of the life cycle of fauna	Nature as an autonomous subject	Empathy and environmentally friendly play
Kodhok Ngorek	Human–river ecosystem harmony	Protection of indicator fauna species	Nature as a moral learning resource	Collective ecological literacy

A comparative analysis of seven Javanese traditional children's play songs identifies four interconnected ideological dimensions of human–nature relations: ecological harmony, traditional sustainability, Javanese cosmology positioning nature as a moral subject, and collective ecological ethics. These dimensions constitute beneficial ecological discourse transmitted intergenerationally through performative practices. Rather than merely nostalgic folkloric artifacts, these songs function as semiotic systems that transmit ecological epistemologies through collective participation. Folklore shapes social thought and behavior by embedding spiritual, educational, social, and economic values in environmental lexicons, characters, dialogues, and narratives (Agustin et al., 2020;

Hilmiyatun et al., 2022; Sumekto et al., 2022). From an ecolinguistic perspective, language constructs *stories we live by* that influence human perceptions and interactions with the environment (Stibbe, 2021) . Through repetition, rhythm, and embodied participation, these songs cultivate ecological imagination before children acquire formal conceptual understandings of sustainability.

The first dimension, ecological harmony, emerges through diverse representations of human–nature relationships. *Kidang Talun* depicts peaceful coexistence between humans and wildlife, presenting fauna and landscapes as interconnected components of a vibrant agrarian environment. *Pitik Tukung* emphasizes ethical care for domestic animals, although the relationship also reflects human management of nonhuman life. *Jago Kluruk* illustrates the synchronization of human activities with biological and natural rhythms, particularly through rooster crowing and agricultural practices. Meanwhile, *Lir Ilir* integrates productivity and spirituality through agrarian symbolism, transforming vegetation and cultivation into representations of moral regeneration. *Menthok-Menthok* connects domestic environmental order with social harmony through satire, whereas *Kupu Kui* and *Kodhok Ngorek* encourage non-destructive relationships with wildlife and river ecosystems. Collectively, these representations construct contextual and relational ecological harmony rather than an idealized vision of nature.

These findings support Mbete (2013) argument that interactions between language and the environment generate lexical categories encoded in ecolinguistic units. Environmentally adapted lexical richness demonstrates that language use is shaped by surrounding ecological realities (Istianah & Suhandano, 2022; Supatmiwati et al., 2021); Widayati, 2019). Nevertheless, ecological meaning extends beyond lexical representation into broader forms of discourse embedded in oral traditions. Cowley (2013) argues that language shapes contemporary living worlds through the coordination of bodies, artifacts, and social values, challenging the nature–culture dichotomy. This perspective corresponds with the holistic foundations of ecolinguistics, which question the assumption of human uniqueness and separation from nature (Chawla, 2001 ; Halliday, 2001) . Furthermore, ecological ideology is embedded in collective beliefs and mental frameworks that regulate social understanding and manifest through myths, norms, laws, and values (Lindo & Bundsgaard, 2000; Stibbe, 2020).

The second dimension, traditional sustainability, emphasizes balanced resource utilization, regeneration, and respect for natural cycles. *Kidang Talun* symbolizes natural consumption without exploitation, while *Pitik Tukung* represents reproduction and growth through laying, hatching, and nurturing. *Jago Kluruk* connects agricultural activities with sunlight and seasonal rhythms, whereas *Lir Ilir* symbolizes regeneration and ecological care. *Menthok-Menthok* highlights domestic responsibility, while *Kupu Kui* suggests the importance of preserving pollinating fauna through non-destructive interaction. Similarly, *Kodhok Ngorek* associates river fauna with environmental well-being. These representations indicate that sustainability is embedded in everyday practices rather than articulated as an abstract theoretical principle.

However, the ecological implications of symbolic representations require critical interpretation. In *Kidang Talun*, the representation of fauna and landscapes establishes nature as a meaningful living environment rather than a passive backdrop. Nevertheless, metaphorical representations do not necessarily articulate explicit ecological awareness, as also observed in studies of ecolinguistic metaphors in Nias by Ndruru & Umiyati (2017) . Although metaphor functions as a cognitive strategy for constructing worldviews (Stibbe, 2020), critical mediation is necessary to prevent ecological meanings from remaining at the level of landscape romanticism. Accordingly, integrating traditional children's play songs into place-based sustainability education offers

considerable potential for strengthening ecological attachment and environmental responsibility (Ardoin et al., 2020) .

In *Pitik Tukung*, the reproductive cycle of chickens translates biological processes into familiar narrative forms. Nevertheless, positioning humans as feeders and managers reflects relational anthropocentrism, in which responsibility coexists with a subtle hierarchy between humans and nonhumans. This limitation is particularly relevant to more-than-human ethics, which emphasizes recognizing the agency of other living beings (Braidotti, 2019) . Since ecolinguistics seeks to sustain life-supporting relationships (Micalay-Hurtado & Poole, 2022; Stibbe, 2020), pedagogical reinterpretation should extend the song's meaning toward animal welfare, food systems, and sustainable production. Similarly, *Jago Kluruk* demonstrates the synchronization of biological, cosmic, and social rhythms, reflecting the interconnectedness of ecological processes and human practices within social-ecological systems (Folke et al., 2010) . Connecting the song with school gardening and collaborative environmental projects could translate its temporal ecological awareness into practical responses to contemporary environmental challenges.

The third dimension, Javanese cosmology positioning nature as a moral subject, is particularly evident in *Lir Ilir*. Vegetative metaphors transform agrarian landscapes into spaces of ethical and spiritual reflection, illustrating the relationship between ecological regeneration and personal transformation. In Javanese philosophical traditions, harmony among humans, nature, and God is expressed through *rukun* (harmony), *sumeleh* (wholehearted acceptance), and *manunggaling kawula lan Gusti* (the union of servant and Lord). These values reflect an understanding of humans as integral components of the web of life. Within Javanese cosmology, nature is not merely an object of exploitation but a spiritually meaningful entity interconnected through three cosmic layers: *kahyangan* (heaven), *marcapada* (the mortal world), and the spirit world. Their continuous interaction reflects an interconnected cosmological order (Naess, 1989; Capra & Luisi, 2014; Pamungkas et al., 2018), offering an alternative philosophical foundation for relational ecological paradigms (E. Retnowati et al., 2018) .

This cosmological dimension also emerges in *Kidang Talun* and *Pitik Tukung*, which position fauna as components of interconnected life systems rather than exclusively economic resources. *Jago Kluruk* represents cosmic balance through natural and agricultural rhythms, while *Menthok-Menthok* uses animals as instruments of ethical reflection. *Kupu Kui* recognizes the ecological significance of nonhuman life, and *Kodhok Ngorek* presents river ecosystems as potential sources of social and environmental knowledge. The ecological importance of butterflies as pollinators and frogs as indicators of water quality further demonstrates the convergence of traditional ecological sensitivity and biological knowledge. This relationship reflects the interdependence of biological and linguistic diversity (Connoly et al., 2023).

The fourth dimension, collective ecological ethics, encompasses empathy, responsibility, cooperation, regeneration, humor, and environmental learning. These values are internalized through singing, movement, repetition, and social interaction rather than doctrinal instruction. The musical and embodied structures of children's play songs strengthen memory retention and emotional engagement, while affective experiences contribute to sustained ecological commitment. Nevertheless, *Menthok-Menthok* and *Kodhok Ngorek* demonstrate that traditional ecological discourse is not uniformly harmonious. Animals may function as moral allegories that reproduce particular social norms, indicating that cultural representations can simultaneously foster solidarity and perpetuate social hierarchies. Such tensions reinforce the importance of critical ecolinguistic analysis, which seeks to identify potentially destructive discourses while promoting language practices that

support ecological well-being (Micalay-Hurtado & Poole, 2022; Stibbe, 2020).

Overall, the seven Javanese traditional children's play songs construct a multilayered ecological discourse encompassing relational harmony, sufficiency-based sustainability, moral cosmology, and collective environmental responsibility. Their predominantly care-oriented anthropocentrism provides a culturally grounded epistemic foundation for contemporary eco-pedagogy. However, because ideology remains embedded in specific social contexts (Lindo & Bundsgaard, 2000) , these songs also contain subtle anthropocentric assumptions and normative hierarchies. Their revitalization in contemporary education should therefore be reflective and transformative, connecting local cosmologies with global environmental challenges, bridging indigenous knowledge and scientific understanding, and translating symbolic ecological harmony into concrete, participatory, and ecologically just sustainability practices.

Conclusion

Overall, the synthesis of analyses concerning environmental themes, contexts of use, lyrical structures, lexical forms and types, and pragmatic functions demonstrates that the seven Javanese traditional children's play songs constitute a coherent, multilayered, and ideological system of ecological representation. The depiction of fauna, including *kidang* (deer), *pitik* (chicken), *jago* (rooster), *menthok* (Muscovy duck), *kupu* (butterfly), and *kodhok* (frog), as well as flora, such as *pari* (rice), *kacang talun* (jungle beans), *lembayung* (purple spinach leaves), and *blimbing* (star fruit), and landscape elements, including mountains, rivers, the sun, and the moon, do not merely function as descriptive ornaments. Rather, they serve as central articulations of meaning that structure children's perspectives on human–nature relations. The thematic orientation of the corpus as a whole reveals orientations toward harmony, sustainability, and systemic interconnectedness rooted in Javanese agrarian cosmology. In this paradigm, nature is positioned as a living entity endowed with moral, symbolic, and social value.

At the structural and lexical levels, the consistent use of repetition, parallelism, reduplication, and onomatopoeia functions as more than aesthetic devices of oral tradition. These structures function as cognitive and pedagogical mechanisms that facilitate the internalization of ecological imagination through rhythm, sound, and collective sensory experience. Repetition reinforces ecological memory; parallelism constructs a sense of cosmic order; natural metaphors transform empirical experience into symbolic reflection; while onomatopoeia presents ecological landscapes as vivid auditory experiences. Accordingly, linguistic form and ecological content are interrelated, with linguistic structures serving a dual role in reflecting and affirming the ecological order they represent.

From a pragmatic perspective, these songs operate polyfunctionally—that is, educationally, regulatively, affectively, and socially—within embodied musical speech events. It has been demonstrated that, in addition to acquiring ecological vocabulary, children also learn to coordinate body, voice, and emotion in collective practice. The regulatory functions manifest through symbolic imperatives (*penekna blimbing kuwi*), satirical allegories (*menthok ora nyambut gawe*/Muscovy ducks don't work.), and value oppositions (*sing pinter... sing bodho.../*the clever… the fool…), which instill work ethics, responsibility, and social aspirations. However, such regulation is almost always framed in ecological imagery, thereby legitimizing social norms through natural metaphors. In this sense, traditional children's play songs function as mechanisms for reproducing ecological and moral habitus.

From a critical standpoint, while some songs still exhibit residual utilitarianism—for example, in representations of livestock as productive resources or animals as allegories of social hierarchy—the prevailing orientation of the corpus underscores coexistence and sustainability. Nature is seldom characterized as a resource to be exploited; rather, it is conceptualized as a relational space that sustains collective and spiritual life. Even

when animals function as symbols of social critique, their existence remains acknowledged as an integral part of domestic or agrarian ecosystems. This suggests that the ecological epistemology embedded in Javanese traditional children's play songs is grounded in sensory experience, everyday agrarian practices, and cosmological symbolism that integrates empirical and ethical dimensions.

The theoretical implications of these findings affirm that Javanese traditional children's play songs may be interpreted as forms of beneficial ecolinguistic discourse, insofar as they construct narratives of human–nature harmony and normalize sustainability ethics within children's cultural domains. Methodologically, the integrated analysis of themes, contexts, structures, lexicons, and pragmatic functions demonstrates that children's oral texts cannot be reduced to simple entertainment materials but must be understood as complex semiotic systems that transmit local cosmologies. Practically, rereading traditional children's play songs within the framework of contemporary ecopedagogy opens possibilities for integrating local wisdom into environmental education curricula—not as peripheral folklore, but as alternative epistemological resources relevant to global sustainability agendas.

Consequently, Javanese traditional children's play songs function not only as representations of nature, but also as instruments in the construction and reproduction of the ecological imagination of younger generations through repetitive collective performative practices. This complexity positions traditional children's play songs as cultural archives that preserve intergenerational ecological knowledge. These songs function as a form of community-based education that operates through aesthetics, affect, and shared experience. In the context of contemporary ecological crises, recognizing the epistemic value of traditional children's play songs constitutes a strategic step toward repositioning oral traditions as sources of ecological literacy that are critical, contextual, and sustainable.

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